

CATO ON AGRICULTURE



BERSERKER

BOOKS



The Complete Works of

CATO

(234 BC-149 BC)



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The Translations



Roman remains at Tusculum, an ancient city in the Alban Hills of Italy — Cato's birthplace

ON AGRICULTURE

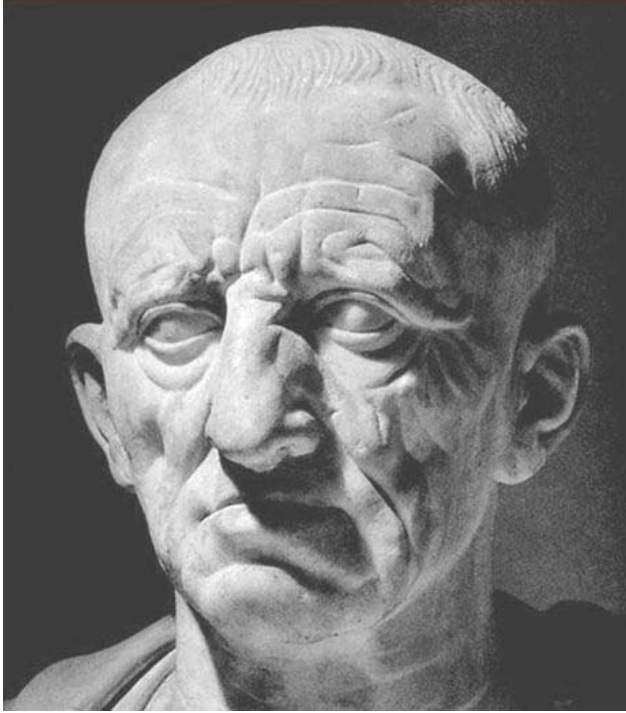


Cato's only extant work, *De Agri Cultura* is the oldest surviving book of Latin prose and is believed to have been written in c. 160 BC. Noted for his lack of form and penchant for old customs and superstitions, Cato was, nevertheless, revered by many later authors for his practical attitudes, his natural stoicism and his tight, lucid prose. The book is often characterised as a farmer's notebook, written in a spontaneous fashion, appearing to be no more than a manual of husbandry intended for friends and neighbours, though its direct style and valuable depiction of rural life during the Roman Republic have won many admirers over the centuries.

The introduction to the book compares farming with other common activities of that time. Cato criticises commerce for the dangers and uncertainty that it bears and he complains of usury as, according to the Twelve Tables, the usurer is judged a worse criminal than a thief. Cato makes a strong contrast with farming, which he praises as the source of good citizens and soldiers, of both wealth and high moral values.

De Agri Cultura provides detailed information on the creation and caring of vineyards, including information on the slaves that helped maintain them. It is believed that the book inspired numerous landowners in Rome to produce wine on a large scale. Many of the new vineyards were sixty acres, as recommended by Cato, and because of their large size, even more slaves were necessary to keep the production of wine running smoothly. The book also contains a short section of religious rituals to be performed by farmers. The language of these is clearly traditional, somewhat more archaic than that of the remainder of the text.

The existing manuscripts of *De Agri Cultura* directly or indirectly descend from a long-lost manuscript called the *Marcianus*, which was once held in the Biblioteca Marciana in Venice and described by Petrus Victorinus as *liber antiquissimus et fidelissimus* (a book most ancient and faithful). The oldest existing manuscript is the Codex Parisinus 6842, written in Italy at some point before the end of the twelfth century. The *editio princeps* was printed at Venice in 1472 and Angelo Politian's collation of the *Marcianus* against his copy of this first printing is considered an important witness for the text.



Marcus Porcius Cato (234 BC-149 BC) — Cato the Elder



A Gallo-Roman harvesting machine

FAIRFAX HARRISON TRANSLATION



Translated by Fairfax Harrison

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Introduction: of the dignity of the farmer

The pursuits of commerce would be as admirable as they are profitable if they were not subject to so great risks: and so, likewise, of banking, if it was always honestly conducted. For our ancestors considered, and so ordained in their laws, that, while the thief should be cast in double damages, the usurer should make four-fold restitution. From this we may judge how much less desirable a citizen they esteemed the banker than the thief. When they sought to commend an honest man, they termed him good husbandman, good farmer. This they rated the superlative of praise. Personally, I think highly of a man actively and diligently engaged in commerce, who seeks thereby to make his fortune, yet, as I have said, his career is full of risks and pitfalls. But it is from the tillers of the soil that spring the best citizens, the stanchest soldiers; and theirs are the enduring rewards which are most grateful and least envied. Such as devote themselves to that pursuit are least of all men given to evil counsels.

And now, to get to my subject, these observations will serve as preface to what I have promised to discuss.

Of buying a farm

(I) When you have decided to purchase a farm, be careful not to buy rashly; do not spare your visits and be not content with a single tour of inspection. The more you go, the more will the place please you, if it be worth your attention. Give heed to the appearance of the neighbourhood, — a flourishing country should show its prosperity. “When you go in, look about, so that, when needs be, you can find your way out.”

Take care that you choose a good climate, not subject to destructive storms, and a soil that is naturally strong. If possible, your farm should be at the foot of a mountain, looking to the South, in a healthy situation, where labour and cattle can be had, well watered, near a good sized town, and either on the sea or a navigable river, or else on a good and much frequented road. Choose a place which has not often changed ownership, one which is sold unwillingly, that has buildings in good repair.

Beware that you do not rashly condemn the experience of others. It is better to buy from a man who has farmed successfully and built well.

When you inspect the farm, look to see how many wine presses and storage vats there are; where there are none of these you can judge what the harvest is. On the other hand, it is not the number of farming implements, but what is done with them, that counts. Where you find few tools, it is not an expensive farm to operate. Know that with a farm, as with a man, however productive it may be, if it has the spending habit, not much will be left over.

Of the duties of the owner.

(II) When you have arrived at your country house and have saluted your household, you should make the rounds of the farm the same day, if possible; if not, then certainly the next day. When you have observed how the field work has progressed, what things have been done, and what remains undone, you should summon your overseer the next day, and should call for a report of what work has been done in good season and why it has not been possible to complete the rest, and what wine and corn and other crops have been gathered. When you are advised on these points you should make your own calculation of the time necessary for the work, if there does not appear to you to have been enough accomplished. The overseer will report that he himself has worked diligently, but that some slaves have been sick and others truant, the weather has been bad, and that it has been necessary to work the public roads. When he has given these and many other excuses, you should recall to his attention the program of work which you had laid out for him on your last visit and compare it with the results attained. If the weather has been bad, count how many stormy days there have been, and rehearse what work could have been done despite the rain, such as washing and pitching the wine vats, cleaning out the barns, sorting the grain, hauling out and composting the manure, cleaning seed, mending the old gear, and making new, mending the smocks and hoods furnished for the hands. On feast days the old ditches should be mended, the public roads worked, briers cut down, the garden dug, the meadow cleaned, the hedges trimmed and the clippings collected and burned, the fish pond cleaned out. On such days, furthermore, the slaves' rations should be cut down as compared with what is allowed when they are working in the fields in fine weather.

When this routine has been discussed quietly and with good humour and is thoroughly understood by the overseer, you should give orders for the completion of the work which has been neglected.

The accounts of money, supplies and provisions should then be considered. The overseer should report what wine and oil has been sold, what price he got, what is on hand, and what remains for sale. Security should be taken for such accounts as ought to be secured. All other unsettled matters should be agreed upon. If any thing is needed for the coming year, it should be bought; every thing which is not needed should be sold. Whatever there is for lease should be leased. Orders should be given (and take care that they are in writing) for all work which next it is desired to have done on the farm or let to contract. You

should go over the cattle and determine what is to be sold. You should sell the oil, if you can get your price, the surplus wine and corn, the old cattle, the worn out oxen, and the cull sheep, the wool and the hides, the old and sick slaves, and if any thing else is superfluous you should sell that. The appetite of the good farmer is to sell, not to buy.

(IV) Be a good neighbour. Do not roughly give offence to your own people. If the neighbourhood regards you kindly, you will find a readier market for what you have to sell, you will more easily get your work done, either on the place or by contract. If you build, your neighbours will aid you with their services, their cattle and their materials. If any misfortune should overtake you (which God forbid!) they will protect you with kindly interest.

Of laying out the farm

(I) If you ask me what is the best disposition to make of your estate, I would say that should you have bought a farm of one hundred *jugera* (about 66 acres) all told, in the best situation, it should be planted as follows: 1° a vineyard, if it promises a good yield, 2° an irrigated garden, 3° an osier bed, 4° an olive yard, 5° a meadow, 6° a corn field, 7° a wood lot, 8° a cultivated orchard, and 9° a mast grove.

(III) In his youth, the farmer ought, diligently to plant his land, but he should ponder before he builds. Planting does not require reflection, but demands action. It is time enough to build when you have reached your thirty-sixth year, if you have farmed your land well meanwhile. When you do build, let your buildings be proportioned to your estate, and your estate to your buildings. It is fitting that the farm buildings should be well constructed, that you should have ample oil cellars and wine vats, and a good supply of casks, so that you can wait for high prices, something which will redound to your honour, your profit and your self-respect.

(IV) Build your dwelling house in accordance with your means. If you build well in a good situation and on a good property, and furnish the house suitably for country life, you will come there more often and more willingly. The farm will then be better, fewer mistakes will be made, and you will get larger crops. The face of the master is good for the land.

(VI) Plant elm trees along the roads and fence rows, so that you may have the leaves to feed the sheep and cattle, and the timber will be available if you need it. If any where there are banks of streams or wet places, there plant reeds; and surround them with willows that the osiers may serve to tie the vines.

(VII) It is most convenient to set out the land nearest the house as an orchard, whence fire wood and faggots may be sold and the supply of the master obtained. In this enclosure should be planted every thing fitting to the land and vines should be married to the trees.

(VIII) Near the house lay out also a garden with garland flowers and vegetables of all kinds, and set it about with myrtle hedges, both white and black, as well as Delphic and Cyprian laurel.

Of stocking the farm

(X) An olive farm of two hundred and forty *jugera* (160 acres) ought to be stocked as follows: an overseer, a house keeper, five labourers, three ox drivers, one swineherd, one ass driver, one shepherd; in all thirteen hands: three pair of oxen, three asses with pack saddles, to haul out the manure, one other ass to turn the mill, and one hundred sheep.

Of the duties of the overseer.

(V) These are the duties of the overseer: He should maintain discipline. He should observe the feast days. He should respect the rights of others and steadfastly uphold his own. He should settle all quarrels among the hands; if any one is at fault he should administer the punishment. He should take care that no one on the place is in want, or lacks food or drink; in this respect he can afford to be generous, for he will thus more easily prevent picking and stealing.

Unless the overseer is of evil mind, he will himself do no wrong, but if he permits wrong-doing by others, the master should not suffer such indulgence to pass with impunity. He should show appreciation of courtesy, to encourage others to practise it. He should not be given to gadding or conviviality, but should be always sober. He should keep the hands busy, and should see that they do what the master has ordered. He should not think that he knows more than his master. The friends of the master should be his friends, and he should give heed to those whom the master has recommended to him. He should confine his religious practices to church on Sunday, or to his own house.

He should lend money to no man unbidden by the master, but what the master has lent he should collect. He should never lend any seed reserved for sowing, feed, corn, wine, or oil, but he should have relations with two or three other farms with which he can exchange things needed in emergency. He should state his accounts with his master frequently. He should not keep any hired men or day hands longer than is necessary. He should not sell any thing without the knowledge of the master, nor should he conceal any thing from the master. He should not have any hangers-on, nor should he consult any soothsayer, fortune teller, necromancer, or astrologer. He should not spare seed in sowing, for that is bad economy. He should strive to be expert in all kinds of farm work, and, without exhausting himself, often lend a hand. By so doing, he will better understand the point of view of his hands, and they will work more contentedly; moreover, he will have less inclination to gad, his health will be better, and he will sleep more refreshingly.

First up in the morning, he should be the last to go to bed at night; and before he does, he should see that the farm gates are closed, and that each of the hands is in his own bed, that the stock have been fed. He should see that the best of care is taken of the oxen, and should pay the highest compliments to the teamsters who keep their cattle in the best condition. He should see to it that the ploughs and plough shares are kept in good repair. Plan all the work in ample

time, for so it is with farm work, if one thing is done late, every thing will be late.

(XXXIX) When it rains try to find some thing to do indoors. Clean up, rather than remain idle. Remember that while work may stop, expenses still go on.

Of the duties of the housekeeper

(CXLIII) The overseer should be responsible for the duties of the housekeeper. If the master has given her to you for a wife, you should be satisfied with her, and she should respect you. Require that she be not given to wasteful habits; that she does not gossip with the neighbours and other women. She should not receive visitors either in the kitchen or in her own quarters. She should not go out to parties, nor should she gad about. She should not practise religious observances, nor should she ask others to do so for her without the permission of the master or the mistress. Remember that the master practises religion for the entire household. She should be neat in appearance and should keep the house swept and garnished. Every night before she goes to bed she should see that the hearth is swept and clean. On the Kalends, the Ides, the Nones, and on all feast days, she should hang a garland over the hearth. On those days also she should pray fervently to the household gods. She should take care that she has food cooked for you and for the hands. She should have plenty of chickens and an abundance of eggs. She should diligently put up all kinds of preserves every year.

Of the hands

(LVI) The following are the customary allowances for food: For the hands, four pecks of meal for the winter, and four and one-half for the summer. For the overseer, the housekeeper, the wagoner, the shepherd, three pecks each. For the slaves, four pounds of bread for the winter, but when they begin to cultivate the vines this is increased to five pounds until the figs are ripe, then return to four pounds.

(LVII) The sum of the wine allowed for each hand per annum is eight quadrantals, or Amphora, but add in the proportion as they do work. Ten quadrantals per annum is not too much to allow them to drink.

(LVIII) Save the wind fall olives as much as possible as relishes for the hands. Later set aside such of the ripe olives as will make the least oil. Be careful to make them go as far as possible. When the olives are all eaten, give them fish pickles and vinegar. One peck of salt per annum is enough for each hand.

(LIX) Allow each hand a smock and a cloak every other year. As often as you give out a smock or cloak to any one take up the old one, so that caps can be made out of it. A pair of heavy wooden shoes should be allowed every other year.

Of draining

(XLIII) If the land is wet, it should be drained with trough shaped ditches dug three feet wide at the surface and one foot at the bottom and four feet deep. Blind these ditches with rock. If you have no rock then fill them with green willow poles braced crosswise. If you have no poles, fill them with faggots. Then dig lateral trenches three feet deep and four feet wide in such way that the water will flow from the trenches into the ditches.

(CLV) In the winter surface water should be drained off the fields. On hillsides courses should be kept clear for the water to flow off. During the rainy season at the beginning of Autumn is the greatest risk from water. When it begins to rain all the hands should go out with picks and shovels and clear out the drains so that the water may flow off into the roads, and the crops be protected.

Of preparing the seed bed

(LXI) What is the first principle of good agriculture? To plough well. What is the second? To plough again; and the third is to manure. When you plough corn land, plough well and in good weather, lest you turn a cloddy furrow. The other things of good agriculture are to sow seed plentifully, to thin the young sprouts, and to hill up the roots with earth.

(V) Never plough rotten land nor drive flocks or carts across it.

If care is not taken about this, the land so abused will be barren for three years.

Of manure

(V) Plan to have a big compost heap and take the best of care of the manure. When it is hauled out see that it is well rotted and spread. The Autumn is the time to do this.

(XXXVII) You can make manure of litter, lupine straw, chaff, bean stalks, husks and the leaves of ilex and of oak.

(XXX) Fold your sheep on the land which you are about to seed, and there feed them leaves.

Of soil improvement

(XXXVII) The things which are harmful to corn land are to plough the ground when it is rotten, and to plant chick peas which are harvested with the straw and are salt. Barley, fenugreek and pulse all exhaust corn land, as well as all other things which are harvested with the straw. Do not plant nut trees in the corn land. On the other hand, lupines, field beans and vetch manure corn land.

(VI) Where the soil is rich and fertile, without shade, there the corn land ought to be. Where the land lies low, plant rape, millet, and panic grass.

Of forage crops

(VIII) If you have a water meadow you will not want forage, but if not then sow an upland meadow, so that hay may not be lacking.

(LIII) Save your hay when the times comes, and beware lest you mow too late. Mow before the seed is ripe. House the best hay by itself, so that you may feed it to the draft cattle during the spring ploughing, before the clover is mature.

(XXVII) Sow, for feed for the cattle, clover, vetch, fenugreek, field beans and pulse. Sow these crops a second and a third time.

Of planting

(XXXIV) Wherever the land is cold and wet, sow there first, and last of all in the warmest places.

Of pastures

(L) Manure the pastures in early spring in the dark of the moon, when the west wind begins to blow. When you close your pastures (to the stock) clean them and root out all weeds.

Of feeding live stock

(XXX) As long as they are available, feed green leaves of elm, poplar, oak and fig to your cattle and sheep.

(V) Store leaves, also, to be fed to the sheep before they have withered.

(XXX) Take the best of care of your dry fodder, which you house for the winter, and remember always how long the winter may last.

(IV) Be sure you have well constructed stables furnished with substantial stalls and equipped with latticed feed racks. The intervals between the bars of the racks should be one foot. If you build them in this way, the cattle will not waste their food.

(LIV) This is the way that provender should be prepared and fed: When the seeding is finished, gather mast and soak it in water. Feed a measure of it every day to each steer; or if they have not been worked it will be sufficient to let them pasture the mast beds. Another good feed is a measure of grape husks which you shall have preserved in jars. By day turn the cattle out and at night feed twenty-five pounds of hay to each steer. If hay is short, feed the leaves of the ilex and ivy. Stack the straw of wheat, barley, beans, vetch and lupine, indeed all the grain straws, but pick out and house the best of it. Scatter your straw with salt and you can then feed it in place of hay. When in the spring you begin to feed (more heavily to prepare for work), feed a measure of mast or of grape husks, or a measure of ground lupines, and fifteen pounds of hay. When the clover is ripe, feed that first. Gather it by hand so that it will bloom a second time, for what you harvest with the sickle blooms no more. Feed clover until it is dry, then feed vetch and then panic grass, and after the panic grass feed elm leaves. If you have poplar, mix that with the elm so that the elm may last the longer. If you have no elm feed oak and fig leaves.

Nothing is more profitable than to take good care of your cattle.

Cattle should not be put out to graze except in winter when they are not worked; for when they eat green stuff they expect it all the time, and it is then necessary to muzzle them while they plough.

Of the care of live stock

(V) The flocks and herds should be well supplied with litter and their feet kept clean. If litter is short, haul in oak leaves, they will serve as bedding for sheep and cattle. Beware of scab among the sheep and cattle. This comes from hunger and exposure to rain.

(LXXII) To prevent the oxen from wearing down their hoofs, anoint the bottom of the hoof with liquid pepper before driving them on the highroad.

(LXXIII) Take care that during the summer the cattle drink only sweet and fresh water. Their health depends on it.

(XCVI) To prevent scab among sheep, make a mixture of equal parts of well strained amurca, of water in which lupine has been steeped, and of lees of good wine. After shearing, anoint all the flock with this mixture, and let them sweat profusely for two or three days. Then dip them in the sea. If you have no sea water, make salt water and dip then in that. If you will do this they will suffer no scab, they will have more and better wool and they will not be molested by ticks.

(LXXI) If an ox begins to sicken, give him without delay a raw hen's egg and make him swallow it whole. The next day make him drink from a wooden bowl a measure of wine in which has been scraped the head of an onion. Both the ox and his attendant should do these things fasting and standing upright.

(CII) If a serpent shall bite an ox, or any other quadruped, take a cup of that extract of fennel, which the physicians call smyrnean, and mix it with a measure of old wine. Inject this through his nostrils and at the same time poultice the wound with hogs' dung. You can treat a man the same way.

(CLX) If a bone is dislocated it can be made sound by this incantation. Take a green reed four or five feet long, split it down the middle and let two men hold the pieces against your hips. Begin then to chant as follows:

“In Alio. S.F. Motas Vaeta,
Daries Dardaries Astataries Dissunapiter”

and continue until the free ends of the reed are brought slowly together in front of you. Meanwhile, wave a knife above the reeds, and when they come together and one touches the other, seize them in your hand and cut them right and left. These pieces of reed bound upon a dislocated or fractured bone will cure it.

But every day repeat the incantation, or in place of it this one:

“Huat Hanat Huat
Ista Pista Sista
Domiabo Damnaustra”

Of cakes and salad

(LXXV) This is the recipe for cheese cake (*libum*): Bray well two pounds of cheese in a mortar, and, when this is done, pour in a pound of corn meal (or, if you want to be more dainty, a half pound of flour) and mix it thoroughly with the cheese. Add one egg and beat it well. Pat into a cake, place it on leaves and bake slowly on a hot hearth stone under a dish.

(CXIX) This is the recipe for olive salad (*epityrum*): Select some white, black and mottled olives and stone them. Mix and cut them up. Add a dressing of oil, vinegar, coriander, cumin, fennel, rue and mint. Mix well in an earthen ware dish, and serve with oil.

(CXXI) This is the recipe for must cake (*mustaceus*): Sprinkle a peck of wheat flour with must. Add anise, cumin, two pounds of lard, a pound of cheese and shredded laurel twigs. When you have kneaded the dough, put laurel leaves under it and so bake.

Of curing hams

(CLXII) This is the way to cure hams in jars or tubs: When you have bought your hams trim off the hocks. Take a half peck (*semodius*) of ground Roman salt for each ham. Cover the bottom of the jar or tub with salt and put in a ham, skin down. Cover the whole with salt and put another ham on top, and cover this in the same manner. Be careful that meat does not touch meat. So proceed, and when you have packed all the hams, cover the top with salt so that no meat can be seen, and smooth it out even. When the hams have been in salt five days, take them all out with the salt and repack them, putting those which were on top at the bottom. Cover them in the same way with salt and press them down.

After the twelfth day remove the hams finally, brush off the salt and hang them for two days in the wind. On the third day wipe them off clean with a sponge and rub them with (olive) oil. Then hang them in smoke for two days, and on the third day rub them with a mixture of (olive) oil and vinegar.

Then hang them in the meat house, and neither bats nor worms will touch them.

ASH AND HOOPER TRANSLATION



*Translated by W. D. Hooper and H. B. Ash
Loeb Classical Library, 1934*

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SECTIONS 1-19

It is true that to obtain money by trade is sometimes more profitable, were it not so hazardous; and likewise money-lending, if it were as honourable. Our ancestors held this view and embodied it in their laws, which required that the thief be mulcted double and the usurer fourfold; how much less desirable a citizen they considered the usurer than the thief, one may judge from this. ² And when they would praise a worthy man their praise took this form: “good husbandman, good farmer”; one so praised was thought to have received the greatest commendation. ³ The trader I consider to be an energetic man, and one bent on making money; but, as I said above, it is a dangerous career and one subject to disaster. ⁴ On the other hand, it is from the farming class that the bravest men and the sturdiest soldiers come, their calling is most highly respected, their livelihood is most assured and is looked on with the least hostility, and those who are engaged in that pursuit are least inclined to be disaffected. And now, to come back to my subject, the above will serve as an introduction to what I have undertaken.

^{1 1} When you are thinking of acquiring a farm, keep in mind these points: that you be not over-eager in buying nor spare your pains in examining, and that you consider it not sufficient to go over it once. However often you go, a good piece of land will please you more at each visit. ² Notice how the neighbours keep up their places; if the district is good, they should be well kept. Go in and keep your eyes open, so that you may be able to find your way out. It should have a good climate, not subject to storms; the soil should be good, and naturally strong. ³ If possible, it should lie at the foot of a mountain and face south; the situation should be healthful, there should be a good supply of labourers, it should be well watered, and near it there should be a flourishing town, or the sea, or a navigable stream, or a good and much travelled road. ⁴ It should lie among those farms which do not often change owners; where those who have sold farms are sorry to have done so. It should be well furnished with buildings. Do not be hasty in despising the methods of management adopted by others. It will be better to purchase from an owner who is a good farmer and a good builder. When you reach the steading, observe whether there are numerous oil presses and wine vats; ⁵ if there are not, you may infer that the amount of the yield is in proportion. The farm should be one of no great equipment, but should be well situated. See that it be equipped as economically as possible, and that the land be not extravagant. ⁶ Remember that a farm is like a man — however great the income,

if there is extravagance but little is left. ⁷ If you ask me what is the best kind of farm, I should say: a hundred iugera of land, comprising all sorts of soils, and in a good situation; a vineyard comes first if it produces bountifully wine of a good quality; second, a watered garden; third, an osier-bed; fourth, an oliveyard; fifth, a meadow; sixth, grain land; seventh, a wood lot; eighth, an arbustum; ninth, a mast grove.

^{2 1} When the master arrives at the farmstead, after paying his respects to the god of the household, let him go over the whole farm, if possible, on the same day; if not, at least on the next. When he has learned the condition of the farm, what work has been accomplished and what remains to be done, let him call in his overseer the next day and inquire of him what part of the work has been completed, what has been left undone; whether what has been finished was done betimes, and whether it is possible to complete the rest; and what was the yield of wine, grain, and all other products. ² Having gone into this, he should make a calculation of the labourers and the time consumed. If the amount of work does not seem satisfactory, the overseer claims that he has done his best, but that the slaves have not been well, the weather has been bad, slaves have run away, he has had public work to do; when he has given these and many other excuses, call the overseer back to your estimate of the work done and the hands employed. ³ If it has been a rainy season, remind him of the work that could have been done on rainy days: scrubbing and pitching wine vats, cleaning the farmstead, shifting grain, hauling out manure, making a manure pit, cleaning seed, mending old harness and making new; and that the hands ought to have mended their smocks and hoods. ⁴ Remind him, also, that on feast days old ditches might have been cleaned, road work done, brambles cut, the garden spaded, a meadow cleared, faggots bundled, thorns rooted out, spelt ground, and general cleaning done. When the slaves were sick, such large rations should not have been issued. ⁵ After this has been gone into calmly, give orders for the completion of what work remains; run over the cash accounts, grain accounts, and purchases of fodder; run over the wine accounts, the oil accounts — what has been sold, what collected, balance due, and what is left that is saleable; where security for an account should be taken, let it be taken; ⁶ and let the supplies on hand be checked over. Give orders that whatever may be lacking for the current year be supplied; that what is superfluous be sold; that whatever work should be let out be let. Give directions as to what work you want done on the place, and what you want let out, and leave the directions in writing. ⁷ Look over the live stock and hold a sale. Sell your oil, if the price is satisfactory, and sell the surplus of your wine and grain. Sell worn-out oxen, blemished cattle, blemished sheep, wool, hides,

an old wagon, old tools, an old slave, a sickly slave, and whatever else is superfluous. The master should have the selling habit, not the buying habit.

³ ¹ In his youth the owner should devote his attention to planting. He should think a long time about building, but planting is a thing not to be thought about but done. When you reach the age of thirty-six you should build, if you have your land planted. In building, you should see that the steading does not lag behind the farm nor the farm behind the steading. ² It is well for the master to have a well-built barn and storage room and plenty of vats for oil and wine, so that he may hold his products for good prices; it will redound to his wealth, his self-respect, and his reputation. He should have good presses, so that the work may be done thoroughly. Let the olives be pressed immediately, to prevent the oil from spoiling. Remember that high winds come every year and are apt to beat off the olives; ³ if you gather them at once and the presses are ready, there will be no loss on account of the storm, and the oil will be greener and better. ⁴ If the olives remain too long on the ground or the floor they will spoil, and the oil will be rancid. Any sort of olive will produce a good and greener oil if it is pressed betimes. ⁵ For an oliveyard of 120 iugera there should be two pressing equipments, if the trees are vigorous, thickly planted, and well cultivated. The mills should be stout and of different sizes, so that if the stones become worn you may change. Each should have its own leather ropes, six sets of hand bars, six double sets of pins, and leather belts. Greek blocks run on double ropes of Spanish broom; ⁶ you can work more rapidly with eight pulleys above, and six below; if you wish to use wheels it will work more slowly but with less effort.

⁴ ¹ Have good stalls, stout pens, and latticed feed-racks. The rack bars should be a foot apart; if you make them in this way the cattle will not scatter their feed. Build your dwelling-house in accordance with your means. If you build substantially on a good farm, placing the house in a good situation, so that you can live comfortably in the country, you will like to visit it, and will do so oftener; the farm will improve, there will be less wrongdoing, and you will receive greater returns; the forehead is better than the hindhead. Be a good neighbor, and do not let your people commit offences. If you are popular in the neighbourhood it will be easier for you to sell your produce, easier to let out your work, easier to secure extra hands. If you build, the neighbours will help you with their work, their teams, and their materials; if trouble comes upon you, which God forbid, they will be glad to stand by you.

⁵ ¹ The following are the duties of the overseer: — He must show good management. The feast days must be observed. He must withhold his hands from another's goods and diligently preserve his own. He must settle disputes among the slaves; and if anyone commits an offence he must punish him properly in

proportion to the fault. ² He must see that the servants are well provided for, and that they do not suffer from cold or hunger. Let him keep them busy with their work — he will more easily keep them from wrongdoing and meddling. If the overseer sets his face against wrongdoing, they will not do it; if he allows it, the master must not let him go unpunished. He must express his appreciation of good work, so that others may take pleasure in well-doing. The overseer must not be a gadabout, he must always be sober, and must not go out to dine. He must keep the servants busy, and see that the master's orders are carried out. He must not assume that he knows more than the master. ³ He must consider the master's friends his own friends. He must pay heed to anyone to whom he has been bidden to listen. He must perform no religious rites, except on the occasion of the Compitalia at the cross-roads, or before the hearth. He must extend credit to no one without orders from the master, and must collect the loans made by the master. He must lend to no one seed-grain, fodder, spelt, wine, or oil. He must have two or three households, no more, from whom he borrows and to whom he lends. ⁴ He must make up accounts with the master often. He must not hire the same day-labourer or servant or caretaker for longer than a day. He must not want to make any purchases without the knowledge of the master, nor want to keep anything hidden from the master. He must have no hanger-on. He must not consult a fortune-teller, or prophet, or diviner, or astrologer. He must not stint the seed for sowing, for that brings bad fortune. He must see to it that he knows how to perform all the operations of the farm, and actually does perform them often, but not to the point of becoming exhausted; ⁵ by so doing he will learn what is in his servants' minds, and they will perform their work more contentedly. Also, he will be less disposed to gad about, will be in better health, and will enjoy his sleep more. He must be the first out of bed, the last to go to bed. Before then he must see that the farmstead is closed, that each one is asleep in his proper place, and that the stock have fodder.

⁶ See that the draft oxen are looked after with the greatest care, and be somewhat indulgent to the teamsters to make them look after their stock with more pleasure. See that you keep your ploughs and ploughshares in good condition. Be careful not to plough land which is cariosa or drive a cart over it, or turn cattle into it; if you are not careful about this, you will lose three years' crop of the land on which you have turned them. ⁷ Litter the cattle and flocks carefully, and see that their hoofs are kept clean. Guard against the scab in flocks and herds; it is usually caused by under-feeding and exposure to wet weather. See that you carry out all farm operations betimes, for this is the way with farming: if you are late in doing one thing you will be late in doing everything. If bedding runs short, gather oak leaves and use them for bedding down sheep and

cattle. See that you have a large dunghill; ⁸ save the manure carefully, and when you carry it out, clean it of foreign matter and break it up. Autumn is the time to haul it out. During the autumn also dig trenches around the olive trees and manure them. Cut poplar, elm, and oak leaves betimes; store them before they are entirely dry, as fodder for sheep. Second-crop hay and after-math should also be stored dry. Sow turnips, forage crops, and lupines after the autumn rains.

⁶ ¹ This rule should be observed as to what you should plant in what places: — Grain should be sown in heavy, rich, treeless soil; and if this sort of soil is subject to fogs it should preferably be sown with rape, turnips, millet, and panic-grass. In heavy, warm soil plant olives — those for pickling, the long variety, the Sallentine, the orcites, the posea, the Sergian, the Colminian, the waxy-white; choose especially the varieties which are commonly agreed to be the best for these districts. Plant this variety of olives at intervals of twenty-five or thirty feet. ² Land which is suitable for olive planting is that which faces the west and is exposed to the sun; no other will be good. Plant the Licinian olive in colder and thinner soil. If you plant it in heavy or warm soil the yield will be worthless, the tree will exhaust itself in bearing, and a reddish scale will injure it. ³ Around the borders of the farm and along the roads plant elms and some poplars, so that you may have leaves for the sheep and cattle; and the timber will be available if you need it. Wherever there is a river bank or wet ground, plant poplar cuttings and a reed thicket. The method of planting is as follows: — turn the ground with the mattock and then plant the eyes of the reed three feet apart. Plant there also the wild asparagus, so that it may produce asparagus; ⁴ for a reed thicket goes well with the wild asparagus, because it is worked and burned over, and furnishes a shade when shade is needed. Plant Greek willows along the border of the thicket, so that you may have withes for tying up vines.

Choose soil for laying out a vineyard by the following rules: — In soil which is thought to be best adapted for grapes and which is exposed to the sun, plant the small Aminnian, the double eugeneum, and the small parti-coloured; in soil that is heavy or more subject to fogs plant the large Aminnian, the Murgentian, the Apician, and the Lucanian. The other varieties, and especially the hybrids, grow well anywhere.

⁷ ¹ It is especially desirable to have a plantation on a suburban farm, so that firewood and faggots may be sold, and also may be furnished for the master's use. On the same farm should be planted anything adapted to the soil, and several varieties of grapes, such as the small and large Aminnian and the Apician. Grapes are preserved in grape-pulp in jars; ² also they keep well in boiled wine, or must, or after-wine. You may hang up the hard-berried and the larger Aminnian and they will keep as well dried before the forge fire as when

spread in the sun. ³ Plant or ingraft all kinds of fruit — sparrow-apples, Scantian and Quirinian quinces, also other varieties for preserving, must-apples and pomegranates (the urine or dung of swine should be applied around the roots of these to serve as food for the fruit); of pears, the volema, the Anician frost-pears (these are excellent when preserved in boiled wine), ⁴ the Tarentine, the must-pear, the gourd-pear, and as many other varieties as possible; of olives, the orcite and posea, which are excellent when preserved green in brine or bruised in mastic oil. When the orcites are black and dry, powder them with salt for five days; then shake off the salt, and spread them in the sun for two days, or pack them in boiled must without salt. Preserve sorbs in boiled must; or you may dry them; make them quite free from moisture. Preserve pears in the same way.

⁸ ¹ Plant mariscan figs in chalky, open soil. The African, Herculean, Saguntine, the winter variety, the black Tellanian with long pedicles, in soil which is richer or manured. Lay down a meadow, so that you may have a supply of hay — a water meadow if you have it, if not, a dry meadow. ² Near a town it is well to have a garden planted with all manner of vegetables, and all manner of flowers for garlands — Megarian bulbs, conjugulan myrtle, white and black myrtle, Delphian, Cyprian, and wild laurel, smooth nuts, such as Abellan, Praenestine, and Greek filberts. The suburban farm, and especially if it be the only one, should be laid out and planted as ingeniously as possible.

⁹ ¹ Osier-beds should be planted in damp, marshy, shady ground, near a stream. But be sure that the master will need them or that he can find a market for them. If you have a water supply, pay particular attention to water meadows; if not, have all the dry meadows possible. This is the sort of farm which it is profitable to make anywhere.

¹⁰ ¹ This is the proper equipment for an oliveyard of 240 iugera: An overseer, a housekeeper, 5 labourers, 3 teamsters, 1 muleteer, 1 swineherd, 1 shepherd — a total of 13 persons; ³ yoke of oxen, 3 pack-asses to carry manure, 1 ass for the mill, and 100 sheep; ² 5 complete oil-pressing equipments, 1 copper vessel holding 30 quadrantals, with copper cover, 3 iron hooks, 3 water-pots, 2 funnels, 1 copper vessel holding 5 quadrantals, with copper cover, 3 hooks, 1 small bowl, 2 oil jars, 1 jar holding 50 heminae (?), 1 water bucket, 1 basin, 1 small pot, 1 ewer, 1 platter, 1 chamber-vessel, 1 watering-pot, 1 ladle, 1 candlestick, 1 sextarius measure; ³ large carts, 6 ploughs and ploughshares, 3 yokes fitted with straps, 6 sets of ox harness; ³ 1 harrow, 4 manure hampers, 3 manure baskets, 3 pack-saddles, 3 pads for the asses; tools: 8 forks, 8 hoes, 4 spades, 5 shovels, 2 four-toothed rakes, 8 scythes, 5 straw-hooks, pruning-hooks, 3 axes, 3 wedges, 1 hand-mill, 2 tongs, 1 poker, 2 braziers; ⁴ 100 oil-jars, 12 pots, 10 jars for holding grape pulp, 10 for holding amurca, 10 wine jars, 20 grain jars, 1 lupine

vat, 10 large jars, 1 wash-tub, 1 bath-tub, 2 water-basins, several covers for jars and pots; 1 donkey-mill, 1 hand-mill, 1 Spanish mill, 3 collars and traces, 1 small table, 2 copper disks, 2 tables, 3 large benches, 1 bedroom stool, ⁵ 3 stools, 4 chairs, 2 arm-chairs, 1 bed in the bedroom, 4 beds on cords, and 3 common beds; 1 wooden mortar, 1 fuller's mortar, 1 loom, 2 mortars, 4 pestles — one for beans, one for grain, one for seed, one for cracking kernels; 1 modius measure, 1 half-modius measure; 8 mattresses, 8 coverlets, 16 cushions, 10 table covers, 3 napkins, 6 servants' hoods.

¹¹ This is the proper equipment for a vineyard of 100 iugera: An overseer, a housekeeper, 10 labourers, 1 teamster, 1 muleteer, 1 willow-worker, 1 swineherd — a total of 16 persons; 2 oxen, 2 draft donkeys, 1 for the mill; 3 complete presses, vats for holding five vintages of 800 cullei, 20 jars for holding grape pulp, ² 20 for grain, and the necessary covers and tops; 6 pots covered with Spanish broom, 4 amphorae of the same kind, 2 funnels, 3 wicker strainers, 3 strainers for removing the flower, 10 vessels for juice; 2 carts, 2 ploughs, 1 wagon yoke, 1 iugum vinarium, 1 donkey yoke; 1 copper disk, 1 mill harness, 1 copper vessel holding a culleus, 1 copper cover, 3 iron hooks, 1 copper boiler holding a culleus, ³ 2 water pots, 1 watering-pot, 1 basin, 1 small pot, 1 wash-basin, 1 water-bucket, 1 platter, 1 ladle, 1 candlestick, 1 chamber-vessel, 4 beds, 1 bench, 2 tables, 1 small table, 1 clothes chest, 1 wardrobe, 6 long benches, 1 iron-bound modius measure, 1 half-modius measure, 1 wash-tub, 1 bath-tub, 1 lupine vat, 10 large pots; ⁴ 2 complete sets of ox-harness, 3 of donkey-harness, 3 pack-saddles, 3 baskets for wine-lees, 3 donkey-mills, 1 hand-mill; tools: 5 rush-hooks, 6 tree-hooks, 3 pruning-hooks, 5 axes and 4 wedges, 2 ploughs, 10 forks, 6 spades, 4 shovels, 2 four-toothed rakes, 4 manure-hampers, 1 manure-basket; 40 grape-knives, 10 broom-hooks, 2 braziers, 2 tongs; 1 poker; ⁵ 20 Amerine baskets, 40 planting-baskets or troughs, 40 wooden scoops, 2 trays, 4 mattresses, 4 coverlets, 6 cushions, 6 table covers, 3 napkins, 6 servants' hoods.

¹² ¹ This is the necessary equipment for the pressing-room: For 5 vats, 5 mounted press-beams, with 3 spares; 5 windlasses with 1 spare; 5 leather ropes; 5 hoisting ropes, 5 cables; 10 pulleys; 5 bands; 5 posts for the press-beams to rest on; 3 large jars; 40 levers; 40 stout wooden pins to brace the anchor-posts if they spread, and 6 wedges; 5 mills, 10 small casks, 10 troughs, 10 wooden spades, 5 iron shovels.

¹³ ¹ The following equipment is needed for the pressing-room at the time of pressing: A pitcher, 1 copper vessel holding 5 quadrantals, 3 iron hooks, 1 copper disk, — millstones, 1 strainer, 1 sieve, 1 axe, 1 bench, 1 large wine-jar, 1 key for the pressing-room, 1 complete bed for two free workmen who act as watchmen to sleep on (while the third, who is a slave, should sleep with the

labourers), — new and — old baskets, 1 net-cord, 1 cushion, — lanterns, 1 hide, 2 gridirons, 1 meat-rack, 1 ladder.

² The following equipment is needed for the oil cellar: Oil jars and covers, 14 oil vats, 2 large and 2 small oil flasks, 3 copper ladles, 2 oil amphorae, ³ 1 water-jar, 1 jar holding fifty heminae (?), 1 sextarius oil-measure, 1 pan, 2 funnels, 2 sponges, 2 earthenware pitchers, 2 half-amphora measures, 2 wooden ladles, 2 locks with bars for the cellar, 1 set of scales, 1 one-hundred-pound weight, and other weights.

¹⁴ ¹ If you are contracting for the building of a new steading from the ground up, the contractor should be responsible for the following: — All walls as specified, of quarry-stone set in mortar, pillars of solid masonry, all necessary beams, sills, uprights, lintels, door-framing, supports, winter stables and summer feed racks for cattle, a horse stall, 2 quarters for servants, 3 meat-racks, a round table, 2 copper boilers, 10 coops, a fireplace, 1 main entrance and another at the option of the owner, windows, 10 two-foot lattices for the larger windows, 6 window-shutters, 3 benches, 5 stools, 2 looms, 1 small mortar for crushing wheat, 1 fuller's mortar, trimmings, and 2 presses. ³ The owner will furnish the timber and necessary material for this and deliver it on the ground, and also 1 saw and 1 plumb-line (but the contractor will fell, hew, square, and finish the timber), stone, lime, sand, water, straw, and earth for making mortar. If the steading should be struck by lightning an expiatory prayer must be offered. The price of this work from an honest owner, who furnishes duly all necessary materials and pays conscientiously, one sesterce per tile. ⁴ The roof will be reckoned as follows: On the basis of a whole tile, one which is one-fourth broken is counted two for one; all gutter tiles are counted each as two; and all joint-tiles each as four.

In a steading of stone and mortar groundwork, carry the foundation one foot above ground, the rest of the walls of brick; add the necessary lintels and trimmings. ⁵ The rest of the specifications as for the house of rough stone set in mortar. The cost per tile will be one sesterce. The above prices are for a good owner, in a healthful situation. The cost of workmanship will depend upon the count. In an unwholesome situation, where summer work is impossible, the generous owner will add a fourth to the price.

¹⁵ ¹ Construct the enclosure walls of mortar, rough stone, and rubble (the owner furnishing all the materials) five feet high, 1½ feet thick, with a one-foot coping, ¹⁴ feet long, and let out the plastering. If he lets the walls of the steading by the hundred feet, that is, ten feet on every side, ⁵ libellae to the foot, and ¹⁰ victoriati for a strip one foot by ten. The owner shall build the foundation 1½

feet thick, and will furnish one modius of lime and two modii of sand for each linear foot.

¹⁶ ¹ The following are proper terms of a contract for burning lime on shares: The burner prepares the kiln, burns the lime, takes it from the kiln, and cuts the wood for the kiln. The owner furnishes the necessary stone and wood for the kiln.

¹⁷ ¹ Oak wood and also wood for vine props is always ripe for cutting at the time of the winter solstice. Other species which bear seed are ripe when the seeds are mature, while those which are seedless are ripe when they shed bark. The pine, because it has both green and ripe seed (such seed may be gathered from the cypress and the pine at any season) is ripe and ready at any season. ² The same tree has second-year cones from which the seed will fall, and first-year cones; when the latter are just beginning to open, they are ready for gathering. They begin to ripen at seed-time, and continue to ripen then for more than eight months. The first-year cones are green. The elm is fit for cutting a second time when the leaves fall.

¹⁸ ¹ If you wish to build a pressing-room with four vats facing each other, lay off the vats as follows: Anchor-posts ² feet thick, ⁹ feet high, including tenons; ² openings hollowed out $3\frac{1}{2}$ feet long, ⁶ fingers wide, the bottom of the opening $1\frac{1}{2}$ feet from the ground; ² feet between anchor-post and wall; ¹ foot between the two anchor-posts, and ¹⁶ feet straight to the first guide-posts; guide-posts ² feet in diameter and ¹⁰ feet high, including the tenons; windlass ⁹ feet high, exclusive of mortice; press-beam 25 feet long, and the tongue on it $2\frac{1}{2}$ long. Allow 30 feet of floor space for each pair of vats, with their conduits, and 20 feet for four mills, right and left. ³ Allow 22 feet between the guide-posts of one press and those of the next for the levers. Allow 20 feet for the second set of vats facing them, from the last guide-post to the wall behind the anchor-posts. Total for the pressing-room with four vats, 66 feet by 52 feet. Between the walls, where you intend to mount the anchor-posts, make solid foundations ⁵ feet deep; cover the whole area ⁵ feet by $2\frac{1}{2}$ feet with hard stones to a depth of $1\frac{1}{2}$ feet; ⁴ in this clear a place for two bolts, and fix the posts firmly in the stone with the bolt. Fill the interval between the two anchor-posts with oak, and pour lead over it. Let the head of the anchor-posts project six fingers, and cap it with an oak head so as to make a place for the posts to stand. ⁵ Make a 5-foot foundation and lay on it a flat stone, $2\frac{1}{2}$ by $2\frac{1}{2}$ by $1\frac{1}{2}$ feet, and set the posts on it. Mount the corresponding posts in the same way. Above the anchor-posts and the guide-posts lay a horizontal beam, ² feet by 1, 37 feet long, or two beams if you have no solid ones of that size. Under these beams, between the conduits and the end walls, in the position of the mills, run a beam $1\frac{1}{2}$ feet square and $23\frac{1}{2}$ feet long, or two pieces. ⁶ On

these rest the beams which stand above the main posts, and on these timbers build a wall and join it to the timber to give it sufficient weight. Where you are to build a seat for the press make a foundation ⁵ feet deep, ⁶ feet across; the seat and circular conduit $4\frac{1}{2}$ feet in diameter. For the rest of the pavement make the foundation uniformly ² feet deep. First pack down the bottom, and then spread successive half-foot layers of finely crushed stone and sanded lime. Construct the pavement as follows: After levelling, spread the first layer of gravel and sanded lime, and tamp it down; then spread a similar layer over it, sift lime with a sieve to the depth of two fingers, and then lay a pavement of dry potsherds. When completed, pack and rub down so as to have a smooth surface. ⁸ All anchor-posts and guide-posts should be of oak or pine. If you wish to use shorter timbers, cut conduits on the outside; if this method is employed you will need 22-foot timbers. ⁹ Make the disk ⁴ feet in diameter, ⁶ fingers thick, constructed in sections in the Punic style with dovetailed oak. When you have fitted them together, fasten with pins of dogwood. Fit three crossbars to the disk, and fasten them with iron nails. Make the disk of elm or hazel; if you have both, lay them alternately.

¹⁹ ¹ For a wine press make the guide-posts and anchor-posts two feet higher, and above the holes in the anchor-posts, which should be one foot apart, make a place for one pin. Cut six openings, a half-foot square, in each of the windlass beams, ² placing the first a half-foot from the tenon, and the others at equal intervals. Set a hook in the middle of the windlass; the centre of the distance between the anchor-posts should correspond with the middle of the windlass, where the hook should be set, in order to have the press-beam exactly in the middle. When you set the tongue, measure from the centre of the press-beam so that it may be exactly midway between the anchor-posts; allow one thumb width play. The longest levers are ¹⁸ feet, the second size 16, the third 15; the hand-spikes are 12, 10, and 8 feet respectively.

SECTIONS 20-39

²⁰ ¹ Method of mounting the mill. The iron pivot which stands on the post must stand straight upright in the centre; it should be fastened firmly on all sides with willow wedges, and lead should be poured over it to prevent it from shaking; if it moves, take it out and fasten it again in the same way, so that it will not move. ² Make the sockets for the stones of orcite olive wood, and fasten them with lead, being careful to keep them tight. Fix them on the axle. Make one piece bushings, a thumb wide, flanged at both ends and double-nailed to keep them from falling out.

²¹ ¹ Make a ten-foot bar as thick as the sockets require, the mid-point to fit between the stones. Drill a hole in the middle as large as the iron pivot, so that the latter may be inserted in it. Insert here an iron casing to fit into the pivot and the bar. ² Make a hole in the bar, ⁴ finger-tips square and ³ finger-tips deep, and on the lower side of the bar fasten an iron plate of the breadth of the middle of the bar, perforated to fit over the pivot. After piercing the holes face them on both sides with metal plates, and bend back all four plates to the lower side of the bar; ³ under these plates fasten thin metal strips on both sides, and fasten them together so that the holes in which the small handles are fitted may not spread. At the point where the bar enters the sockets be careful to face them on both sides with four trough-shaped iron plates and fasten them in the middle with nails. Above these plates pierce the bar on the outside for the bolt to fasten the stone. ⁴ On top of the opening place a one-pound iron collar, ⁶ fingers wide, pierced on both sides to allow the bolt to enter. All this is for the purpose of preventing the bar from wearing on the stone. Make four rings to place around the stone to keep the bar and the bolt from wearing on the inside. Use elm or beech for the bar. ⁵ The same smith should make and set the necessary iron work, at a cost of 60 sesterces; you can buy lead for the bar for ⁴ sesterces; wages of the workman who assembles and sets the sockets with lead, at least ⁸ sesterces, and the same man should adjust the mill. Total cost, 72 sesterces, exclusive of helpers.

²² ¹ The mill should be adjusted as follows: Level it so that the stones are set at equal distances from the rims and clearing the bottom of the mortar by a little finger's breadth; see that the stones do not rub the basin at all. There should be a finger's breadth between the stone and the column; if the space is greater and the stones are too far distant, ² wind a cord around the column tightly several times so as to fill in the excessive space. If the stones are set too deep and rub the

bottom of the basin too much, place perforated wooden disks over the pivot and on the column and thus regulate the height. In the same way adjust the spread with wooden disks or iron rings until the stones fit accurately.

³ A mill is bought near Suessa for 400 sesterces and fifty pounds of oil. The cost of assembling is 60 sesterces, and the charge for transportation by oxen, with six days' wages of six men, drivers included, is 72 sesterces. The bar complete costs 72 sesterces, and there is a charge of 25 sesterces for oil; the total cost is 629 sesterces. At Pompeii one is bought complete for 384 sesterces, freight 280 sesterces. It is better to assemble and adjust on the ground, and this will cost 60 sesterces, making a total cost of 724 sesterces. ⁴ If you are fitting old mills with stones, they should be ¹ foot ³ fingers thick at the centre and ¹ foot in diameter, with a half-foot square opening; alter them to fit the mill after they have been hauled. These can be bought at the yard of Rufrius for 180 sesterces, and fitted for 30 sesterces. The price is the same at Pompeii.

²³ ¹ Have everything that is needed ready for the vintage; let vats be cleaned, baskets mended and pitched, necessary jars be pitched on rainy days; let hampers be made ready and mended, spelt be ground, salt fish be bought, and windfall olives be salted. ² Gather the inferior grapes for the sharp wine for the hands to drink, when the time comes. Divide the grapes gathered each day, after cleaning and drying, equally between the jars. If necessary, add to the new wine a fortieth part of must boiled down from untrod grapes, or a pound and a half of salt to the culleus. ³ If you use marble dust, add one pound to the culleus; mix this with must in a vessel and then pour into the jar. If you use resin, pulverize it thoroughly, three pounds to the culleus of must, place it in a basket, and suspend it in the jar of must; shake the basket often so that the resin may dissolve. ⁴ When you use boiled must or marble dust or resin, stir frequently for twenty days and press down daily. Divide the must of the second pressing and add equally to each jar.

²⁴ ¹ Directions for making Greek wine: Gather carefully well-ripened Apician grapes, and add to the culleus of must two quadrants of old sea-water, or a modius of pure salt. If the latter is used, suspend it in a basket and let it dissolve in the must. If you wish to make a straw-coloured wine, take equal parts of yellow and Apician wine and add a thirtieth part of old boiled wine. Add a thirtieth part of concentrated must to any kind of blended wine.

²⁵ ¹ When the grapes are ripe and gathered, let the first be kept for household use. See that they are not gathered until they are thoroughly ripe and dry, that the wine may not lose its reputation. Sift the fresh husks daily through a bed stretched on cords, or make a sieve for the purpose, and after treading place them in pitched jars or a pitched vat. Have this sealed tight, to feed to cattle through

the winter; or if you wish you can soak some of it a while and you will have an after-wine for the hands to drink.

²⁶ After the vintage is over order all the pressing utensils, hampers, baskets, ropes, props, and bars to be stored, each in its proper place. Have the jars containing wine wiped off twice a day, and see that you provide each jar with its own broom with which to wipe off the edges. Thirty days after the gathering, if the fermentation is complete, seal the jars. If you wish to draw off the wine from the lees, this will be the best time to do it.

²⁷ ¹ Sow clover, vetch, fenugreek, beans and bitter-vetch as forage for cattle. Make a second and a third sowing of forage; then plant the other crops. Dig trenches in fallow ground for olives, elms, vines, and figs, and plant at seed-time. If the ground is dry, transplant olives at seed-time, prune the young olives which had been planted before, and trench the trees.

²⁸ ¹ In transplanting olives, elms, figs, fruit trees, vines, pines, and cypresses, dig them up carefully, roots and all, with as much of their own soil as possible, and tie them up so that you can transport them. Have them carried in a box or basket. Be careful not to dig them up or transport them when the wind is blowing or when it is raining, for this is especially to be avoided. ² When you place them in the trench, bed them in top soil, spread dirt over them to the ends of the roots, trample it thoroughly, and pack with rammers and bars as firmly as possible; this is the most important thing. Before transplanting, cut off the tops of trees which are more than five fingers in diameter and smear the scars with dung and wrap them in leaves.

²⁹ ¹ Divide your manure as follows: Haul one-half for the forage crops, and when you sow these, if this ground is planted with olives, trench and manure them at this time; then sow the forage crops. Add a fourth of the manure around the trenched olives when it is most needed, and cover this manure with soil. Save the last fourth for the meadows, and when most needed, as the west wind is blowing, haul it in the dark of the moon.

³⁰ ¹ Feed the cattle elm, poplar, oak, and fig leaves as long as these last; and keep the sheep supplied with green leaves as long as you have them. Fold sheep on land which you intend to plant, and feed them leaves there until the forage is full grown. Save as carefully as possible the dry fodder which you have stored against winter, and remember how long winter lasts.

³¹ ¹ Let all necessary preparations be made for the olive harvest: Let ripe withes and willow branches be gathered betimes as material for making new baskets and mending old ones. Have dry oak, elm, nut, and fig sticks for making pins buried in the dunghill or in water, and make pins from them when needed. Have oak, ilex, laurel, and elm levers ready. Make the press-beam preferably of

black hornbeam. ² Take out elm, pine, nut, and all other timber which you are felling, when the moon is on the wane, after noon, while there is no south wind. It is ready for cutting when the seed is ripe. Be careful not to haul it or work it in the wet. Timber that has no seed is ready for cutting when the bark peels. Do not handle any timber or vine when the south wind is blowing, unless you are compelled to do so.

^{32 1} See that you begin early to trim vines and trees. Layer vines into trenches, and, so far as possible, train them to grow vertically. The trees should be trimmed as follows: The branches which you leave should spread out, should be cut straight up, and should not be left too thick. ² The vines should be well knotted; and be especially careful not to bend them downward along any of the branches and not to tie them too tightly. See that the trees are well “wedded,” and that a sufficient number of vines are planted for them; and wherever it is necessary let these be detached from the trees and buried in the ground, and two years later cut them off from the old stock.

^{33 1} Have the vineyard treated as follows: Tie a well-knotted vine straight up, keeping it from bending, and make it grow vertically, so far as you can. Leave fruit-bearing shoots and reserve stubs at proper intervals. Train the vines as high as possible and tie them firmly, but without choking them. Cultivate as follows: at seed-time trench the soil around the crown of the vine, ² and after pruning cultivate around it. Begin ploughing, and run straight furrows back and forth. Set out young vines as early as possible, then harrow; prune the old ones very slightly, or rather, if you need cuttings, layer the branches and take off the cuttings two years later. The proper time for cutting back the young plant is when it is strong. ³ If there are gaps in the rows, run furrows and plant rooted cuttings, keep the furrows clear of shade, and cultivate frequently. In an old vineyard sow clover if the soil is lean (do not sow anything that will form a head), and around the roots apply manure, straw, grape dregs, or anything of the sort, to make it stronger. ⁴ When the vine begins to form leaves, thin them. Tie up the young vines at frequent intervals to keep the stems from breaking, and when they begin to climb the props tie the tender branches loosely, and turn them so that they will grow vertically. When the grapes begin to turn, tie up the vines, strip the leaves so as to expose the grapes, and dig around the stocks.

⁵ Cut willows at the proper time, strip the bark, and tie them in tight bundles. Save the bark, and when you need it for the vines, steep some of it in water to make tapes. Save the withes for making baskets.

^{34 1} I return to the matter of planting. Plant the coldest and most humid ground first, and then the rest of the ground in turn to the warmest, which should come last. ² Do not work ground which is cariosa at all. Lupine will do well in soil that

is reddish, and also in ground that is dark, or hard, or poor, or sandy, or not wet. Sow spelt preferably in soil that is chalky, or swampy, or red, or humid. Plant wheat in soil that is dry, free from weeds, and sunny.

³⁵ ¹ Plant beans in strong soil which is protected from storms; vetch and fenugreek in places as clear of weeds as possible. Wheat and winter wheat should be sown on high, open ground, where the sun shines longest. Lentils should be planted in unfertile and reddish soil, free of weeds; ² barley in new ground, or ground which does not need to lie fallow. Spring wheat should be planted in ground in which you cannot ripen the regular variety, or in ground which, because of its strength, does not need to lie fallow. Plant turnips, kohlrabi seed, and radishes in land well manured or naturally strong.

³⁶ Fertilizers for crops: Spread pigeon dung on meadow, garden, and field crops. Save carefully goat, sheep, cattle, and all other dung. Spread or pour amurca around trees, an amphora to the larger, an urn to the smaller, diluted with half its volume of water, after running a shallow trench around them.

³⁷ ¹ Things which are harmful to crops: If you work land which is cariosa; chick peas are harmful, because they are torn out by the roots and are salty; barley, fenugreek, bitter vetch, and all crops which are pulled out by the roots, exhaust the soil. Do not bury olive seeds in land intended for crops.

² Crops which fertilize land: Lupines, beans, and vetch.

You may make compost of straw, lupines, chaff, bean stalks, husks, and ilex and oak leaves. Pull up the elder and hemlock bushes which grow in the grain fields, and the high grass and sedge around the willow bed; use them for bedding down sheep, and decayed leaves for cattle. Separate part of the olive seeds and throw them into a pit, add water, and mix them thoroughly with a shovel. Make trenches around the olive trees and apply this mixture, adding also burned seeds.

³ If a vine is unhealthy, cut its shoots into small bits and plough or spade them in around it.

The following is evening work for winter: Work up into vine poles and stakes the wood which was brought under cover the day before to dry out; make faggots; and clear out manure. Do not touch timber except in the dark of the moon, or in its last phase. ⁴ The best time to take out timber which you dig up or fell is during the seven days following the full moon. Above all things, do not work, or fell, or, if you can avoid it, even touch timber which is wet, or frosted, or covered with dew. ⁵ Hoe and weed grain twice, and strip the wild oats. Remove the twigs from the prunings of vines and trees, and make them into bundles; and heap the vine and fig sticks for the forge, and the split wood for the use of the master.

³⁸ ¹ Build the lime-kiln ten feet across, twenty feet from top to bottom, sloping the sides in to a width of three feet at the top. If you burn with only one door, make a pit inside large enough to hold the ashes, so that it will not be necessary to clear them out. Be careful in the construction of the kiln; see that the grate covers the entire bottom of the kiln. ² If you burn with two doors there will be no need of a pit; when it becomes necessary to take out the ashes, clear through one door while the fire is in the other. Be careful to keep the fire burning constantly, and do not let it die down at night or at any other time. Charge the kiln only with good stone, as white and uniform as possible. ³ In building the kiln, let the throat run straight down. When you have dug deep enough, make a bed for the kiln so as to give to it the greatest possible depth and the least exposure to the wind. If you lack a spot for building a kiln of sufficient depth, run up the top with brick, or face the top on the outside with field stone set in mortar. ⁴ When it is fired, if the flame comes out at any point but the circular top, stop the orifice with mortar. Keep the wind, and especially the south wind, from reaching the door. The calcining of the stones at the top will show that the whole has calcined; also, the calcined stones at the bottom will settle, and the flame will be less smoky when it comes out.

If you cannot sell your firewood and faggots, and have no stone to burn for lime, make charcoal of the firewood, and burn in the field the faggots and brush you do not need. Where you have burned them plant poppies.

³⁹ ¹ When the weather is bad and no other work can be done, clear out manure for the compost heap; clean thoroughly the ox stalls, sheep pens, barnyard, and farmstead; and mend wine-jars with lead, or hoop them with thoroughly dried oak wood. If you mend it carefully, or hoop it tightly, closing the cracks with cement and pitching it thoroughly, you can make any jar serve as a wine-jar. Make a cement for a wine-jar as follows: Take one pound of wax, one pound of resin, and two-thirds of a pound of sulphur, and mix in a new vessel. ² Add pulverized gypsum sufficient to make it of the consistency of a plaster, and mend the jar with it. To make the colour uniform after mending, mix two parts of crude chalk and one of lime, form into small bricks, bake in the oven, pulverize, and apply to the jar.

In rainy weather try to find something to do indoors. Clean up rather than be idle. Remember that even though work stops, expenses run on none the less.

SECTIONS 40-59

⁴⁰ ¹ The following work should be done in the spring: Trenches and furrows should be made, ground should be turned for the olive and vine nurseries, vines should be set out; elms, figs, fruit trees, and olives should be planted in rich, humid ground. Figs, olives, apples, pears, and vines should be grafted in the dark of the moon, after noon, when the south wind is not blowing. The following is a good method of grafting olives, figs, pears or apples: ² Cut the end of the branch you are going to graft, slope it a bit so that the water will run off, and in cutting be careful not to tear the bark. Get you a hard stick and sharpen the end, and split a Greek willow. Mix clay or chalk, a little sand, and cattle dung, and knead them thoroughly so as to make a very sticky mass. Take your split willow and tie it around the cut branch to keep the bark from splitting. ³ When you have done this, drive the sharpened stick between the bark and the wood two finger-tips deep. Then take your shoot, whatever variety you wish to graft, and sharpen the end obliquely for a distance of two finger-tips; take out the dry stick which you have driven in and drive in the shoot you wish to graft. Fit bark to bark, and drive it in to the end of the slope. In the same way you may graft a second, a third, a fourth shoot, as many varieties as you please. ⁴ Wrap the Greek willow thicker, smear the stock with the kneaded mixture three fingers deep, and cover the whole with ox-tongue, so that if it rains the water will not soak into the bark; this ox-tongue must be tied with bark to keep it from falling off. Finally, wrap it in straw and bind tightly, to keep the cold from injuring it.

⁴¹ ¹ Vine grafting may be done in the spring or when the vine flowers, the former time being best. Pears and apples may be grafted during the spring, for fifty days at the time of the summer solstice, and during the vintage; ² olives and figs should be grafted during the spring. Graft the vine as follows: Cut off the stem you are grafting, and split the middle through the pith; in it insert the sharpened shoots you are grafting, fitting pith to pith. A second method is: If the vines touch each other, cut the ends of a young shoot of each obliquely, and tie pith to pith with bark. ³ A third method is: With an awl bore a hole through the vine which you are grafting, and fit tightly to the pith two vine shoots of whatever variety you wish, cut obliquely. Join pith to pith, and fit them into the perforation, one on each side. ⁴ Have these shoots each two feet long; drop them to the ground and bend them back toward the vine stock, fastening the middle of the vine to the ground with forked sticks and covering with dirt. Smear all these

with the kneaded mixture, tie them up and protect them in the way I have described for olives.

⁴² ¹ Another method of grafting figs and olives is: Remove with a knife the bark from any variety of fig or olive you wish, and take off a piece of bark containing a bud of any variety of fig you wish to graft. Apply it to the place you have cleared on the other variety, and make it fit. The bark should be three and a half fingers long and three fingers wide. Smear and protect as in the other operation.

⁴³ ¹ Ditches, if the ground is swampy, should be dug trough-shaped, three feet wide at the top, four feet deep, sloping to a width of one foot one palm at the bottom. Blind them with stones, or lacking stones, with green willow sticks laid crosswise in layers; or, failing this, with bundles of brush. Then dig trenches three and a half feet deep, four feet wide, so placed that the water will run off from the trenches into the ditch; and so plant olives. ² Dig furrows and trenches for vines not less than two and a half feet deep and the same distance wide. If you wish the vines and olives which you have planted to grow fast, spade the furrows once a month, and dig around the foot of the olives every month until they are three years old. Treat other trees in the same way.

⁴⁴ ¹ The trimming of the olive-yard should begin fifteen days before the vernal equinox; you can trim to advantage from this time for forty-five days. Follow this rule: If the land is very fertile, clear out all dead branches only and any broken by the wind; if it is not fertile, trim more closely and plough. Trim clean, and smooth the stems.

⁴⁵ ¹ Cut olive slips for planting in trenches three feet long, and when you chop or cut them off, handle them carefully so as not to bruise the bark. Those which you intend to plant in the nursery should be cut one foot long, and planted in the following way: The bed should be turned with the trenching spade until the soil is finely divided and soft. ² When you set the slip, press it in the ground with the foot; and if it does not go deep enough, drive it in with a mallet or maul, but be careful not to break the bark in so doing. Do not first make a hole with a stick, in which to set out the slip. It will thrive better if you plant it so that it stands as it did on the tree. ³ The slips are ready for transplanting at three years, when the bark turns. If you plant in trenches or furrows, plant in groups of three, and spread them apart. Do not let them project more than four finger-widths above the ground; or you may plant the eyes.

⁴⁶ Make a nursery as follows: Choose the best, the most open, and the most highly fertilized land you have, with soil as nearly as possible like that into which you intend to transplant, and so situated that the slips will not have to be carried too far from the nursery. Turn this with a trench spade, clear of stones,

build a stout enclosure, and plant in rows. Plant a slip every foot and a half in each direction, pressing into the ground with the foot; ² and if it does not go deep enough, drive it in with a mallet or maul. Let the slips project a finger above the ground, and smear the tops with cow dung, placing a mark by each; hoe often if you wish the slips to grow rapidly. Plant other slips in the same way.

^{47 1} The reed bed should be planted as follows: Plant the eyes three feet apart.

Use the same method for making and planting the vine nursery. Cut back the vine when it is two years old and transplant when it is three. If the ground on which you wish to plant the vine is to be used for pasture, see that the vine has been cut back three times before it is tied up to the tree; it should not be trained on the tree until it has five old knots. Plant a leek-bed every year, and you will have something to take off every year.

^{48 1} In making the fruit nursery follow the method used in making the olive nursery. Plant separately each variety of slip.

Turn the ground with a trench spade where you are going to plant cypress seed, and plant at the opening of spring. ² Make ridges five feet wide, add well-pulverized manure, hoe it in, and break the clods. Flatten the ridge, forming a shallow trough. Plant the seed as thickly as flax, sifting dirt a finger-breadth deep over it with a sieve. Level the ground with a board or the foot, and set forked stakes around the edges. Lay poles in the forks, and on these hang brush or fig-curtains, to keep off cold and sun. Make the covering high enough for a person to walk under. Hoe often, and clear off the weeds as soon as they begin to grow; for if you pull up the growth when it is hard, you will pull up the cypress with it.

³ Plant and cover pear and apple seed in the same way. use the same method for planting pine-nuts, but alter it slightly.

^{49 1} You may transplant an old vine if you wish, up to the thickness of your arm. First prune back so as to leave not more than two buds on each branch; clear the dirt thoroughly from the roots over their full length, and be careful not to injure them. ² Replace the vine just as it was, in a trench or furrow, cover with soil, and trample firmly. Plant, tie, and train it just as it was, and work it often.

^{50 1} Manure meadows at the opening of spring, in the dark of the moon. When the west wind begins to blow and you close the dry meadows to stock, clean them and dig up all noxious weeds by the roots.

² After pruning vines, pile the wood and branches; prune fig trees moderately, and clear those in the vineyard to a good height, so that the vines will not climb them; make new nurseries and repair old ones. All this before you begin cultivating the vines.

As soon as the sacred feast has been offered and eaten, begin the spring ploughing, working first the driest spots and last the heaviest and wettest, provided they do not get hard in the meantime.

⁵¹ Layering of fruit trees and other trees: Press into the earth the scions which spring from the ground around the trees, elevating the tip so that it will take root. Then two years later dig up and transplant them. Fig, olive, pomegranate, quince, and all other fruit trees, laurel, myrtle, Praenestine nuts, and planes should all be layered, dug, and transplanted in the same way.

⁵² ¹ When you wish to layer more carefully you should use pots or baskets with holes in them, and these should be planted with the scion in the trench. To make them take root while on the tree, make a hole in the bottom of the pot or basket and push the branch which you wish to root through it. Fill the pot or basket with dirt, trample thoroughly, and leave on the tree. When it is two years old, cut off the branch below the basket; ² cut the basket down the side and through the bottom, or, if it is a pot, break it, and plant the branch in the trench with the basket or pot. Use the same method with a vine, cutting it off the next year and planting it with the basket. You can layer any variety you wish in this way.

⁵³ Cut hay in season, and be careful not to wait too long. Harvest before the seed ripens, and store the best hay by itself for the oxen to eat during the spring ploughing, before you feed clover.

⁵⁴ ¹ Feed for cattle should be prepared and fed as follows: When the sowing is over, gather the acorns and soak them in water. A half-modius of this should be fed each ox per day, though if the oxen are not working it will be better to let them forage; or feed a modius of the grape husks which you have stored in jars. During the day let them forage, and at night feed 25 pounds of hay a head; if you have no hay, feed ilex and ivy leaves. Store wheat and barley straw, husks of beans, of vetch, of lupines, and of all other crops. In storing litter, bring under cover that which has most leaves, sprinkle it with salt, and feed it instead of hay. When you begin feeding in spring, feed a modius of mast, or grape husks, or soaked lupine, and ¹⁵ pounds of hay. When clover is in season feed it first; pull it by hand and it will grow again, for if you cut it with the hook it will not. Continue to feed clover until it dries out, after which feed it in limited quantities; then feed vetch, then panic grass, and after this elm leaves. If you have poplar leaves, mix them with the elm to make the latter hold out; and failing elm, feed oak and fig leaves. There is nothing more profitable than to take good care of cattle. They should not be pastured except in winter, when they are not ploughing; for when they once eat green food they are always expecting it; and

so they have to be muzzled to keep them from biting at the grass while ploughing.

⁵⁵ ¹ Store firewood for the master's use on flooring, and cut olive sticks and roots and pile them out of doors.

⁵⁶ ¹ Rations for the hands: Four modii of wheat in winter, and in summer four and a half for the field hands. The overseer, the housekeeper, the foreman, and the shepherd should receive three. The chain-gang should have a ration of four pounds of bread through the winter, increasing to five when they begin to work the vines, and dropping back to four when the figs ripen.

⁵⁷ ¹ Wine ration for the hands: For three months following the vintage let them drink after-wine. In the fourth month issue a hemina a day, that is, 2½ congii a month; in the fifth, sixth, seventh, and eighth months a sextarius a day, that is, 5 congii a month; in the ninth, tenth, eleventh, and twelfth months 3 heminae a day, that is, an amphora a month. In addition, issue 3½ congii per person for the Saturnalia and the Compitalia. Total of wine for each person per year, 7 quadrantals; and an additional amount for the chain-gang proportioned to their work. Ten quadrantals of wine per person is not an excessive allowance for the year.

⁵⁸ ¹ Relish for the hands: Store all the windfall olives you can, and later the mature olives which will yield very little oil. Issue them sparingly and make them last as long as possible. When they are used up, issue fish-pickle and vinegar, and a pint of oil a month per person. A modius of salt a year per person is sufficient.

⁵⁹ ¹ Clothing allowance for the hands: A tunic 3½ feet long and a blanket every other year. When you issue the tunic or the blanket, first take up the old one and have patchwork made of it. A stout pair of wooden shoes should be issued every other year.

SECTIONS 60-79

⁶⁰ ¹ The following is a year's ration for a yoke of steers: 120 modii of lupines, or 240 of mast; 520 pounds of hay, and . . . of clover; 20 modii of beans; and 30 modii of vetch. See also that you sow enough vetch to allow some to go to seed. Make several sowings of forage crops.

⁶¹ What is good cultivation? Good ploughing. What next? Ploughing. What third? Manuring.

The planter who works his olives very often and very deep will plough up the very slender roots; while bad ploughing will cause the roots to come to the surface and grow too large, and the strength of the tree will waste into the roots. When you plough grain land do it well and at the proper season, and do not plough with an irregular furrow. The rest of the cultivation consists in hoeing often, taking up shoots carefully, and transplanting, at the proper time, as many roots as possible, with their soil. When you have covered the roots well, trample them firmly so that the water will not harm them. If one should ask what is the proper time for planting olives, I should say, at seed-time in dry ground, and in spring in rich ground.

⁶² ¹ You should have as many carts as you have teams, either of oxen, mules, or donkeys.

⁶³ ¹ The press rope should be 55 feet long when stretched; there should be 60 feet of leather cordage for the cart, and 26 feet for reins; the yoke straps for the cart ¹⁸ feet, and the line 15; the yoke straps for the plough ¹⁶ feet and the line 8.

⁶⁴ ¹ When the olives are ripe they should be gathered as soon as possible, and allowed to remain on the ground or the floor as short a time as possible, as they spoil on the ground or the floor. The gatherers want to have as many windfalls as possible, that there may be more of them to gather; and the pressers want them to lie on the floor a long time, so that they will soften and be easier to mill. Do not believe that the oil will be of greater quantity if they lie on the floor. The more quickly you work them up the better the results will be, and you will get more and better oil from a given quantity. Olives which have been long on the ground or the floor will yield less oil and of a poorer quality. If possible, draw off the oil twice a day, for the longer it remains on the amurca and the dregs, the worse the quality will be.

⁶⁵ ¹ Observe the following directions in making green oil: Pick the olives off the ground as soon as possible, and if they are dirty, wash them and clean off leaves and dung. Mill them a day or two days after they have been gathered.

Pick olives after they have turned black; the more acid the olives the better the oil will be, but the master will find it most profitable to make oil only from ripe olives. If frost has fallen on the olives, mill them three or four days after gathering. You may sprinkle such olives with salt, if you wish; and keep a high temperature in the pressing-room and the storeroom.

⁶⁶ ¹ Duties of the watchman and the ladler: The watchman must keep a close watch on the store-room and the pressing-room, and must see that there is as little passing in and out as possible. He must see that the work is done as neatly and cleanly as possible, that copper vessels are not used, and that no seeds are crushed for oil; otherwise it will have a bad flavour. Place a lead cauldron in the basin into which the oil flows. As soon as the workmen press down the levers, at once the ladler must take off the oil with a shell very carefully, and without stopping, being careful not to take off the amurca. Pour the oil into the first vessel, then into the second, each time removing the dregs and the amurca. When you take the oil from the cauldron, skim off the amurca.

⁶⁷ Further duties of the watchman: Those in the pressing-room must keep their vessels clean and see that the olives are thoroughly worked up and that they are well dried. They must not cut wood in the pressing-room. They must skim the oil frequently. He must give the workmen a sextarius of oil for each pressing, and what they need for the lamp. He must throw out the lees every day and keep cleaning the amurca until the oil reaches the last vat in the room. He must wipe off the baskets with a sponge, and change the vessel daily until the oil reaches the jar. He must be careful to see that no oil is pilfered from the pressing-room or the cellar.

⁶⁸ ¹ When the vintage and the olive harvest are over, raise up the press beams, and hang up the mill ropes, cables, and cords on the meat-rack or the beam. Put the stones, pins, levers, rollers, baskets, hampers, grass baskets, ladders, props, and everything which will be needed again, each in its proper place.

⁶⁹ ¹ To steep new oil jars: Fill them with amurca, maintaining a constant level, for seven days; then pour off the amurca and let the jars dry. When the drying is finished soak gum in water a day ahead, and the next day dilute it. Then heat the jar to a lower temperature than if you were to pitch it — it is sufficient for it to be warm, so heat it over a slow fire. When it is moderately warm, pour in the gum and rub it in. Four pounds of gum are enough for a jar holding 50 quadrants, if you apply it properly.

⁷⁰ Remedy for oxen: If you have reason to fear sickness, give the oxen before they get sick the following remedy: $\frac{3}{4}$ grains of salt, $\frac{3}{4}$ laurel leaves, $\frac{3}{4}$ leek leaves, $\frac{3}{4}$ spikes of leek, $\frac{3}{4}$ of garlic, $\frac{3}{4}$ grains of incense, $\frac{3}{4}$ plants of Sabine herb, $\frac{3}{4}$ leaves of rue, $\frac{3}{4}$ stalks of bryony, $\frac{3}{4}$ white beans, $\frac{3}{4}$ live coals, and $\frac{3}{4}$ pints of wine. You must

gather, macerate, and administer all these while standing, and he who administers the remedy must be fasting. Administer to each ox for three days, and divide it in such a way that when you have administered three doses to each you will have used it all. See that the ox and the one who administers are both standing, and use a wooden vessel.

⁷¹ ¹ If an ox begins to sicken, administer at once one hen's egg raw, and make him swallow it whole. The next day macerate a head of leek with a hemina of wine, and make him drink it all. Macerate while standing, and administer in a wooden vessel. Both the ox and the one who administers must stand, and both be fasting.

⁷² ¹ To keep oxen from wearing down their feet, smear the bottom of their hoofs with melted pitch before you drive them anywhere on a road.

⁷³ ¹ Give the cattle medicine every year when the grapes begin to change colour, to keep them well. When you see a snake skin, pick it up and put it away, so that you will not have to hunt for one when you need it. Macerate this skin, spelt, salt, and thyme with wine, and give it to all the cattle to drink. See that the cattle always have good, clear water to drink in summer-time; it is important for their health.

⁷⁴ Recipe for kneaded bread: Wash your hands and a bowl thoroughly. Pour meal into the bowl, add water gradually, and knead thoroughly. When it is well kneaded, roll out and bake under a crock.

⁷⁵ Recipe for libum: Bray 2 pounds of cheese thoroughly in a mortar; when it is thoroughly macerated, add 1 pound of wheat flour, or, if you wish the cake to be more dainty, $\frac{1}{2}$ pound of fine flour, and mix thoroughly with the cheese. Add 1 egg, and work the whole well. Pat out a loaf, place on leaves, and bake slowly on a warm hearth under a crock.

⁷⁶ ¹ Recipe for placenta: Materials, 2 pounds of wheat flour for the crust, 4 pounds of flour and 2 pounds of prime groats for the tracta. Soak the groats in water, and when it becomes quite soft pour into a clean bowl, drain well, and knead with the hand; when it is thoroughly kneaded, work in the 4 pounds of flour gradually. From this dough make the tracta, and spread them out in a basket where they can dry; and when they are dry arrange them evenly. Treat each tractum as follows: After kneading, brush them with an oiled cloth, wipe them all over and coat with oil. When the tracta are moulded, heat thoroughly the hearth where you are to bake, and the crock. Then moisten the 2 pounds of flour, knead, and make of it a thin lower crust. Soak 14 pounds of sheep's cheese (sweet and quite fresh) in water and macerate, changing the water three times. Take out a small quantity at a time, squeeze out the water thoroughly with the hands, and when it is quite dry place it in a bowl. When you have dried out the

cheese completely, knead it in a clean bowl by hand, and make it as smooth as possible. Then take a clean flour sifter and force the cheese through it into the bowl. Add 4½ pounds of fine honey, and mix it thoroughly with the cheese. Spread the crust on a clean board, one foot wide, on oiled bay leaves, and form the placenta as follows: Place a first layer of separate tracta over the whole crust, cover it with the mixture from the bowl, add the tracta one by one, covering each layer until you have used up all the cheese and honey. On the top place single tracta, and then fold over the crust and prepare the hearth . . . then place the placenta, cover with a hot crock, and heap coals on top and around. See that it bakes thoroughly and slowly, uncovering two or three times to examine it. When it is done, remove and spread with honey. This will make a half-modius cake.

⁷⁷ ₁ Recipe for spira: For the quantity desired do everything in proportion just as for the placenta, except that you shape it differently. Cover the tracta on the crust thickly with honey; then draw out like a rope and so place it on the crust, filling it closely with plain tracta. Do everything else as in the case of the placenta, and so bake.

⁷⁸ ₁ Recipe for scriblita: Follow the same directions with respect to crust, tracta, and cheese, as for the placenta, but without honey.

⁷⁹ ₁ Recipe for globi: Mix the cheese and spelt in the same way, sufficient to make the number desired. Pour lard into a hot copper vessel, and fry one or two at a time, turning them frequently with two rods, and remove when done. Spread with honey, sprinkle with poppy-seed, and serve.

SECTIONS 80-99

⁸⁰ Make the enyctum the same way as the globus, except that you use a vessel with a hole in the bottom; press it through this hole into boiling lard, and shape it like the spira, coiling and keeping it in place with two rods. Spread with honey and glaze while moderately warm. Serve with honey or with mulsum.

⁸¹ ¹ The erneum is made in the same way as the placenta, and has the same ingredients. Mix it in a trough, pour into an earthenware jar, plunge into a copper pot full of hot water, and boil over the fire. When it is done, break the jar and serve.

⁸² ¹ The spaerita is made in the same way as the spira, except that you shape it as follows: Mould balls as large as the fist, of tracta, cheese, and honey; arrange them on the crust as closely as in the spira, and bake in the same way.

⁸³ ¹ Perform the vow for the health of the cattle as follows: Make an offering to Mars Silvanus in the forest during the daytime for each head of cattle: 3 pounds of meal, 4½ pounds of bacon, 4½ pounds of meat, and 3 pints of wine. You may place the viands in one vessel, and the wine likewise in one vessel. Either a slave or a free man may make this offering. After the ceremony is over, consume the offering on the spot at once. A woman may not take part in this offering or see how it is performed. You may vow the vow every year if you wish.

⁸⁴ Recipe for the savillum: Take ½ pound of flour, 2½ pounds of cheese, and mix together as for the libum; add ¼ pound of honey and 1 egg. Grease an earthenware dish with oil. When you have mixed thoroughly, pour into a dish and cover with a crock. See that you bake the centre thoroughly, for it is deepest there. When it is done, remove the dish, cover with honey, sprinkle with poppy-seed, place back under the crock for a while, then remove from the fire. Serve in the dish, with a spoon.

⁸⁵ ¹ Recipe for Punic porridge: Soak a pound of groats in water until it is quite soft. Pour it into a clean bowl, add 3 pounds of fresh cheese, ½ pound of honey, and 1 egg, and mix the whole thoroughly; turn into a new pot.

⁸⁶ ¹ Recipe for wheat pap: Pour ½ pound of clean wheat into a clean bowl, wash well, remove the husk thoroughly, and clean well. Pour into a pot with pure water and boil. When done, add milk slowly until it makes a thick cream.

⁸⁷ ¹ Recipe for starch: Clean hard wheat thoroughly, pour into a trough, and add water twice a day. On the tenth day drain off the water, squeeze thoroughly, mix well in a clean tray until it is of the consistency of wine-dregs. Place some of this in a new linen bag and squeeze out the creamy substance into a new pan

or bowl. Treat the whole mass in the same way, and knead again. Place the pan in the sun and let it dry; then place in a new bowl and cook with milk.

⁸⁸ 1 Recipe for bleaching salt: Break off the neck of a clean amphora, fill with clear water, and place in the sun. Suspend in it a basket filled with common salt and shake and renew from time to time. Do this daily several times a day until the salt ceases to dissolve for two days. You can find when it is saturated by this test: place a small dried fish or an egg in it, and if it floats you have a brine strong enough to pickle meat or cheese or salted fish. Place this brine in flat vessels or in pans and expose it to sun. Keep it in the sun until it solidifies, and you will have a pure salt. In cloudy weather or at night put it under cover, but expose it to the sun every day when there is sunshine.

⁸⁹ 1 To cram hens or geese: Shut up young hens which are beginning to lay; make pellets of moist flour or barley-meal, soak in water, and push into the mouth. Increase the amount daily, judging from the appetite the amount that is sufficient. Cram twice a day, and give water at noon, but do not place water before them for more than one hour. Feed a goose the same way, except that you let it drink first, and give water and food twice a day.

⁹⁰ 1 To cram squabs: After catching the squab feed it first boiled and toasted beans, blowing them from your mouth into its mouth, and water the same way; do this for seven days. Then clean crushed beans and spelt; let one-third the quantity of beans come to a boil, then pour in the spelt, keeping it clean, and boil thoroughly. When you have turned it out of the pot, knead it thoroughly, after greasing the hand with oil — a small quantity first, then more — greasing and kneading until you can make pellets. Feed the food in moderate quantities, after soaking it.

⁹¹ To make a threshing-floor: Turn the soil for the floor and pour amurca over it thickly, letting it soak in. Then break up the clods carefully, level the ground, and pack it with rammers; then cover again with amurca and let it dry. If you build in this way the ants will not injure it, and weeds will not grow.

⁹² 1 To keep weevils and mice from injuring grain, make a slime of amurca with a little chaff added, leaving it quite thin and working thoroughly. Cover the whole granary with the thick slime, and then add a coat of amurca over the whole. After it has dried, store cooled grain there, and the weevils will not injure it.

⁹³ 1 If an olive tree is sterile, trench it and wrap it with straw. Make a mixture of equal parts of amurca and water and pour it around the tree; an urna is sufficient for a large tree, and a proportionate quantity for the smaller trees. If you do the same thing for bearing trees they will be even more productive; do not wrap these with straw.

⁹⁴ ¹ To make fig trees retain their fruit, do everything as for the olive, and in addition bank them deep in early spring. If you do this the fruit will not drop prematurely, the trees will not be scaly, and they will be much more productive.

⁹⁵ ¹ To keep caterpillars off the vines: Strain stored amurca and pour ² congii into a copper vessel; heat over a gentle fire, stirring constantly with a stick until it reaches the consistency of honey. Take one-third sextarius of bitumen, and one-fourth sextarius of sulphur, pulverize each in a mortar separately, and add in very small quantities to the warm amurca, at the same time stirring with a stick, and let it boil again in the open; for if you boil it under cover it will blaze up when the mixture of bitumen and sulphur is added. When it reaches the consistency of glue let it cool. Apply this around the trunk and under the branches, and caterpillars will not appear.

⁹⁶ ¹ To keep scab from sheep; Take equal parts of old strained amurca, water in which lupines have been boiled, and dregs of good wine, and mix all together. After shearing, smear the whole body with this, and let them sweat two or three days. Then wash them in the sea, or, if you have no sea-water, make a brine and wash them in it. If you do this as directed, they will not have the scab, will bear more wool and of better quality, and ticks will not bother them. Use the same remedy for all quadrupeds if they have the scab.

⁹⁷ ¹ Grease the axle, belts, shoes, and hides with boiled amurca; you will make them all better.

⁹⁸ ¹ To protect clothing from moths: Boil amurca down to one-half its volume and rub it over the bottom, the outside, the feet, and the corners of the chest. After it is dry, store the clothing and the moths will not attack it. Also, if you rub it over the whole surface of wooden furniture it will prevent decay, and the article when rubbed will have a higher polish. You may also use it as a polish for any kind of copper vessel, after cleaning the article thoroughly. After applying the amurca, rub the vessel when it is to be used; it will have a lustre, and will be protected from rust.

⁹⁹ If you wish to keep dried figs from spoiling, place them in an earthenware vessel and coat this with boiled amurca.

SECTIONS 100-119

100 1 If you intend to store oil in a new jar, first wash down the jar with crude amurca, shaking for a long time so that it may soak up the amurca thoroughly. If you do this, the jar will not soak up the oil, it will make the oil better, and the jar itself will be stronger.

101 1 To preserve myrtle or any other twigs with the berries, or fig branches with the leaves, tie them together into bundles and plunge them into amurca until they are covered. But the fruit to be preserved should be picked a little before it is ripe, and the vessel in which it is stored should be sealed tight.

102 1 When a serpent has bitten an ox or any other quadruped, macerate an acetabulum of fennel flower, which the physicians call smyrnaeum, in a hemina of old wine. Administer through the nostrils, and apply swine's dung to the wound itself. Treat a person in the same way if occasion arises.

103 1 To keep cattle well and strong, and to increase the appetite of those which are off their feed, sprinkle the feed which you give with amurca. Feed in small quantities at first to let them grow accustomed to it, and then increase. Give them less often a draught of equal parts of amurca and water. Do this every fourth or fifth day. This treatment will keep them in better condition, disease will stay away from them.

104 Wine for the hands to drink through the winter: Pour into a jar 10 quadrantals of must, 2 quadrantals of sharp vinegar, 2 quadrantals of boiled must, 50 quadrantals of fresh water. Stir with a stick thrice a day for five consecutive days. Then add 64 sextarii of old sea-water, cover the jar, and seal ten days later. This wine will last you until the summer solstice; whatever is left over after the solstice will be a very sharp and excellent vinegar.

105 1 If your place is far from the sea, you may use this recipe for Greek wine: Pour 20 quadrantals of must into a copper or lead boiler and heat. As soon as the wine boils, remove the fire; and when the wine has cooled, pour into a jar holding 40 quadrantals. Pour 1 modius of salt and 1 quadrantal of fresh water into a separate vessel, and let a brine be made; and when the brine is made pour it into the jar. Pound rush and calamus in a mortar to make a sufficient quantity, and pour 1 sextarius into the jar to give it an odour. Thirty days later seal the jar, and rack off into amphorae in the spring. Let it stand for two years in the sun, then bring it under cover. This wine will not be inferior to the Coan.

106 1 Preparation of sea-water: Take 1 quadrantal of water from the deep sea where no fresh water comes; parch 1½ pounds of salt, add it, and stir with a rod

until a boiled hen's egg will float; then stop the stirring. Add ² congii of old wine, either Aminnian or ordinary white, and after mixing thoroughly pour into a pitched jar and seal. If you wish to make a larger quantity of sea-water, use a proportionate amount of the same materials.

¹⁰⁷ ¹ To coat the brim of wine jars, so as to give a good odour and to keep any blemish from the wine: Put ⁶ congii of the best boiled must in a copper or lead vessel; take a hemina of dry crushed iris and ⁵ pounds of fragrant Campanian melilot, grind very fine with the iris, and pass through a sieve into the must. Boil the whole over a slow fire of faggots, stirring constantly to prevent scorching; continue the boiling, until you have boiled off a half. When it has cooled, pour into a sweet smelling jar covered with pitch, seal, and use for the brims of wine jars.

¹⁰⁸ ¹ If you wish to determine whether wine will keep or not, place in a new vessel half an acetabulum of large pearl barley and a sextarius of the wine you wish to test; place it on the coals and bring it to a boil two or three times; then strain, throw away the barley, and place the wine in the open. Taste it the next morning. If it is sweet, you may know that the wine in the jar will keep; but if it is slightly acid it will not.

¹⁰⁹ ¹ To make sharp wine mild and sweet: Make ⁴ pounds of flour from vetch, and mix ⁴ cyathi of wine with boiled must; make into small bricks and let them soak for a night and a day; then dissolve with the wine in the jar, and seal sixty days later. The wine will be mild and sweet, of good colour and of good odour.

¹¹⁰ ¹ To remove a bad odour from wine: Heat a thick clean piece of roofing-tile thoroughly in the fire. When it is hot coat it with pitch, attach a string, lower it gently to the bottom of the jar, and leave the jar sealed for two days. If the bad odour is removed the first time, that will be best; if not, repeat until the bad odour is removed.

¹¹¹ ¹ If you wish to determine whether wine has been watered or not: Make a vessel of ivy wood and put in it some of the wine you think has water in it. If it contains water, the wine will soak through and the water will remain, for a vessel of ivy wood will not hold wine.

¹¹² ¹ Recipe for Coan wine: Take sea-water at a distance from the shore, where fresh water does not come, when the sea is calm and no wind is blowing, seventy days before vintage. After taking it from the sea, pour into a jar, filling it not fully but to within five quadrantals of the top. Cover the jar, leaving space for air, and thirty days later pour it slowly and carefully into another jar, leaving the sediment in the bottom. Twenty days later pour in the same way into a third jar, and leave until vintage. Allow the grapes from which you intend to make the Coan wine to remain on the vine, let them ripen thoroughly, and pick them when

they have dried after a rain. Place them in the sun for two days, or in the open for three days, unless it is raining, in which case put them under cover in baskets; clear out any berries which have rotted. Then take the above-mentioned sea-water and pour ¹⁰ quadrantals into a jar holding 50; then pick the berries of ordinary grapes from the stem into the jar until you have filled it. Press the berries with the hand so that they may soak in the sea-water. When the jar is full, cover it, leaving space for air, and three days later remove the grapes from the jar, tread out in the pressing-room, and store the wine in jars which have been washed clean and dried.

¹¹³ 1 To impart a sweet aroma: Take a tile covered with pitch, spread over it warm ashes, and cover with aromatic herbs, rush and the palm which the perfumers keep, place in a jar and cover, so that the odour will not escape before you pour in the wine. Do this the day before you wish to pour in the wine. Pour the wine into the jars from the vat immediately, let them stand covered for fifteen days before sealing, leaving space for air, and then seal. Forty days later pour off into amphorae, and add one sextarius of boiled must to the amphora. Do not fill the amphorae higher than the bottom of the handles, and place them in the sun where there is no grass. Cover the amphorae so that water cannot enter, and let them stand in the sun not more than four years; four years later, arrange them in a wedge, and pack them closely.

¹¹⁴ 1 If you wish to make a laxative wine: After vintage, when the vines are trenched, expose the roots of as many vines as you think you will need for the purpose and mark them; isolate and clear the roots. Pound roots of black hellebore in the mortar, and apply around the vines. Cover the roots with old manure, old ashes, and two parts of earth, and cover the whole with earth. Gather these grapes separately; if you wish to keep the wine for some time as a laxative, do not mix it with the other wine. Take a cyathus of this wine, dilute it with water, and drink it before dinner; it will move the bowels with no bad results.

¹¹⁵ 1 Throw in a handful of black hellebore to the amphora of must, and when the fermentation is complete, remove the hellebore from the wine; save this wine for a laxative.

To prepare a laxative wine: When the vines are trenched, mark with red chalk so that you will not mix with the rest of the wine; place three bundles of black hellebore around the roots and cover with earth. Keep the yield from these vines separate during the vintage. Put a cyathus into another drink; it will move the bowels and the next day give a thorough purging without danger.

¹¹⁶ 1 To preserve lentils: Infuse asafetida in vinegar, soak the lentils in the infusion of vinegar and asafetida, and expose to the sun; then rub the lentils with oil, allow them to dry, and they will keep quite sound.

117 1 To season green olives: Bruise the olives before they become black and throw them into water. Change the water often, and when they are well soaked press out and throw into vinegar; add oil, and a half pound of salt to the modius of olives. Make a dressing of fennel and mastic steeped in vinegar, using a separate vessel. If you wish to mix them together they must be served at once. Press them out into an earthenware vessel and take them out with dry hands when you wish to serve them.

118 1 To season green olives which you wish to use after vintage, add as much must as vinegar; for the rest, season them as stated above.

119 1 Recipe for a confection of green, ripe, and mottled olives. Remove the stones from green, ripe, and mottled olives, and season as follows: chop the flesh, and add oil, vinegar, coriander, cummin, fennel, rue, and mint. Cover with oil in an earthen dish, and serve.

SECTIONS 120-139

¹²⁰ ¹ If you wish to keep grape juice through the whole year, put the grape juice in an amphora, seal the stopper with pitch, and sink in the pond. Take it out after thirty days; it will remain sweet the whole year.

¹²¹ Recipe for must cake: Moisten ¹ modius of wheat flour with must; add anise, cummin, ² pounds of lard, ¹ pound of cheese, and the bark of a laurel twig. When you have made them into cakes, put bay leaves under them, and bake.

¹²² ¹ To blend a wine as a remedy for retention of urine: Macerate capreida or Jupiter, add a pound of it, and boil in ² congii of old wine in a copper or lead vessel. After it cools, pour into a bottle. Take a cyathus in the morning before eating; it will prove beneficial.

¹²³ ¹ To blend a wine as a remedy for gout: Cut into small chips a piece of juniper wood a half-foot thick, boil with a congius of old wine, and after it cools pour into a bottle. Take a cyathus in the morning before eating; it will prove beneficial.

¹²⁴ ¹ Dogs should be chained up during the day, so that they may be keener and more watchful at night.

¹²⁵ ¹ Recipe for myrtle wine: Dry out black myrtle in the shade, and when dried keep it until vintage. Macerate a half-modius of myrtle into an urna of must and seal it. When the must has ceased to ferment remove the myrtle. This is a remedy for indigestion, for pain in the side, and for colic.

¹²⁶ For gripes, for loose bowels, for tapeworms and stomach-worms, if troublesome: Take ³⁰ acid pomegranates, crush, place in a jar with ³ congii of strong black wine, and seal the vessel. Thirty days later open and use. Drink a hemina before eating.

¹²⁷ ¹ Remedy for dyspepsia and strangury: Gather pomegranate blossoms when they open, and place ³ minae of them in an amphora. Add one quadrantal of old wine and a mina of clean crushed root of fennel; seal the vessel and thirty days later open and use. You may drink this as freely as you wish without risk, when you wish to digest your food and to urinate. The same wine will clear out tapeworms and stomach-worms if it is blended in this way. Bid the patient refrain from eating in the evening, and the next morning macerate ¹ drachm of pulverized incense, ¹ drachm of boiled honey, and a sextarius of wine of wild marjoram. Administer to him before he eats, and, for a child, according to age, a triobolus^o and a hemina. Have him climb a pillar and jump down ten times, and walk about.

128 1 To plaster a dwelling: Take very chalky or red earth, pour amurca over it, and add chopped straw; let it soften for four days, and when it has softened thoroughly, work up with a spade; and when you have worked it up, plaster. With this treatment, the moisture will not injure the walls, nor the mice burrow in them, nor weeds grow, nor the plaster crack.

129 1 To make a floor for threshing grain: Break the ground fine, soak thoroughly with amurca and let it absorb as much as possible; then pulverize the dirt and level with a roller or rammer. When it is levelled the ants will not be troublesome, and there will be no mud when it rains.

130 1 Wet olive logs and other firewood with crude amurca and expose them to the sun so that they will absorb it thoroughly; with this treatment, they will not be smoky, but will burn well.

131 1 Make the offering for the oxen when the pear trees bloom; then begin the spring ploughing. Plough first the spots which are dry and sandy. Then, the heavier and wetter the spots are, the later they should be ploughed.

132 The offering is to be made in this way: Offer to Jupiter Dapalis a cup of wine of any size you wish, observing the day as a holiday for the oxen, the teamsters, and those who make the offering. In making the offering use this formula: "Jupiter Dapalis, forasmuch as it is fitting that a cup of wine be offered thee, in my house and in the midst of my people, for thy sacred feast; and to that end, be thou honoured by the offering of this food." Wash the hands, then take the wine, and say: "Jupiter Dapalis, be thou honoured by the offering of thy feast, and be thou honoured by the wine placed before thee." You may make an offering to Vesta if you wish. Present it to Jupiter religiously, in the fitting form. The feast to Jupiter consists of roasted meat and an urn of wine. After the offering is made plant millet, panic grass, garlic, and lentils.

133 1 To layer fruit and other trees: Press back into the ground the scions which spring up from the ground, but raise their tips out, so that they will take root; dig up at the proper time and transplant vertically. In this way you should propagate from the crown and transplant fig, olive, pomegranate, quince, wild quince, and all other fruits, Cyprian and Delphic laurel, plum, conjuglan myrtle, as well as white and black myrtle, Abellan and Praenestine nuts, and plane trees. Those which you wish to have planted more carefully should be planted in pots. To make them take root while on the tree, take a pot perforated at the bottom or a basket, run the shoot through it, fill the basket with earth, pack it, and leave it on the tree. When it is two years old cut off the tender branch below and plant along with the basket. By this method you can make any variety of tree take root firmly. Vines may also be layered by thrusting them through a basket, packing firmly with earth, cutting a year later, and planting along with the basket.

¹³⁴ ¹ Before harvest the sacrifice of the porca praecidanea should be offered in this manner: Offer a sow as porca praecidanea to Ceres before harvesting spelt, wheat, barley, beans, and rape seed; and address a prayer, with incense and wine, to Janus, Jupiter, and Juno, before offering the sow. Make an offering of cakes to Janus, with these words: "Father Janus, in offering these cakes, I humbly beg that thou wilt be gracious and merciful to me and my children, my house and my household." Then make an offering of cake to Jupiter with these words: "In offering this cake, O Jupiter I humbly beg that thou, pleased by this offering, wilt be gracious and merciful to me and my children, my house and my household." Then present the wine to Janus, saying: "Father Janus, as I prayed humbly in offering the cakes, so wilt thou to the same end be honoured by this wine placed before thee." And then pray to Jupiter thus: "Jupiter, wilt thou deign to accept the cake; wilt thou deign to accept the wine placed before thee." Then offer up the porca praecidanea. When the entrails have been removed, make an offering of cakes to Janus, with a prayer as before; and an offering of a cake to Jupiter, with a prayer as before. After the same manner, also, offer wine to Janus and offer wine to Jupiter, as was directed before for the offering of the cakes, and the consecration of the cake. Afterwards offer entrails and wine to Ceres.

¹³⁵ Tunics, togas, blankets, smocks, and shoes should be bought at Rome; caps, iron tools, scythes, spades, mattocks, axes, harness, ornaments, and small chains at Cales and Minturnae; spades at Venafrum; carts and sledges at Suessa and in Lucania; jars and pots at Alba and at Rome; and tiles at Venafrum. ² Roman ploughs will be good for heavy soil, Campanian for black loam. Roman yokes are the best made. You will find detachable ploughshares the best. The following cities are the best markets for the articles named: oil mills at Pompeii, and at Rufrius's yard at Nola; nails and bars at Rome; pails, oil-urns, water-pitchers, wine-urns, other copper vessels at Capua and at Nola; Campanian baskets from Capua will be found useful; ³ pulley ropes and all sorts of cordage at Capua; Roman baskets at Suessa and Casinum; . . . at Rome will be found best.

Lucius Tunnius, of Casinum, and Gaius Mennius, son of Lucius Mennius, of Venafrum, make the best press-ropes. Eight good native hides, freshly tanned, should be used for these, and should have very little salt; they should be tanned, rubbed down with fat, and then dried. ⁴ The rope should be laid down 72 feet long, and should have ³ splices, with ⁹ leather thongs, ² fingers wide, at each splice. When twisted it will be 49 feet long; ³ feet will be lost in the fastening, leaving 46 feet; when stretched, ⁵ feet will be added, and the length will be 51 feet. ⁵ The press-rope should be 55 feet long for the largest presses and 51 for the smaller when stretched. Proper length of thongs for the cart 60 feet, cords 45 feet,

leather reins for the cart 36 feet and for the plough 26 feet; traces 27½ feet; yoke straps for the cart 19 feet, lines 15; for the plough, yoke straps 12 feet and line 8 feet.

⁶ The largest mills are 4½ feet in diameter; the stones 3½ feet, the centre (when quarried) a foot and a palm thick. Interval between the column and the basin 1 foot, 2 fingers; basin 5 fingers thick. Those of the second size are 4 feet and a palm in diameter, interval between column and basin 1 foot, 1 finger, basin 5 fingers thick; stones 3 feet, 5 fingers in diameter, 1 foot, 3 fingers thick. Cut a hole ½ foot square in the stones. Those of the third size are 4 feet in diameter, interval between column and basin 1 foot, thickness of basin 5 fingers; stones 3 feet, 3 fingers in diameter, 1 foot, 2 fingers thick. Assemble and adjust the press after it has been brought to the place where you wish to set it up.

¹³⁶ ¹ Terms for letting the tending of the land to a share tenant: In the district of Casinum and Venafrum, on good land he should receive one-eighth of the unthreshed grain, on fairly good land one-seventh, on land of third quality one-sixth; if the threshed grain is shared, one-fifth. In the district of Venafrum the division is one-ninth of the unthreshed grain on the best land. If they mill in common, the caretaker shall pay for the milling in proportion to the share he receives. He should receive one-fifth of threshed barley and one-fifth of shelled beans.

¹³⁷ ¹ Terms for letting the care of the vineyard to a share tenant: he must take good care of the estate, the orchard, and the grain land. The share worker is to have enough hay and fodder for the cattle on the place; everything else is in common.

¹³⁸ Oxen may be yoked on feast days for these purposes: to haul firewood, bean stalks, and grain for storing. There is no holiday for mules, horses, or donkeys, except the family festivals.

¹³⁹ ¹ The following is the Roman formula to be observed in thinning a grove: A pig is to be sacrificed, and the following prayer uttered: "Whether thou be god or goddess to whom this grove is dedicated, as it is thy right to receive a sacrifice of a pig for the thinning of this sacred grove, and to this intent, whether I or one at my bidding do it, may it be rightly done. To this end, in offering this pig to thee I humbly beg that thou wilt be gracious and merciful to me, to my house and household, and to my children. Wilt thou deign to receive this pig which I offer thee to this end."

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¹⁴⁰ ¹ If you wish to till the ground, offer a second sacrifice in the same way, with the addition of the words: “for the sake of doing this work.” So long as the work continues, the ritual must be performed in some part of the land every day; and if you miss a day, or if public or domestic feast days intervene, a new offering must be made.

¹⁴¹ ¹ The following is the formula for purifying land: Bidding the *suovetaurilia* to be led around, use the words: “That with the good help of the gods success may crown our work, I bid thee, Manius, to take care to purify my farm, my land, my ground with this *suovetaurilia*, in whatever part thou thinkest best for them to be driven or carried around.” ² Make a prayer with wine to Janus and Jupiter, and say: “Father Mars, I pray and beseech thee that thou be gracious and merciful to me, my house, and my household; to which intent I have bidden this *suovetaurilia* to be led around my land, my ground, my farm; that thou keep away, ward off, and remove sickness, seen and unseen, barrenness and destruction, ruin and unseasonable influence; ³ and that thou permit my harvests, my grain, my vineyards, and my plantations to flourish and to come to good issue, preserve in health my shepherds and my flocks, and give good health and strength to me, my house, and my household. To this intent, to the intent of purifying my farm, my land, my ground, and of making an expiation, as I have said, deign to accept the offering of these suckling victims; Father Mars, to the same intent deign to accept the offering of these suckling offering.” ⁴ Also heap the cakes with the knife and see that the oblation cake be hard by, then present the victims. When you offer up the pig, the lamb, and the calf, use this formula: “To this intent deign to accept the offering of these victims.” . . . If favourable omens are not obtained in response to all, speak thus: “Father Mars, if aught hath not pleased thee in the offering of those sucklings, I make atonement with these victims.” If there is doubt about one or two, use these words: “Father Mars, inasmuch as thou wast not pleased by the offering of that pig, I make atonement with this pig.”

¹⁴² Those things which are the duty of the overseer, the instructions which the master has given, all those things which should be done on the farm and what should be bought or brought in, and how food and raiment should be issued to the servants — the same I warn that he do and perform, and that he hearken to the master’s instructions. Furthermore, he must know how to manage the housekeeper and how to give her directions, so that the master, at his coming,

will find that all necessary preparations and arrangements have been made with care.

¹⁴³ 1 See that the housekeeper performs all her duties. If the master has given her to you as wife, keep yourself only to her. Make her stand in awe of you. Restrain her from extravagance. She must visit the neighbouring and other women very seldom, and not have them either in the house or in her part of it. She must not go out to meals, or be a gadabout. She must not engage in religious worship herself or get others to engage in it for her without the orders of the master or the mistress; let her remember that the master attends to the devotions for the whole household. She must be neat herself, and keep the farmstead neat and clean. She must clean and tidy the hearth every night before she goes to bed. On the Kalends, Ides, and Nones, and whenever a holy day comes, she must hang a garland over the hearth, and on those days pray to the household gods as the opportunity offers. She must keep a supply of cooked food on hand for you and the servants. She must keep many hens and have plenty of eggs. She must have a large store of dried pears, sorbs, figs, raisins, sorbs in must, preserved pears and grapes and quinces. She must also keep preserved grapes in grape-pulp and in pots buried in the ground, as well as fresh Praenestine nuts kept in the same way, and Scantian quinces in jars, and other fruits that are usually preserved, as well as wild fruits. All these she must store away diligently every year. She must also know how to make good flour and to grind spelt fine.

¹⁴⁴ 1 Terms for letting the gathering of olives: The contractor will gather the whole harvest carefully, according to the directions of the owner or his representative or the purchaser of the crop. He will not pick or beat down olives without the orders of the owner or his representative. If anyone violates this rule, no one will pay or be liable for what he has picked that day. All gatherers will take an oath before the owner or his representative that they have not stolen olives, nor has anyone with their connivance stolen olives from the estate of Lucius Manlius during that harvest; if any refuse to take the oath, no one will pay or be liable for what he has gathered. He must give security for the proper harvesting of the olives, satisfactory to Lucius Manlius. Ladders are to be returned in as good condition as when they were issued, except those which have been broken because of age; if they are not returned, a fair deduction will be made by arbitration of an honest man. Whatever damage is done the owner through the fault of the contractor the latter will make good, the amount to be deducted after arbitration by an honest person. The contractor will furnish as many gatherers and pickers as are needed; and if he fails to do so, a deduction will be made of the cost of hiring or contracting, and the total will be less by that amount. He is not to remove firewood or olives from the farm; and if any of his

gatherers carry them off, a deduction will be made of 2 sesterces for each load, and that amount will not be due. All olives will be measured clean in an olive measure. He is to furnish fifty active workmen, two-thirds being pickers. No one shall form a combination for the purpose of raising the contract price for harvesting and milling olives, unless he names his associate at the time; in case of a violation of this rule, if the owner or his representative wish, all the associates shall take an oath, and if anyone refuses so to swear, no one will pay or be liable for pay for the gathering or milling of the olives to one who has not so sworn. Bonuses: The extra allowance for a harvest of 1200 modii will be 5 modii of salted olives, 9 pounds of pure oil, 5 quadrantals of vinegar for the whole harvest; for that part of the salted olives which they do not take during the harvesting, an allowance of 5 sesterces per modius of the aforesaid will be made.

¹⁴⁵ 1 Terms on which contracts are to be made for the milling of olives: Mill them honestly, to the satisfaction of the owner or his representative in charge of the work. If necessary, supply six complete equipments. Furnish workmen to the satisfaction of the representative of the owner or the one who has bought the olives. If a mill is necessary, set it up. If labourers are hired, or the work has to be sublet, settle for this, or let it be deducted. Do not touch any oil by way of use or pilfering beyond what the owner or his representative issues; if he takes it, 40 sesterces will be deducted for each offence, and that amount will not be due. All hands engaged in the manufacturing will take an oath before the owner or his representative that neither they nor anyone with their connivance has stolen oil or olives from the farm of Lucius Manlius. If any one of them will not take such an oath, his share of the pay will be deducted, and that amount will not be due. You will have no partner without the approval of the owner or his representative. Any damage done to the owner through the fault of the contractor will be deducted on the decision of an honest person. If green oil is required, make it. There will be an allowance of a sufficient quantity of oil and salt for his own use, and two victoriati as toll.

¹⁴⁶ 1 Terms for the sale of olives on the tree: Olives for sale on the tree on an estate near Venafrum. The purchaser of the olives will add one per cent. of all money more than the purchase price; the auctioneer's fee of 50 sesterces; and pay 1500 pounds of Roman oil, 200 pounds of green oil, 50 modii of windfall olives, 10 modii of picked olives, all measured by olive measure, and 10 pounds of lubricating oil; and pay 2 cotylae of the first pressing for the use of the weights and measures of the owner. Date of payment: within ten months from the first of November he will pay the contract price for gathering and working up the olives, even if the purchaser has made a contract, on the Ides. Sign a contract and give bond to the satisfaction of the owner or his representative that such payments

will be made in good faith, and that all will be done to the satisfaction of the owner or his representative. Until payment is made, or such security has been given, all property of the purchaser on the place will be held in pledge, and none of it shall be removed from the place; whatever is so removed becomes the property of the owner. All presses, ropes, ladders, mills, and whatever else has been furnished by the owner, will be returned in the same good condition, except articles broken because of age; and a fair price will be paid for all not returned. If the purchaser does not pay the gatherers and the workmen who have milled the oil, the owner may, if he wishes, pay the wages due; and the purchaser will be liable to the owner for the amount, and give bond, and his property will be held in pledge as described above.

¹⁴⁷ ¹ Terms for the sale of grapes on the vine: The purchaser will leave unwashed lees and dregs. Storage will be allowed for the wine until the first of October next following; if it is not removed before that time, the owner will do what he will with the wine. All other terms as for the sale of olives on the tree.

¹⁴⁸ ¹ Terms for the sale of wine in jars: Forty-one urns to the culleus will be delivered, and only wine which is neither sour nor musty will be sold. Within three days it shall be tasted subject to the decision of an honest man, and if the purchaser fails to have this done, it will be considered tasted; but any delay in the tasting caused by the owner will add as many days to the time allowed the purchaser. The acceptance will take place before the first of January next following; and in default of the acceptance by the purchaser the owner will measure the wine, and settlement will be made on the basis of such measurement; if the purchaser wishes the owner will take an oath that he has measured it correctly. Storage will be allowed for the wine until the first of October next following; if it is not removed before that date, the owner will do what he wishes with the wine. Other terms as for olives on the tree.

¹⁴⁹ Terms for the lease of winter pasturage: The contract should state the limits of pasturage. The use of the pasturage should begin on the first of September, and should end on dry meadows when the pear trees begin to bloom, and on water meadows when the neighbours above and below begin irrigating, or on a definite date fixed for each; on all other meadows on the first of March. The owner reserves the right to pasture two yoke of oxen and one gelding while the renter pastures; the use of vegetables, asparagus, firewood, water, roads, and right of way is reserved for the owner. All damage done to the owner by the renter or his herdsmen or cattle shall be settled for according to the decision of an honest man; and all damage done to the renter by the owner or his servants or cattle shall be settled for according to the decision of good man. Until such damage is settled for in cash or by security, or the debt is assigned, all herds and

servants on the place shall be held in pledge; and if there arises any dispute over such matters, let the decision be made at Rome.

¹⁵⁰ 1 Terms for the sale of the increase of the flock: The lessee will pay per head 1½ pounds of cheese, one-half dry; one-half of the milking on holy days; and an urn of milk on other days. For the purpose of this rule a lamb which lives for a day and a night is counted as increase; the lessee will end the increase on the first of June, or, if an intercalation intervene, on the first of May. The lessor will not promise more than thirty lambs; ewes which have borne no lambs count in the increase two for one. Ten months after the date of the sale of wool and lambs he shall receive his money from the collector. He may feed one whey-fed hog for every ten sheep. The lessee will furnish a shepherd for two months; and he shall remain in pledge until the owner is satisfied either by security or by payment.

¹⁵¹ 1 As to cypress seed, the best method for its gathering, planting, and propagation, and for the planting of the cypress bed has been given as follows by Minius Percennius of Nola: The seed of the Tarentine cypress should be gathered in the spring, and the wood when the barley turns yellow; when you gather the seed, expose it to the sun, clean it, and store it dry so that it may be set out dry. Plant the seed in the spring, in soil which is very mellow, the so-called pulla, close to water. First cover the ground thick with goat or sheep dung, then turn it with the trenching spade and mix it well with the dung, cleaning out grass and weeds; break the ground fine. Form the seed-beds four feet wide, with the surface concave, so that they will hold water, leaving a footway between the beds so that you may clean out the weeds. After the beds are formed, sow the seed as thickly as flax is usually sowed, sift dirt over it with a sieve to the depth of a half-finger, and smooth carefully with a board, or the hands or feet. In case the weather is dry so that the ground becomes thirsty, irrigate by letting a stream gently into the beds; or, failing a stream, have the water brought and poured gently; see that you add water whenever it is needed. If weeds spring up, see that you free the beds of them. Clean them when the weeds are very young, and as often as necessary. This procedure should be continued as stated throughout the summer. The seed, after being planted, should be covered with straw, which should be removed when they begin to sprout.

¹⁵² 1 Of brush-brooms, according to the directions of the Manlii: At several times during the thirty days of the vintage, make brooms of dry elm twigs bound around a stick. With these scrape continually the inner surfaces of the wine jars, to keep the wine dregs from sticking to the sides.

¹⁵³ 1 To make lees-wine: Keep two Campanian olive baskets for the purpose; fill them with lees, place them under the press-beam, and force out the juice.

¹⁵⁴ ¹ A convenient method of measuring wine for buyers: Take for this purpose a cask of culleus size, with four handles at the top for easy handling; make a hole at the bottom, fitting into it a pipe so that it can be stopped tight, and also pierce near the top at the point where it will hold exactly a culleus. Keep it on the elevation among the jars, so that the wine can run from the jar into the cask; and when the cask is filled close it up.

¹⁵⁵ ¹ Land ought to be drained during the winter, and the drain-ditches on the hillsides kept clean. The greatest danger from water is in the early autumn, when there is dust. When the rains begin, the whole household must turn out with shovels and hoes, open the ditches, turn the water into the roads, and see that it flows off. You should look around the farmstead while it is raining, and mark all leaks with charcoal, so that the tile can be replaced after the rain stops. During the growing season, if water is standing anywhere, in the grain or the seed-bed or in ditches, or if there is any obstruction to the water, it should be cleared, opened and removed.

¹⁵⁶ ¹ Of the medicinal value of the cabbage: It is the cabbage which surpasses all other vegetables. It may be eaten either cooked or raw; if you eat it raw, dip it into vinegar. It promotes digestion marvellously and is an excellent laxative, and the urine is wholesome for everything. If you wish to drink deep at a banquet and to enjoy your dinner, eat as much raw cabbage as you wish, seasoned with vinegar, before dinner, and likewise after dinner eat some half a dozen leaves; it will make you feel as if you had not dined, and you can drink as much as you please.

² If you wish to clean out the upper digestive tract, take four pounds of very smooth cabbage leaves, make them into three equal bunches and tie them together. Set a pot of water on the fire, and when it begins to boil sink one bunch for a short time, which will stop the boiling; when it begins again sink the bunch briefly while you count five, and remove. ³ Do the same with the second and third bunches, then throw the three together and macerate. After macerating, squeeze through a cloth about a hemina of the juice into an earthen cup; add a lump of salt the size of a pea, and enough crushed cummin to give it an odour, and let the cup stand in the air through a calm night. Before taking a dose of this, one should take a hot bath, drink honey-water, and go to bed fasting. ⁴ Early the next morning he should drink the juice and walk about for four hours, attending to any business he has. When the desire comes on him and he is seized with nausea, he should lie down and purge himself; he will evacuate such a quantity of bile and mucus that he will wonder himself where it all came from. Afterwards, when he goes to stool, he should drink a hemina or a little more. If it acts too freely, if he will take two conchas of fine flour, sprinkle it into water,

and drink a little, it will cease to act. ⁵ Those who are suffering from colic should macerate cabbage in water, then pour into hot water, and boil until it is quite soft. Pour off the water, add salt, a bit of cummin, barley flour dust, and oil, and boil again; ⁶ turn into a dish and allow it to cool. You may break any food you wish into it and eat it; but if you can eat the cabbage alone, do so. If the patient has no fever, administer a very little strong, dark wine, diluted; but if he has fever give only water. The dose should be repeated every morning, but in small quantities, so that it may not pall but continue to be eaten with relish. The treatment is the same for man, woman, and child. ⁷ Now for those who pass urine with difficulty and suffer from strangury: take cabbage, place it in hot water and boil until it is half-done; pour off most of the water, add a quantity of oil, salt, and a bit of cummin, and boil for a short time. After that drink the broth of this and eat the cabbage itself, that it may be absorbed quickly. Repeat the treatment daily.

¹⁵⁷ ¹ Of Pythagoras's cabbage, what virtue and health-giving qualities it has. The several varieties of cabbage and the quality of each should first be known; it has all the virtues necessary for health, and constantly changes its nature along with the heat, being moist and dry, sweet, bitter, and acid. The cabbage has naturally all the virtues of the so-called "Seven Blessings" mixture. To give, then, the several varieties: the first is the so-called smooth; it is large, with broad leaves and thick stem; it is hardy and has great potency. ² The second is the curly variety, called "parsley cabbage"; it has a good nature and appearance, and has stronger medicinal properties than the above-mentioned variety. So also has the third, the mild, with small stalk, tender, and the most pungent of all; and its juice, though scanty, has the most powerful effect. No other variety of cabbage approaches it in medicinal value. ³ It can be used as a poultice on all kinds of wounds and swellings; it will cleanse all sores and heal without pain; it will soften and open boils; it will cleanse suppurating wounds and tumours, and heal them, a thing which no other medicine can do. But before it is applied, the surface should be washed with plenty of warm water, and then the crushed cabbage should be applied as a poultice, and renewed twice a day; it will remove all putridity. The black ulcer has a foul odour and exudes putrid pus, the white is purulent but fistulous, and suppurates under the surface; ⁴ but if you macerate cabbage it will cure all such sores — it is the best remedy for sores of this kind. Dislocations will be healed quickly if they are bathed twice a day in warm water and a cabbage poultice is applied; if applied twice a day, the treatment will relieve the pain. A contusion will burst, and when bruised cabbage is applied, it will heal. ⁵ An ulcer on the breast and a cancer can be healed by the application of macerated cabbage; and if the spot is too tender to endure the astringency, the

cabbage should be mixed with barley-flour and so applied. All sores of this kind it will heal, a thing which no other medicine can do or cleanse. When applied to a sore of this kind on a boy or girl the barley-meal should be added. If you eat it chopped, washed, dried, and seasoned with salt and vinegar, nothing will be more wholesome. ⁶ That you may eat it with better appetite, sprinkle it with grape vinegar, and you will like a little better when washed, dried, and seasoned with rue, chopped coriander and salt. This will benefit you, allow no ill to remain in the body, and promote digestion; and will heal any ill that may be inside. Headache and eyeache it heals alike. It should be eaten in the morning, on an empty stomach. ⁷ Also if you are bilious, if the spleen is swollen, if the heart is painful, or the liver, or the lungs, or the diaphragm — in a word, it will cure all the internal organs which are suffering. (If you grate silphium into it, it will be good.) For when all the veins are gorged with food they cannot breathe in the whole body, and hence a disease is caused; and when from excess of food the bowels do not act, if you eat cabbage proportionately, prepared as I direct above, you will have no ill effects from these. But as to disease of the joints, nothing so purges it as raw cabbage, if you eat it chopped, and rue, chopped dry coriander, grated asafetida, and cabbage out of vinegar and honey, and sprinkled with salt. ⁸ After using this remedy you will have the use of all your joints. There is no expense involved; and even if there were, you should try it for your health's sake. It should be eaten in the morning, on an empty stomach. One who is sleepless or debilitated you can make well by this same treatment. But give the person, without food, simply warm cabbage, oiled, and a little salt. The more the patient eats the more quickly will he recover from the disease. ⁹ Those suffering from colic should be treated as follows: Macerate cabbage thoroughly, then put in a pot and boil well; when it is well done pour off the water, add plenty of oil, very little salt, cummin, and fine barley-flour, and let it boil very thoroughly again. After boiling turn it into a dish. The patient should eat it without bread, if possible; if not, plain bread may be soaked in it and if he has no fever he may have some dark wine. The cure will be prompt. ¹⁰ And further, whenever such occasion arises, if a person who is debilitated will eat cabbage prepared as I have described above, he will be cured. And still further, if you save the urine of a person who eats cabbage habitually, heat it, and bathe the patient in it, he will be healed quickly; this remedy has been tested. Also, if babies are bathed in this urine they will never be weakly; those whose eyes are not very clear will see better if they are bathed in this urine; and pain in the head or neck will be relieved if the heated urine is applied. ¹¹ If a woman will warm the privates with this urine, they will never become diseased. The method is as follows: when you

have heated it in a pan, place under a chair whose seat has been pierced. Let the woman sit on it, cover her, and throw garments around her.

¹² Wild cabbage has the greatest strength; it should be dried and macerated very fine. When it is used as a purge, let the patient refrain from food the previous night, and in the morning, still fasting, take macerated cabbage with four cyathi of water. Nothing will purge so well, neither hellebore, nor scammony; it is harmless, and highly beneficial; it will heal persons whom you despair of healing. ¹³ The following is the method of purging by this treatment: Administer it in a liquid form for seven days; if the patient has an appetite, feed him on roast meat, or, if he has not, on boiled cabbage and bread. He should drink diluted mild wine, bathe rarely, and rub with oil. One so purged will enjoy good health for a long time, and no sickness will attack him except by his own fault. If one has an ulcer, whether suppurated or new, sprinkle this wild cabbage with water and apply it; you will cure him. ¹⁴ If there is a fistula, insert a pellet; or if it will not admit a pellet, make a solution, pour into a bladder attached to a reed, and inject into the fistula by squeezing the bladder. It will heal quickly. An application of wild cabbage macerated with honey to any ulcer, old or new, will heal it. ¹⁵ If a nasal polypus appears, pour macerated dry wild cabbage into the palm of the hand; apply to the nostril and sniff with the breath as vigorously as possible. Within three days the polypus will fall out, but continue the same treatment for several days after it has fallen out, so that the roots of the polypus may be thoroughly cleaned. ¹⁶ In case of deafness, macerate cabbage with wine, press out the juice, and instil warm water into the ear, and you will soon know that your hearing is improved. An application of cabbage to a malignant scab will cause it to heal without ulcerating.

¹⁵⁸ Recipe for a purgative, if you wish to purge thoroughly: Take a pot and pour into it six sextarii of water and add the hock of a ham, or, if you have no hock, a half-pound of ham-scrap with as little fat as possible. Just as it comes to a boil, add two cabbage leaves, two beet plants with the roots, a shoot of fern, a bit of the mercury-plant, two pounds of mussels, a capito fish and one scorpion, six snails, and a handful of lentils. ² Boil all together down to three sextarii of liquid, without adding oil. Take one sextarius of this while warm, add one cyathus of Coan wine, drink, and rest. Take a second and a third dose in the same way, and you will be well purged. You may drink diluted Coan wine in addition, if you wish. Any one of the many ingredients mentioned above is sufficient to move the bowels; but there are so many ingredients in this concoction that it is an excellent purgative, and, besides, it is agreeable.

¹⁵⁹ ¹ To prevent chafing: When you set out on a journey, keep a small branch of Pontic wormwood under the anus.

160 1 Any kind of dislocation may be cured by the following charm: Take a green reed four or five feet long and split it down the middle, and let two men hold it to your hips. Begin to chant: “motas uaeta daries dardares astataries dissunapiter” and continue until they meet. Brandish a knife over them, and when the reeds meet so that one touches the other, grasp with the hand and cut right and left. If the pieces are applied to the dislocation or the fracture, it will heal. And none the less chant every day, and, in the case of a dislocation, in this manner, if you wish: “huat haut haut istasis tarsis ardannabou dannaustra.”

161 1 Method of planting asparagus: Break up thoroughly ground that is moist, or is heavy soil. When it has been broken, lay off beds, so that you may hoe and weed them in both directions without trampling the beds. In laying off the beds, leave a path a half-foot wide between the beds on each side. Plant along a line, dropping two or three seeds together in a hole made with a stick, and cover with the same stick. After planting, cover the beds thickly with manure; plant after the vernal equinox. When the shoots push up, weed often, being careful not to uproot the asparagus with the weed. The year it is planted, cover the bed with straw through the winter, so that it will not be frostbitten. Then in the early spring uncover, hoe, and weed. The third year after planting burn it over in the early spring; after this do not work it before the shoots appear, so as not to injure the roots by hoeing. In the third or fourth year you may pull asparagus from the roots; for if you break it off, sprouts will start and die off. You may continue pulling until you see it going to seed. The seed ripens in autumn; when you have gathered it, burn over the bed, and when the asparagus begins to grow, hoe and manure. After eight or nine years, when it is now old, dig it up, after having thoroughly worked and manured the ground to which you are to transplant it, and made small ditches to receive the roots. The interval between the roots of the asparagus should be not less than a foot. In digging, loosen the earth around the roots so that you can dig them easily, and be careful not to break them. Cover them very deep with sheep dung; this is the best for this purpose, as other manure produces weeds.

162 1 Method of curing hams and Puteolan ofella. You should salt hams in the following manner, in a jar or large pot: When you have bought the hams cut off the hocks. Allow a half-modius of ground Roman salt to each ham. Spread salt on the bottom of the jar or pot; then lay a ham, with the skin facing downwards, and cover the whole with salt. Place another ham over it and cover in the same way, taking care that meat does not touch meat. Continue in the same way until all are covered. When you have arranged them all, spread salt above so that the meat shall not show, and level the whole. When they have remained five days in the salt remove them all with their own salt. Place at the bottom those which had

been on top before, covering and arranging them as before. Twelve days later take them out finally, brush off all the salt, and hang them for two days in a draught. On the third day clean them thoroughly with a sponge and rub with oil. Hang them in smoke for two days, and the third day take them down, rub with a mixture of oil and vinegar, and hang in the meat-house. No moths or worms will touch them.

The Latin Text



The Sabine hills, Italy — after his father's death, Cato inherited a small property in the Sabine territory, at a distance from his native town. There, he spent most of his childhood hardening his body by exercise, overseeing and sharing the operations of the farm, learning business and the rural economy.

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M. PORCI CATONIS CENSORIS DE AGRI CVLTVRA

SECTIONS 1-19

PRAEFATIO

Est interdum praestare mercaturis rem quaerere, nisi tam periculosum sit, et item foenerari, si tam honestum. Maiores nostri sic habuerunt et ita in legibus posiverunt: furem dupli condemnari, foeneratorem quadrupli. Quanto peiorem civem existimarint foeneratorem quam furem, hinc licet existimare. Et virum bonum quom laudabant, ita laudabant: bonum agricolam bonumque colonum; amplissime laudari existimabatur qui ita laudabatur. Mercatorem autem strenuum studiosumque rei quaerendae existimo, verum, ut supra dixi, periculosum et calamitosum. At ex agricolis et viri fortissimi et milites strenuissimi gignuntur, maximeque pius quaestus stabilissimusque consequitur minimeque invidiosus, minimeque male cogitantes sunt qui in eo studio occupati sunt. Nunc, ut ad rem redeam, quod promisi institutum principium hoc erit.

[1] Praedium quom parare cogitabis, sic in animo habeto: uti ne cupide emas neve opera tua parcas visere et ne satis habeas semel circumire; quotiens ibis, totiens magis placebit quod bonum erit. Vicini quo pacto niteant, id animum advertito: in bona regione bene nitere oportebit. Et uti eo introeas et circumspicias, uti inde exire possis. Uti bonum caelum habeat; ne calamitosum siet; solo bono, sua virtute valeat. Si poteris, sub radice montis siet, in meridiem spectet, loco salubri; operariorum copia siet, bonumque aquarium, oppidum validum prope siet; aut mare aut amnis, qua naves ambulant, aut via bona celerisque. Siet in his agris qui non saepe dominum mutant: qui in his agris praedia vendiderint, eos pigeat vendidisse. Uti bene aedificatum siet. Caveto alienam disciplinam temere contempnas. De domino bono bonoque aedificatore melius emetur. Ad villam cum venies, videto vasa torcula et dolia multane sient: ubi non erunt, scito pro ratione fructum esse. Instrumenti ne magni siet, loco bono siet. Videto quam minimi instrumenti sumptuosusque ager ne siet. Scito idem agrum quod hominem, quamvis quaestuosus siet, si sumptuosus erit, relinqui non multum. Praedium quod primum siet, si me rogabis, sic dicam: de omnibus agris optimoque loco iugera agri centum, vinea est prima, vel si vino multo est; secundo loco hortus irriguus; tertio salictum; quarto oletum; quinto pratium; sexto campus frumentarius; septimo silva caedua; octavo arbustum; nono glandaria silva.

[2] Pater familias, ubi ad villam venit, ubi larem familiarem salutavit, fundum eodem die, si potest, circumeat; si non eodem die, at postridie. Ubi cognovit quo

modo fundus cultus siet, opera quaeque facta infectaque sient, postridie eius diei vilicum vocet, roget quid operis siet factum, quid restet, satisne temperi opera sient confecta, possitne quae reliqua sient conficere, et quid factum vini, frumenti aliarumque rerum omnium. Ubi ea cognovit, rationem inire oportet operarum, dierum. Si ei opus non apparet, dicit vilicus sedulo se fecisse, servos non valuisse, tempestates malas fuisse, servos aufugisse, opus publicum effecisse. Ubi eas aliasque causas multas dixit, ad rationem operum operarumque revoca. Cum tempestates pluviae fuerint, quae opera per imbrem fieri potuerint: dolia lavari, picari, villam purgari, frumentum transferri, stercus foras efferri, stercilinum fieri, semen purgari, funes sarciri, novos fieri, centones, cuculiones familiam oportuisse sibi sarcire; per ferias potuisse fossas veteres tergeri, viam publicam muniri, vepres recidi, hortum fodiri, pratium purgari, virgas vinciri, spinas runcari, expinsi far, munditias fieri; cum servi aegrotarint, cibaria tanta dari non oportuisse. Ubi cognita aequo animo sient quae reliqua opera sient, curari uti perficiantur. Rationes putare argentariam, frumentariam, pabuli causa quae parata sunt; rationem vinariam, oleariam, quid venerit, quid exactum siet, quid reliquum siet, quid siet quod veneat; quae satis accipiunda sient, satis accipiantur; reliqua quae sient, uti compareant. Si quid desit in annum, uti paretur; quae supersint, uti veneant; quae opus sient locato, locentur; quae opera fieri velit et quae locari velit, uti imperet et ea scripta relinquat. Pecus consideret. Auctionem uti faciat: vendat oleum, si pretium habeat; vinum, frumentum quod supersit, vendat; boves vetulos, armenta delicula, oves deliculas, lanam, pelles, plostrum vetus, ferramenta vetera, servum senem, servum morbosum, et si quid aliud supersit, vendat. Patrem familias vendacem, non emacem esse oportet.

[3] Prima adulescentia patrem familiae agrum conserere studere oportet. Aedificare diu cogitare oportet, conserere cogitare non oportet, sed facere oportet. Ubi aetas accessit ad annos XXXVI, tum aedificare oportet, si agrum consitum habeas. Ita aedifices, ne villa fundum quaerat nec fundus villam. Patrem familiae villam rusticam bene aedificatam habere expedit, cellam oleariam, vinariam, dolia multa, uti lubeat caritatem exspectare: et rei et virtuti et gloriae erit. Torcularia bona habere oportet, ut opus bene effici possit. Olea ubi lecta siet, oleum fiat continuo, ne corrumpatur. Cogitato quotannis tempestates magnas venire et oleam deicere solere. Si cito sustuleris et vasa parata erunt, damni nihil erit ex tempestate et oleum viridius et melius fiet. Si in terra et tabulato olea nimium diu erit, putescet, oleum fetidum fiet. Ex quavis olea oleum viridius et bonum fieri potest, si temperi facies. In iugera oleti CXX vasa bina esse oportet, si oletum bonum beneque frequens cultumque erit. Trapetos bonos privos in pares esse oportet, si orbes contriti sient, ut conmutare possis, funes loreos privos, vectes senos, fibulas duodenas, medipontos privos loreos.

Trochileas Graecanicas binis funis sparteis ducunt: orbiculis superioribus octonis, inferioribus senis citius duces; si rotas voles facere, tardius ducetur, sed minore labore.

[4] Bubilia bona, bonas praesepis, faliscas clatratas, clatros inesse oportet pede. Si ita feceris, pabulum boves non eicient. Villam urbanam pro copia aedificato.

In bono praedio si bene aedificaveris, bene posiveris, ruri si recte habitaveris, libentius et saepius venies; fundus melis erit, minus peccabitur, fructi plus capies; frons occipitio prior est. Vicinis bonus esto; familiam ne siveris peccare. Si te libenter vicinitas videbit, facilius tua vendes, opera facilius locabis, operarios facilius conduces; si aedificabis, operis, iumentis, materie adiuvabunt; siquid bona salte usus venerit, benigne defendent.

[5] Haec erunt vilici officia. Disciplina bona utatur. Feriae serventur. Alieno manum absteineat, sua servet diligenter. Litibus familia supersedeat; siquis quid deliquerit, pro noxa bono modo vindicet. Familiae male ne sit, ne algeat, ne esuriant; opere bene exerceat, facilius malo et alieno prohibebit. Vilicus si nolet male facere, non faciet. Si passus erit, dominus inpune ne sinat esse.

Pro beneficio gratiam referat, ut aliis recte facere libeat. Vilicus ne sit ambulator, sobrius siet semper, ad cenam nequo eat. Familiam exerceat, consideret, quae dominus imperaverit fiant. Ne plus censeat sapere se quam dominum. Amicos domini, eos habeat sibi amicos. Cui iussus siet, auscultet. Rem divinam nisi Conpitalibus in conpito aut in foco ne faciat. Iniussu domini credat nemini: quod dominus crediderit, exigat. Satui semen, cibaria, far, vinum, oleum mutuum dederit nemini. Duas aut tres familias habeat, unde utenda roget et quibus det, praeterea nemini. Rationem cum domino crebro putet. Operarium, mercennarium, politorem diutius eundem ne habeat die. Nequid emisse velit insciente domino, neu quid dominum celavisse velit. Parasitum nequem habeat. Haruspicem, augurem, hariolum, Chaldaeum nequem consuluisse velit. Segetem ne defrudet: nam id infelix est. Opus rusticum omne curet uti sciat facere, et id faciat saepe, dum ne lassus fiat; si fecerit, scibit in mente familiae quid sit, et illi animo aequiore facient. Si hoc faciet, minus libebit ambulare et valebit rectius et dormibit libentius. Primus cubitu surgat, postremus cubitum eat. Prius villam videat clausa uti siet, et uti suo quisque loco cubet et uti iumenta pabulum habeant. Boves maxima diligentia curatos habeto. Bubulcis opsequito partim, quo libentius boves curent. Aratra vomeresque facito uti bonos habeas. Terram cariosam cave ne ares, neve plostrum neve pecus inpellas. Si ita non caveris, quo inpuleris, trienni fructum amittes. Pecori et bubus diligenter substernatur, ungulae curentur. Scabiem pecoris et iumentis caveto; id ex fame et si inpluit fieri solet. opera omnia mature conficias face. Nam res rustica sic est, si unam rem sero feceris, omnia opera sero facies. Stramenta si deerunt, frondem

illigineam legito, eam substernito ovibus bubusque. Stercilinum magnum stude ut habeas. Stercus sedulo conserva; cum exportabis, purgato et conminuito; per autumnum evehito. Circum oleas autumnitate ablaqueato et stercus addito. Frondem populneam, ulmeam, querneam caedito per tempus: eam condito non peraridam, pabulum ovibus. Item faenum cordum, sicillimenta de prato, ea arida condito. Post imbrem autumnum rapinam, pabulum lupinumque serito.

[6] Agrum quibus locis conseras, sic observari oportet. Ubi ager crassus et laetus est sine arboribus, eum agrum frumentarium esse oportet. Idem ager si nebulosus est, rapa, raphanos, milium, panicum, id maxime seri oportet. In agro crasso et caldo oleam conditivam, radium maiorem, Sallentinam, orcitem, poseam, Sergianam, Colminianam, albicerem, quam earum in iis locis optimam dicent esse, eam maxime serito. Hoc genus oleae in XXV aut in XXX pedes conserito. Ager oleto conserundo, qui in ventum favonium spectabit et soli ostentus erit, alius bonus nullus erit. Qui ager frigidior et macrior erit, ibi oleam Licinianam seri oportet. Si in loco crasso aut calido severis, hostus nequam erit et ferundo arbor peribit et muscus ruber molestus erit. Circum coronas et circum vias ulmos serito et partim populos, uti frondem ovibus et bubus habeas, et materies, siquo opus sit, parata erit. Sicubi in iis locis ripae aut locus umectus erit, ibi cacumina populorum serito et harundinetum. Id hoc modo serito: bipalio vortito, ibi oculos harundinis pedes ternos alium ab alio serito. Ibi corrudam serito, unde asparagi fiant. Nam convenit harundinetum cum corruda, eo quia foditur et incenditur et umbram per tempus habet. Salicem Graecam circum harundinetum serito, uti siet qui vineam alliges.

Vineam quo in agro seri oporteat, sic observato. Qui locus vino optimus dicetur esse et ostentus soli, Aminnium minusculum et geminum eugeneum, helvolum minusculum conserito. Qui locus crassus erit aut nebulosior, ibi Aminnium maius aut Murgentinum, Apicium, Lucanum serito. Ceterae vites, miscellae maxime, in quemvis agrum conveniunt.

[7] Fundum suburbanum arbustum maxime convenit habere; et ligna et virgae venire possunt, et domino erito qui utatur. In eodem fundo suum quidquid conseri oportet; vitem compluria genera Aminnium minusculum et maius et Apicium. Uvae in olla in vinaceis conduntur; eadem in sapa, in musto, in lora recte conduntur. Quas suspendas duracinas Aminnias maiores, vel ad fabrum ferrarium pro passis eae recte servantur. Poma, mala strutea, cotonea Scantiana, Quiriniana, item alia conditiva, mala mustea et Punica (eo lotium suillum aut stercus ad radicem addere oportet, uti pabulum malorum fiat), pira volaema, Aniciana sementiva (haec conditiva in sapa bona erunt), Tarentina, mustea, cucurbitiva, item alia genera quam plurima serito aut inserito. Oleas orcites, posias; eae optime conduntur vel virides in muria vel in lentisco contusae, vel

orcites ubi nigrae erunt et siccae, sale confriato dies V; postea salem excutito, in sole ponito biduum, vel sine sale in defrutum condito. Sorba in sapa condere vel siccare; arida facias. Item pira facias.

[8] Ficos Marsicas in loco cretoso et aperto serito; Africanas et herculaneas, Sacontinas, hibernas, Tellanas atras pediculo longo, eas in loco crassiore aut stercoreato serito. Pratum si inrigivum habebis, si non erit siccum, ne faenum desiet, summitto. Sub urbe hortum omne genus, coronamenta omne genus, bulbos Megaricos, murtum coniugulum et album et nigrum, loream Delphicam et Cypriam et silvaticam, nuces calvas, Abellanas, Praenestinas, Graecas, haec facito uti serantur. Fundum suburbanum, et qui eum fundum solum habebit, ita paret itaque conserat, uti quam sollertissimum habeat.

[9] Salicta locis aquosis, umectis, umbrosis, propter amnes ibi seri oportet; et id videto uti aut domino opus siet aut ut vendere possit. Prata inrigiva, si aquam habebis, id potissimum facito; si aquam non habebis, sicca quam plurima facito. Hoc est praedium quod ubi vis expedit facere.

[10] Quo modo oletum agri iugera CCXL instruere oporteat. Vilicum, vilicam, operarios quinque, bubulcos III, asinarium I, subulcum I, opilionem I, summa homines XIII; boves trinos, asinos ornatos clitellarios qui stercus vectent tris, asinum molarium I, oves C; vasa olearia instructa iuga V, ahenum quod capiat Q. XXX, operculum aheni, uncos ferreos III, urceos aquarios III, infidibula II, ahenum quod capiat Q. V, operculum aheni, uncos III, labellum pollulum I, amphoras olearias II, urnam quinquagenariam unam, trullas tris, situlum aquarium I, pelvim I, matellionem I, trullium I, scutrisum I, matellam I, nassiternam I, trullam I, candelabrum I, sextarium I; plostra maiora III, aratra cum vomeribus VI, iuga cum loris ornata III, ornamenta bubus VI; irpicem I, crates stercerarias IIII, sirpeas stercerarias III, semuncias III, instrata asinis III; ferramenta: ferreas VIII, sarcula VIII, palas IIII, ruta V, rastros quadridentes II, falces faenarias VIII, stramentarias V, arborarias V, securis III, cuneos III, fistulam ferrariam I, forcipis II, rutabulum I, foculos II; dolia olearia C, labra XII, dolia quo vinacios condat X, amurcaria X, vinaria X, frumentaria XX, labrum lupinarium I, series X, labrum eluacrum I, solium I, labra aquaria II, opercula doliis seriis priva; molas asinarias unas et trusatilis unas, Hispaniensis unas, molilia III, abacum I, orbis aheneos II, mensas II, scamna magna III, scamnum in cubiculo I, lectos loris subtentos IIII et lectos III; pilam ligneam I, fullonicam I, telam togalem I, pilas II, pilum fabrarium I, farrearium I, seminarium I, qui nucleos succernat I, modium I, semodium I; culcitas VIII, intragula VIII, pulvinos XVI, operimenta X, mappas III, centones pueris VI.

[11] Quo modo vineae iugera C instruere oporteat. Vilicum, vilicam, operarios X, bubulcum I, asinarium I, salictarium I, subulcum I, summa homines XVI;

boves II, asinos plostrarios II, asinum molarium I; vasa torcula instructa III, dolia ubi quinque vindemiae esse possint culeum DCCC, dolia ubi vinaceos condant XX, frumentaria XX, opercula doliorum et tectaria prava, urnas sparteas VI, amphoras sparteas IIII, infidibula II, cola vitilia III, colia qui florem demat III, urceos mustarios X; plostra II, aratra II, iugum plostrarium I, iugum vinarium I, iugum asinarium I, orbem aheneum I, molile I; ahenum quod capiat culleum I, operculum aheni I, uncus ferreus III, ahenum coculum quod capiat culleum I, urceos aquarios II, nassiternam I, pelvim I, matellionem I, trulleum I, situlum aquarium I, scutriscum I, trullam I, candelabrum I, matellam I, lectos IIII, scamnum I, mensas II, abacum I, arcam vestiariam I, armarium promptarium I, scamna longa VI, rotam aquariam I, modium praeferratum I, semodium I, labrum eluacrum I, solium I, labrum lupinarium I, serias X; ornamenta bubus II, ornamenta asinis instrata III, semuncias III, sportas faecarias III, molas asinarias III, molas trusatilis unas; ferramenta: falces sirpiculas V, falces silvaticas VI, arborarias III, secures V, cuneos IIII, vomeres II, ferreas X, palas VI, rutra IV, rastros quadridentes II, crates stercorarias IV, sirpium stercorarium I, falculas viniaticas XL, falculas rustarias X, foculos II, forcipes II, rutabulum I, corbular Amerinas XX, quala sataria vel alveos XL, palas ligneas XL, luntris II, culcitas IIII, instragula IIII, pulvinos VI, operimenta VI, mappas III, centones pueris VI.

[12] In torcularium quae opus sunt. Vasis quinis prela temperata V, supervacanea III, sucular V, supervacaneam I, funes loreos V, subductarios V, melipontos V, trochileas X, capistra V, assercula ubi prela sita sinet V, serias III, vectes XL, fibulas XL, constibilis ligneas, qui arbores conprimat, si dishiascent, et cuneos VI, trapetos V, cupas minusculas X, alveos X, palas ligneas X, rutra ferrea V.

[13] In torcularium in usu quod opus est. Urceum unum, ahenum quod capiat Q. V, uncus ferreus III, orbem aheneum I, molas, cribrum I, incerniculum I, securim I, scamnum I, seriam vinariam unam, clavem torculari I, lectum stratum ubi duo custodes liberi cubent (tertius servus una cum factoribus uti cubet), fiscinas novas, veteres, epidromum I, pulvinum I, lucernas, corium I, craticulas duas, carnarium I, scalas unas.

In cellam oleariam haec opus sunt. Dolia olearia, opercula, labra olearia XIII, concas maioris II et minoris II, trullas aheneas tris, amphoras olearias II, urceum aquarium unum, urnam quinquagenariam I, sextarium olearium I, labellum I, infidibula II, spongeas II, urceos fictiles II, urnales II, trullas ligneas II, claves cum clostris in cellas II, trutinam I, centumpondium I, et pondera cetera.

[14] Villam aedificandam si locabis novam ab solo, faber haec faciat oportet. Parietes omnes, uti iussitur, calce et caementis, pilas ex lapide angulari, tigna omnia, quae opus sunt, limina, postes, iugumenta, asseres, fulmentas, praesepis

bubus hibernas aestivas faliscas, equile, cellas familiae, carnaria III, orbem, ahenea II, haras X, focum, ianuam maximam et alternam quam volet dominus, fenestras, clatros in fenestras maioris bipedis X, luminaria VI, scamna III, sellas V, telas togalis II, paullulam pilam ubi triticum pinsat I, fulloniam I, antepagmenta, vasa torcula II. Hae rei materiem et quae opus sunt dominus praebebit et ad opus dabit, serram I, lineam I (materiem dumtaxat succidet, dolabit, secabit facietque conductor), lapidem, calcem, harenam, aquam, paleas, terram unde lutum fiat. Si de caelo villa tacta siet, de ea re verba uti fiant. Huic operi pretium ab domino bono, quae bene praebeat quae opus sunt et nummos fide bona solvat, in tegulas singulas II S. Tectum sic numerabitur: tegula integra quae erit, unde quarta pars abierit, duae pro una, conciliares quae erunt pro binis putabuntur; vallus quot erunt, in singulas quaternae numerabuntur.

Villa lapide calce. Fundamenta supra terram pede, ceteros parietes ex latere, iugumenta et antepagmenta quae opus erunt indito. Cetera lex uti villae ex calce caementis. Pretium in tegulas singulas II S. Loco salubri bono domino haec quae supra pretia posita sunt: ex signo manipretium erit. Loco pestilenti, ubi aestate fieri non potest, bono domino pars quarta preti accedat.

[15] Macerias ex calce caementis silice. Uti dominus omnia ad opus praebeat, altam P. V et columen P. I, crassam P. I S, longam P. XIV, et uti sublinat locari oportet. Parietes villae si locet in P. C, id est P. X quoquo versum, libellis in ped. V et perticam I P. VIC. N. X. Sesquipedalem parietem dominus fundamenta faciat et ad opus praebeat calcis in P. singulos in longitudinem modium unum, harenae modios duos.

[16] Calcem partiario coquendam qui dant, ita datur. Perficit et coquit et ex fornace calcem eximit calcarius et ligna conficit ad fornacem. Dominus lapidem, ligna ad fornacem, quod opus siet, praebebit.

[17] Robus materies item ridica, ubi solstitium fuerit ad brumam semper tempestiva est. Cetera materies quae semen habet, cum semen maturum habet, tum tempestiva est.

Quae materies semen non habet, cum glubebit, tum tempestiva est. Pinus eo, quia semen viride et maturum habet (id semen de cupresso, de pino quidvis anni legere possis), item quidvis anni matura est et tempestiva. Ibidem sunt nuces bimae, inde semen excidet, et anniculae, eae ubi primum incipiunt maturae esse, postea usque adeo sunt plus menses VIII. Hornotinae nuces virides sunt. Ulmus, cum folia cadunt, tum iterum tempestiva est.

[18] Torcularium si aedificare voles quadrinis vasis, uti contra ora sient, ad hunc modum vasa componito. Arbores crassas P. II, altas P. VIII cum cardinibus, foramina longa P. III S exsculpta digit. VI, ab solo foramen primum P. I S, inter arbores et parietes P. II, in II arbores P. I, arbores ad stipitem

primum directas P. XVI, stipites crassos P. II, altos cum cardinibus P. X. suculam praeter cardines P. VIII, prelum longum P. XXV, inibi lingulam P. II S, pavementum binis vasis cum canalibus duabus P: XXX, IIII trapetibus locum dextra sinistra pavementum P. XX, inter binos stipites vectibus locum P. XXII, alteris vasis exadversum ab stipite extremo ad parietem qui pone arbores est P. XX; summa torculario vasis quadrinis latitudine P: LXVI, longitudine P: LII. Inter parietes, arbores ubi statues, fundamenta bona facito alta P. V, inibi lapides silices, totum forum longum P. V, latum P. II S, crassum P. I S. Ibi foramen pedicinis duobus facito, ibi arbores pedicino in lapide statuito. Inter suas arbores quod loci supererit robore expleto, eo plumbum infundito. Superiorem partem arborum digitos VI altam facito siet, eo capitulum robustum indito, uti siet stipites ubi stent. Fundamenta P. V facito, ibi silicem longum P. II S, latum P. II S, crassum P. I S planum statuito, ibi stipites statuito. Item alterum stipitem statuito. Insuper arbores stipitesque trabem planam inponito latam P. II, crassam P: I, longam P. XXXVII, vel duplices indito, si solidas non habebis. Sub eas trabes inter canalis et parietes extremos, ubi trapeti stent, trabeculam pedum XXIII S inponito sesquipedalem, aut binas pro singulis eo supponito. In iis trabeculis trabes, quae insuper arbores stipites stant, conlocato; in iis tignis parietes exstruito iungitoque materiae, uti oneris satis habeat. Aram ubi facies, pedes V fundamenta alta facito, lata P. VI, aram et canalem rutundam facito latam P. IIII S, ceterum pavementum totum fundamenta P. II facito. Fundamenta primum festucato, postea caementis minutis et calce harenato semipedem unum quodque corium struito. Pavimenta ad hunc modum facito: ubi libraveris, de glarea et calce harenato primum corium facito, id pilis subigito, idem alterum corium facito; eo calcem cribro subcretam indito alte digitos duo, ibi de testa arida pavementum struito; ubi structum erit, pavito fricatoque, uti pavementum bonum siet. Arbores stipites robustas facito aut pineas. Si trabes minores facere voles, canalis extra columnam expolito. Si ita feceris, trabes P. XXII longae opus erunt. Orbem olearium latum P. IIII Punicanis coagmentis facito, crassum digitos VI facito, subscudes iligneas adindito. Eas ubi confixeris, clavis corneis occludito. In eum orbem tris catenas indito. Eas catenas cum orbi clavis ferreis corrigito. Orbem ex ulmo aut ex corylo facito: si utrumque habebis, alternas indito.

[19] In vasa vinaria stipites arboresque binis pedibus altiores facito, supra foramina arborum, pedem quaeque uti absiet, unae fibulae locum facito. Semipedem quoquo versum in suculam sena foramina indito. Foramen quod primum facies semipedem ab cardine facito, cetera dividito quam rectissime. Porculum in media sucula facito. Inter arbores medium quod erit, id ad mediam conlitrato, ubi porculum figere oportebit, uti in medio prelum recte situm siet.

Lingulam cum facies, de medio prelo conlibrato, ut inter arbores bene conveniat, digitum pollicem laxamenti facito. Vectes longissimos P. XIIX, secundos P. XVI, tertios P. XV, remissarios P. XII, alteros P. X, tertios P. VIII.

SECTIONS 20-39

[20] Trapetum quo modo concinnare oporteat. Columellam ferream, quae in miliario stat, eam rectam stare oportet in medio ad perpendicularum, cuneis salignis circumfigi oportet bene, eo plumbum effundere, caveat ni labet columella. Si movebitur, eximito; denuo eodem modo facito, ne se moveat. Modiolos in orbis oleagineos ex orcite olea facito, eos circumplumbato, caveto ne laxi sient. In cupam eos indito. Cunicas solidas latas digitum pollicem facito, labeam bifariam faciat habeant, quas figat clavis duplicibus, ne cadant.

[21] Cupam facito P. X, tam crassam quam modioli postulabunt, media inter orbis quae conveniant. Crassam quam columella ferrea erit, eam mediam pertundito, uti columellam indere possis. Eo fistulam ferream indito, quae in columellam conveniat et in cupam. Inter cupam dextra sinistra pertundito late digitos primoris IIII, alte digitos primoris III, sub cupa tabulam ferream, quam lata cupa media erit, pertusam figito, quae in columellam conveniat. Dextra sinistra, foramina ubi feceris, lamnis circumplectito. Replicato in inferiorem partem cupae omnis quattuor lamminas; utrimque secus lamminas sub lamminas pollulas minutas supponito, eas inter sese configito, ne foramina maiora fiant, quo cupulae minusculae indentur. Cupa qua fini in modiolos erit, utrimque secus imbricibus ferreis quattuor de suo sibi utrimque secus facito qui figas. Imbrices medias clavulis figito. Supra imbrices extrinsecus cupam pertundito, qua clavus eat, qui orbem cludat. Insuper foramen ferreum digitos sex latum indito, pertusum utrimque secus, qua clavus eat. Haec omnia eius rie causa fiunt, uti ne cupa in lapide conteratur. Armillas IIII facito, quas circum orbem indas, ne cupa et clavus conterantur intrinsecus. Cupam materia ulmea aut faginea facito. Ferrum factum quod opus erit uti idem faber figat; HS LX opus sunt. Plumbum in cupam emitto HS IIII. Cupam qui concinnet et modiolos qui indat et plumbet, operas fabri dumtaxat HS VIII; idem trapetum oportet accommodet. Summa sumpti HS LXXII praeter adiutores.

[22] Trapetum hoc modo accommodare oportet. Librator uti statuatur pariter ab labris. Digitum minimum orbem abesse oportet ab solo mortari. Orbes cavere oportet nequid mortarium terant. Inter orbem et miliarium unum digitum interesse oportet. Si plus intererit atque orbes nimium aberunt, funi circumligato miliarium arte crebro, uti expleas quod nimium interest. Si orbes altiores erunt atque nimium mortarium deorsom teret, orbiculos ligneos pertusos in miliarium in columella supponito, eo altitudinem temperato. Eodem modo latitudinem orbiculis ligneis aut armillis ferreis temperato, usque dum recte temperabitur.

Trapetus emptus est in Suessano HS CCCC et olei P. L. Conposturae HS LX; vecturam boum, operas VI, homines VI cum bubulcis HS LXXII; cupam ornatam HS LXXII, pro oleo HS XXV; S. S. HS DCXXXVIII. Pompeis emptus ornatus HS CCCXXCIII; vecturam HS CCXXC; domi melius concinnatur et accommodatur, eo sumpti opus est HS LX: S. S. HS DCCXXIII. Si orbes in veteres trapetos parabis, medios crassos P. I digitos III, altos P. I, foramen semipedem quoquo vorsum. Eos cum advexeris, ex trapeto temperato. Ii emuntur ad Rufri macerias HS CXXC, temperantur HS XXX. Tantidem Pompeis emitur.

[23] Fac ad vindemiam quae opus sunt ut parentur. Vasa laventur, corbulae sarciantur, picentur, dolia quae opus sunt picentur, quom pluēt; quala parentur, sarciantur, far molatur, menae emantur, oleae caducae saliantur. Uvas miscellas, vinum praeligneum quod operarii bibant, ubi tempus erit, legito. Siccum puriter omnium dierum pariter in dolia dividito. Si opus erit, defrutum indito in mustum de musto lixivo coctum, partem quadragesimam addito defruti vel salis sesquilibram in culleum. Marmor si indes, in culleum libram indito; id indito in urnam, misceto cum musto; id indito in doleum. Resinam si indes, in culleum musti P. III, bene comminuito, indito in fiscellam et facito uti in doleo musti pendeat; eam quassato crebro, uti resina condeliquestat. Ubi indideris defrutum aut marmor aut resinam, dies XX permisceto crebro, tribulato cotidie. Tortivum mustum circumcidaneum suo cuique dolio dividito additoque pariter.

[24] Vinum Graecum hoc modo fieri oportet. Uvas Apicias percoctas bene legito. Ubi delegeris, is eius musti culleum aquae marinae veteris Q. II indito vel salis puri modium; eum in fiscella suspendito sinitoque cum musto distabescat. Si helvolum vinum facere voles, dimidium helvoli, dimidium Apicii vini indito, defruti veteris partem tricesimam addito. Quidquid vini defrutabis, partem tricesimam defruti addito.

[25] Quom vinum coctum erit et quom legetur, facito uti servetur familiae primum suisque facitoque studeas bene percocto siccumque legere, ne vinum nomen perdat. Vinaceos cotidie recentis succernito lecto restibus subtento, vel cribrum illi rei parato. Eos conculcato in dolia picata vel in lacum vinarium picatum. Id bene iubeto oblini, quod des bubus per hiemem. Indidem, si voles, lavito paulatim. Erit lora familiae quod bibat.

[26] Vindemia facta vasa torcula, corbulae, fiscinas, funis, patibula, fibulas iubeto quidquid suo loco condi. Dolia cum vino bis in die fac extergeantur, privasque scopulas in dolia facito habeas illi rei, qui labra doliorum circumfrices. Ubi erit lectum dies triginta, si bene dacinata erunt, dolia oblinito, Si voles de faece demere vinum, tum erit ei rei optimum tempus.

[27] Sementim facito, ocinum, viciam, faenum Graecum, fabam, ervum, pabulum bubus. Alteram et tertiam pabuli sationem facito. Deinde alias fruges serito. Scrobes in vervacto oleis, ulmis, vitibus, ficis; simul cum semine serito. Si erit locus siccus, tum oleas per sementim serito, et quae ante satae erunt, teneras tum supputato et arbores ablaqueato.

[28] Oleas, ulmos, ficos, poma, vites, pinos, cupressos cum seres, bene cum radicibus eximito cum terra sua quam plurima circumligatoque, uti ferre possis; in alveo aut in corbula ferri iubeto. Caveto, quom ventus siet aut imber, effodias aut feras; nam id maxime cavendum est. In scrobe quom pones, summam terram subdito; postea operito terra radicibus fini, deinde calcato pedibus bene, deinde festucis vectibusque calcato quam optime poteris; id erit ei rei primum. Arbores crassiores digitis V quae erunt, eas praecisas serito oblinitoque fimo summas et foliis alligato.

[29] Stercus dividito sic. Partem dimidiam in segetem, ubi pabulum seras, et si ibi olea erit, simul ablaqueato stercusque addito: postea pabulum serito. Partem quartam circum oleas ablaqueatas, quom maxime opus erit, addito terraque stercus operito. Alteram quartam partem in pratium reservato idque, quom maxime opus erit, ubi favonius flabit, evehito luna silenti.

[30] Bubus frondem ulmeam, populneam, querneam, ficulneam, usque dum habebis, dato. Ovibus frondem viridem, usque dum habebis, praebeto; ubi sementim facturus eris, ibi oves delectato; et frondem usque ad pabula matura. Pabulum aridum quod condideris in hiemem quam maxime conservato, cogitatoque hiemis quam longa siet.

[31] Ad oleam cogendam quae opus erunt parentur. Vimina matura, salix per tempus legatur, uti sit unde corbulae fiant et veteres sarciantur. Fibulae unde fiant, aridae iligneae, ulmeae, nuceae, ficulneae, fac in stercus aut in aquam coniciantur; inde, ubi opus erit, fibulas facito. Vectes iligneos, acrufolios, laureos, ulmeos facito uti sient parati. Prelum ex carpino atra potissimum facito. Ulmeam, pineam, nuceam, hanc atque aliam materiem omnem cum effodies, luna decrescente eximito post meridiem sine vento austro. Tum erit tempestiva, cum semen suum maturum erit, cavetoque per rorem trahas aut doles. Quae materies semen non habebit, cum glubebit, tempestiva erit. Vento austro caveto nequam materiam neve vinum tractes nisi necessario.

[32] Vineas arboresque matura face incipias putare. Vites propages in sulcos; susum vorsum, quod eius facere poteris, vitis facito uti ducas. Arbores hoc modo putentur, rami uti divaricentur, quos relinques, et uti recte caedantur et ne nimium crebri relinquuntur. Vites bene nodentur; per omnes ramos diligenter caveto ne vitem praecipites et ne nimium praestringas. Arbores facito uti bene

maritae sint vitesque uti satis multae adserantur et, sicubi opus erit, de arbore deiciantur, uti in terram deprimantur, et biennio post praecidito veteres.

[33] Viniam sic facito uti curetur. Vitem bene nodatam deligato recte, fluxuosa uti ne sit, susum vorsum semper ducito, quod eius poteris. Vinarios custodesque recte relinquito. Quam altissimam viniam facito alligatoque recte, dum ne nimium constringas. Hoc modo eam curato. Capita vitium per sementiam ablaqueato. Vineam putatam circumfodito, arare incipito, ultro citroque sulcos perpetuos ducito. Vites teneras quam primum propagato, sic occato; veteres quam minimum castrato, potius, si opus erit, deicito biennioque post praecidito. Vitem novellam rescicari tum erit tempus, ubi valebit. Si vinea a vite calva erit, sulcos interponito ibique viveradicem serito, umbram ab sulcis removeto crebroque fodito. In vinea vetere serito ocinum, si macra erit (quod granum capiat ne serito), et circum capita addito stercus, paleas, vinaceas, aliquid horum, quo rectius valeat. Ubi vinea frondere coeperit, pampinato. Vineas novellas alligato crebro, ne caules praeferantur, et quae iam in perticam ibit, eius pampinos teneros alligato leviter corrigitoque, uti recte spectent. Ubi uva varia fieri coperit, vites subligato, pampinato uvasque expellito, circum capita sarito. Salictum suo tempore caedito, glubito arteque alligato. Librum conservato, cum opus erit in vinea, ex eo in aquam coicito, alligato. Viminae, unde corbulae fiant, conservato.

[34] Redeo ad sementim. Ubi quisque locus frigidissimus aquosissimusque erit, ibi primum serito. In caldissimis locis sementim postremum fieri oportet. Terram cave cariosam tractes. Ager rubicosus et terra pulla, materina, rudecta, harenosa, item quae aquosa non erit, ibi lupinum bonum fiet. In creta et uligine et rubrica et ager qui aquosus erit, semen adorem potissimum serito. Quae loca sicca et non herbosa erunt, aperta ab umbra, ibi triticum serito.

[35] Fabam in locis validis non calamitosis serito. Viciam et faenum Graecum quam minime herbosis locis serito. Siliginem, triticum in loco aperto celso, ubi sol quam diutissime siet, seri oportet. Lentim in rudecto et rubricoso loco, qui herbosus non siet, serito. Hordeum, qui locus novus erit aut qui restibilis fieri poterit, serito. Trimestre, quo in loco sementim maturam facere non potueris et qui locus restibilis crassitudine fieri poterit, seri oportet. Rapinam et coles rapicii unde fiant et raphanum in loco stercoreto bene aut in loco crasso serito.

[36] Quae segetem stercorent. Stercus columbinum spargere oportet in pratium vel in hortum vel in segetem. Caprinum, ovillum, bubulum, item ceterum stercus omne sedulo conservato. Amurcam spargas vel inriges ad arbores; circum capita maiora amphoras, ad minora urnas cum aquae dimidio addito, ablaqueato prius non alte.

[37] Quae mala in segete sint. Si cariosam terram tractes. Cicer, quod vellitur et quod salsum est, eo malum est. Hordeum, faenum Graecum, ervum, haec omnia segetem exsugunt et omnia quae velluntur. Nucleos in segetem ne indideris.

Quae segetem stercorent fruges: lupinum, faba, vicia. Stercus unde facias: stramenta, lupinum, paleas, fabalia, acus, frondem iligneam, querneam. Ex segeti vellito ebulum, cicutam et circum salicta herbam altam uvamque; eam substernito ovibus bubusque, frondem putidam. Partem de nucleis succernito et in lacum coicito, eo aquam addito, permisceto rutro bene; inde lutum circum oleas ablaqueatas addito, nucleos combustos item addito. Vitis si macra erit, sarmenta sua concidito minute et ibidem inarato aut infodito. Per hiemem lucubratione haec facito: ridicas et palos, quos pridie in tecto posueris, siccis dolato, faculas facito, stercus egerito. Nisi intermestri lunaque dimidiata tum ne tangas materiem. Quam effodies aut praecides abs terra, diebus VII proximis, quibus luna plena fuerit, optime eximetur. Omnino caveto nequam materiem doles neu caedas neu tangas, si potes, nisi siccam neu gelidam neu rorulentam. Frumenta face bis sarias runcesque avenamque destringas. De vinea et arboribus putatis sarmenta degere et fascinam face et vitis et ligna in cacuminum ficulna et codicillos domino in acervum conpone.

[38] Fornacem calcariam pedes latam X facito, altam pedes XX, usque ad pedes tres summam latam redigito. Si uno praefurnio coques, lacunam intus magnam facito, uti satis siet ubi cinerem concipiat, ne foras sit educendus. Fornacemque bene struito; facito fortax totam fornacem infimam complectatur. Si duobus praefurniis coques, lacuna nihil opus erit. Cum cinere eruto opus erit, altero praefurnio eruito, in altero ignis erit. Ignem caveto ne intermittas quin semper siet, neve noctu neve ullo tempore intermittatur caveto. Lapidem bonum in fornacem quam candidissimum, quam minime varium indito. Cum fornacem facies, fauces praecipites deorsum facito. Ubi satis foderis, tum fornaci locum facito, uti quam altissima et quam minime ventosa siet. Si parum altam fornacem habebis ubi facias, latere summam statuito aut caementis cum luto summam extrinsecus oblinito. Cum ignem subdideris, siquam flamma exhibit nisi per orbem summum, luto oblinito. Ventus ad praefurnium caveto ne accedat: inibi austrum caveto maxime. Hoc signi erit, ubi calx cocta erit, summos lapides coctos esse oportebit; item infimi lapides cocti cadent, et flamma minus fumosa exhibit.

Si ligna et virgas non poteris vendere neque lapidem habebis, unde calcem coquas, de lignis carboreas coquito, virgas et sarmenta, quae tibi ustioni supererunt, in segete conburito. Ubi conbusseris, ibi papaver serito.

[39] Ubi tempestates malae erunt, cum opus fieri non poterit, stercus in stercilinum egerito. Bubile, ovile, cohortem, villam bene purgato. Dolia plumbo

vincito vel materie quereae vere sicca alligato. Si bene sarseris aut bene alligaveris et in rimas medicamentum indideris beneque picaveris, quodvis dolium vinarium facere poteris. Medicamentum in dolium hoc modo facito: cerae P. I, resinae P. I, sulphuris P. C' C'. Haec omnia in calicem novum indito, eo addito gypsum contritum, uti crassitudo fiat quasi emplastrum, eo dolia sarcito. Ubi sarseris, qui colorem eundem facias, cretae crudae partes duas, calcis tertiam commisceto; inde laterculos facito, coquito in fornace, eum conterito idque inducito.

Per imbrem in villa quaerito quid fieri possit. Ne cessetur, munditias facito. Cogitato, si nihil fiet, nihilo minus sumptum futurum.

SECTIONS 40-59

[40] Per ver haec fieri oportet. Sulcos et scrobes fieri, seminariis, vitariis locum verti, vites propagari, in locis crassis et umectis ulmos, ficos, poma, oleas seri oportet. Ficos, olea, mala, pira, vites inseri oportet luna silenti post meridiem sine vento austro. Oleas, ficos, pira, mala hoc modo inserito. Quem ramum insiturus eris, praecidito, inclinato aliquantum, ut aqua defluat; cum praecides, caveto ne librum convellas. Sumito tibi surculum durum, eum praeacuito, salicem Graecum discindito. Argillam vel cretam coaddito, harenae paululum et fimum bubulum, haec una bene condepsito, quam maxime uti lentum fiat. Capito tibi scissam salicem, ea stirpem praecisum circumligato, ne liber frangatur. Ubi id feceris, surculum praeacutum inter librum et stirpem artito primoris digitos II. Postea capito tibi surculum, quod genus inserere voles, eum primorem praeacuito oblicum primoris digitos II. Surculum aridum, quem artiveris, eximito, eo artito surculum, quem inserere voles. Librum ac librum vorsum facito, artito usque adeo, quo praeacueris. Idem alterum surculum, tertium, quartum facito; quot genera voles, tot indito. Salicem Graecam amplius circumligato, luto depsto stirpem oblinito digitos crassum tres. Insuper lingua bubula obtegito, si pluat, ne aqua in librum permanet. Eam linguam insuper libro alligato, ne cadat. Postea stramentis circumdato alligatoque, ne gelus noceat.

[41] Vitis insitio una est per ver, altera est cum uva floret, ea optuma est. Pirorum ac malorum insitio per ver et per solstitium dies L et per vindemiam. Oleae et ficorum insitio est per ver. Vitem sic inserito: praecidito quam inseres, eam mediam diffindito per medullam; eo surculos praeacutos artito; quos inseres, medullam cum medulla conponito. Altera insitio est: si vitis vitem continget, utriusque vitem teneram praeacuito, obliquo inter sese medullam cum medulla libro conligato. Tertia insitio est: terebra vitem quam inseres pertundito, eo duos suculos vitigineos, quod genus esse voles, insectos obliquos artito ad medullam; facito iis medullam cum medulla coniungas artitoque ea qua terebraveris alterum ex altera parte. Eos surculos facito sint longi pedes binos, eos in terram demittito replicatoque ad vitis caput, medias vitis vinclis in terram defigito terraque operito. Haec omnia luto depsto oblinito, alligato integitoque ad eundem modum, tamquam oleas.

[42] Ficos et oleas altero modo. Quod genus aut ficum aut oleam esse voles, inde librum scalptro eximito, alterum librum cum gemma de eo fico, quod genus esse voles, eximito, adponito in eum locum unde exicaveris in alterum genus

facitoque uti conveniat. Librum longum facito digitos III S, latum digitos III. Ad eundem modum oblinito, integito, uti cetera.

[43] Sulcos, si locus aquosus erit, alveatos esse oportet, latos summos pedes tres, altos pedes quattuor, infimum latum P. I et palmum. Eos lapide consternito; si lapis non erit, perticis saligneis viridibus controversus conlatis consternito; si pertica non erit, sarmentis conligatis. Postea scrobes facito altos P. III S, latos P. IIII, et facito de scrobe aqua in sulcum defluat: ita oleas serito. Vitibus sulcos et propagines ne minus P. II S quoquo versus facito. Si voles vinea cito crescat et olea, quam severis, semel in mense sulcos et circum capita oleaginea quot mensibus, usque donec trimae erunt, fodere oportet. Eodem modo ceteras arbores procurato.

[44] Olivetum diebus XV ante aequinoctium vernalis incipito putare. Ex eo die dies XLV recte putabis. Id hoc modo putato. Qua locus recte ferax erit, quae arida erunt, et siquid ventus interfregerit, ea omnia eximito. Qua locus ferax non erit, id plus concidito aratoque. Bene enodato stripesque levis facito.

[45] Taleas oleagineas, quas in scrobe saturis eris tripedaneas decidito diligenterque tractato, ne liber laboret, cum dolabis aut secabis. Quas in seminario saturis eris, pedalis facito, eas sic inserito. Locus bipalio subactus siet beneque terra tenera siet beneque glittus siet. Cum taleam demittes, pede taleam opprimito. Si parum descendet, malleo aut mateola adigito cavetoque ne librum scindas, cum adiges. Palo prius locum ne feceris, quo taleam demittas. Si ita severis uti stet talea, melius vivet. Taleae ubi trimae sunt, tum denique maturae sunt, ubi liber sese vertet. Si in scrobibus aut in sulcis seres, ternas taleas ponito easque divaricato, supra terram ne plus IIII digitos transversos emineant; vel oculos serito.

[46] Seminarium ad hunc modum facito. Locum quam optimum et apertissimum et stercorosissimum poteris et quam simillimum genus terrae eae, ubi semina positurus eris, et uti ne nimis longe semina ex seminario ferantur, eum locum bipalio vertito, delapidato circumque saepito bene et in ordine serito. In sesquipedem quoquo vorsum taleam demittito opprimitoque pede. Si parum deprimere poteris, malleo aut mateola adigito. Digitum supra terram facito semina emineant fimoque bubulo summam taleam oblinito signumque apud taleam adponito crebroque sarito, si voles cito semina crescant. Ad eundem modum alia semina serito.

[47] Harundinem sic serito: ternos pedes oculos disponito. Vitiarium eodem modo facito seritoque. Ubi vitis bima erit, resicato; ubi trima erit, eximito. Si pecus pascetur, ubi vitem serere voles, ter prius resicato, quam in arborem ponas. Ubi V nodos veteres habebit, tum ad arborem ponito. Quotannis porrinam serito, quotannis habebis quo eximas.

[48] Pomarium seminarium ad eundem modum atque oleagineum facito. Suum quidquid genus talearum serito. Semen cupressi ubi seres, bipalio vertito. Vere primo serito. Porcas pedes quinos latas facito, eo stercus minutum addito, consarito glebasque conminuito. Porcam planam facito, paulum concavam. Tum semen serito crebrum tamquam linum, eo terram cribro incernito altam digitum transversum. Eam terram tabula aut pedibus conplanato, furcas circum offigito, eo perticas intendito, eo sarmenta aut cratis ficarias inponito, quae frigus defendant et solem. Uti subtus homo ambulare possit facito. Crebro runcato. Simul herbae inceperint nasci, eximito. Nam si herbam duram velles, cupressos simul evelles.

[49] Vineam veterem si in alium locum transferre voles, dumtaxat brachium crassam licebit. Primum deputato, binas gemmas ne amplius relinquito. Ex radicibus bene exfodito, usque radices persequito et caveto ne radices saucies. Ita uti fuerit, ponito in scrobe aut in sulco operitoque et bene occulcato, eodemque modo vineam statuito, alligato flexatoque, uti fuerit, crebroque fodito.

[50] Prata primo vere stercoreto luna silenti. Quae inrigiva non erunt, ubi favonius flare coeperit, cum prata defendes, depurgato herbasque malas omnis radicitus effodito. Ubi vineam deputaveris, acervum lignorum virgarumque facito. Ficos interputato et in vinea ficos subradito alte, ne eas vitis scandat. Seminaria facito et vetera resarcito. Haec facito, antequam vineam fodere incipias. Ubi daps profanata comestaque erit, verno arare incipito. Ea loca primum arato, quae siccissima erunt, et quae crassissima et aquosissima erunt, ea postremum arato, dum ne prius obdurescant.

[51] Propagatio pomorum, aliarum arborum. Ab arbore abs terra pulli qui nascentur, eos in terram deprimito extollitoque primorem partem, uti radicem capiat; inde biennio post effodito seritoque. Ficum, oleam, malum Punicum, cotoneum aliaque mala omnia, laurum, murtum, nuces Praenestinas, platanum, haec omnia a capite propagari eximique serique eodem modo oportet.

[52] Quae diligentius propagari voles, in aullas aut in qualos pertusos propagari oportet et cum iis in scrobem deferri oportet. In arboribus, uti radices capiant, calicem pertundito; per fundum aut qualum ramum, quem radicem capere voles, traicito; eum qualum aut calicem terra inpleto calcatoque bene, in arbore relinquito. Ubi bimum fuerit, ramum sub qualo praecidito. Qualum incidito ex ima parte perpetuum, sive calix erit, conquassato. Cum eo qualo aut calice in scrobem ponito. Eodem modo vitem facito, eam anno post praecidito seritoque cum qualo. Hoc modo quod genus vis propagabis.

[53] Faenum, ubi tempus erit, secato cavetoque ne sero seces. Priusquam semen maturum siet, secato, et quod optimum faenum erit, seorsum condito, per ver cum arabant, antequam ocinum des, quod edint boves.

[54] Bubus pabulum hoc modo parari darique oportet. Ubi sementim patrueris, glandem parari legique oportet et in aquam conici. Inde semodios singulis bubus in dies dari oportet, et si non laborabunt, pascantur satius erit, aut modium vinaceorum, quos in dolium condideris. Interdiu pascito, noctu faeni P. XXV uni bovi dato. Si faenum non erit, frondem iligneam et hederaciam dato. Paleas triticeas et hordeaceas, acus fabaginum, de vicia vel de lupino, item de ceteris frugibus, omnia condito. Cum stramenta condas, quae herbosissima erunt, in tecto condito et sale spargito, deinde ea pro faeno dato. Ubi verno dare coeperis, modium glandis aut vinaceorum dato aut modium lupini macerati et faeni P. XV. Ubi ocinum tempestivum erit, dato primum. Manibus carpito, id renascetur: quod falcula secuieris, non renascetur. Usque ocinum dato donec arescat: ita temperato. Postea viciam dato, postea panicum frondem ulmeam dato. Si populneam habebis, admisceto, ut ulmeae satis siet. Ubi ulmeam non habebis, querneam aut ficulneam dato. Nihil est quod magis expediat, quam boves bene curare. Boves nisi per hiemem, cum non arabunt, pasci non oportet. Nam viride cum edunt, semper id exspectant, et fiscellas habere oportet, ne herbam sectentur, cum arabunt.

[55] Ligna domino in tabulato condito, codicillos oleagineos, radices in acervo sub dio metas facito.

[56] Familiae cibaria. Qui opus facient: per hiemem tritici modios IIII, per aestatem modios IIII S; vilico, vilicae, epistatae, opilioni: modios III; compeditis: per hiemem panis p. IIII, ubi vineam fodere coeperint panis p. V, usque adeo dum ficos esse coeperint; deinde ad p. IIII redito.

[57] Vinum familiae. Ubi vindemia facta erit, loram bibant menses tres; mense quarto: heminas in dies, id est in mense congios II S; mense quinto, sexto, septimo, octavo: in dies sextarios, id est in mense congios quinque; nono, decimo, undecimo, duodecimo: in dies heminas ternas, id est amphoram; hoc amplius Saturnalibus et Compitalibus in singulos homines gongios III S; summa vini in homines singulos inter annum Q. VII. Conpeditis, uti quidquid operis facient, pro portione addito; eos non est nimium in annos singulos vini Q. X ebibere.

[58] Pulmentarium familiae. Oleae caducae quam plurimum condito; postea oleas tempestivas, unde minimum olei fieri poterit, eas condito: parcito uti quam diutissime durent. Ubi oleae comesae erunt, hallacem et acetum dato. Oleum dato in menses unicuique s. I; salis unicuique in anno modium satis est.

[59] Vestimenta familiae. Tunicam p. III S, saga alternis annis. Quotiens cuique tunicam aut sagum dabis, prius veterem accipito, unde centones fiant. Sculponias bonas alternis annis dare oportet.

SECTIONS 60-79

[60] Bubus cibaria annua in iuga singula lupini modios centum viginti aut glandis modios CCXL, faeni pondo DXX, ocini, fabae M. XX, viciae M. XXX. Praeterea granatui videto satis viciae seras. Pabulum cum seres, mulas sationes facito.

[61] Quid est agrum bene colere? Bene arare. Quid secundum? Arare. Quid tertium? Stercorare. Qui oletum saepissime et altissime miscebit, is tenuissimas radices exarabit. Si male arabit, radices susum abibunt, crassiores fient, et in radices vires oleae abibunt. Agrum frumentarium cum ares, bene et tempestivo ares, sulco vario ne ares. Cetera cultura est multum sarire et diligenter eximere semina et per tempus radices quam plurimas cum terra ferre; ubi radices bene operueris, calcare bene, ne aqua noceat. Siquis quaeret, quod tempus oleae serendae siet, agro sicco per sementim, agro laeto per ver.

[62] Quot iuga boverum, mulorum, asinorum habebis, totidem plostra esse oportet.

[63] Funem torculum esse oportet extentum pedes LV, funem loreum in plostrum P. LX, lora retinacula longa P. XXVI, subiugia in plostrum P. XIIII, funiculum P. XV, in aratrum subiugia lora P. XVI, funiculum P. VIII.

[64] Olea ubi matura erit, quam primum cogi oportet, quam minimum in terra et in tabulato esse oportet. In terra et in tabulato putescit. Leguli volunt uti olea caduca quam plurimum sit, quo plus legatur; factores, ut in tabulato diu sit, ut fracida sit, quo facilius efficiant. Nolito credere oleum in tabulato posse crescere. Quam citissime conficies, tam maxime expediet, et, totidem modiis collecta, et plus olei efficiet et melius. Olea quae diu fuerit in terra aut in tabulato, inde olei minus fiet et deterius. Oleum, si poteris, bis in die depleto. Nam oleum quam diutissime in amurca et in fracibus erit, tam taeterrimum erit.

[65] Oleum viride sic facito. Oleam quam primum ex terra tollito. Si inquinata erit, lavito a foliis et stercore purgato. Postridie aut post diem tertium, quam lecta erit, facito. Olea ubi nigra erit, stringito. Quam acerbissima olea oleum facies, tam oleum optimum erit. Domino de matura olea oleum fieri maxime expediet. Si gelicidia erunt, cum oleam coges, triduum atque quatrimum post oleum facito. Eam oleam, si voles, sale spargito. Quam calidissimum torcularium et cellam habeto.

[66] Custodis et capulatoris officia. Servet diligenter cellam et torcularium. Caveat quam minimum in torcularium et in cellam introeat. Quam mundissime purissimeque fiat. Vaso aheo neque nucleis ad oleum ne utatur. Nam si utetur,

oleum male sapiet. Cortinam plumbeam in lacum ponito, quo oleum fluat. Ubi factores vectibus prement, continuo copulator conca oleum, quam diligentissime poterit, ne cesset. Amurcam caveat ne tollat. Oleum in labrum primum indito, inde in alterum doleum indito. De iis labris fraces amurcamque semper subtrahito. Cum oleum sustuleris de cortina, amurcam deorito.

[67] Item custodis officia. Qui in torculario erunt vasa pura habeant curentque uti olea bene perficiatur beneque siccetur. Ligna in torculario ne caedant. Oleum frequenter capiant. Factoribus det in singulos factus olei sextarios et in lucernam quod opus siet. Fraces cotidie reiciat. Amurcam commutet usque adeo, donec in lacum qui in cella est postremum pervenerit. Fiscinas spongia effingat. Cotidie oleo locum commutet, donec in dolium pervenerit. In torculario et in cella caveat diligenter nequid olei subripiatur.

[68] Ubi vindemia et oletas facta erit, prela extollito; funes torculos, melipontos, subductarios in carnario aut in prelo suspendito; orbes, fibulas, vectes, scutulas, fiscinas, corbularas, quala, scalas, patibula, omnia quis usus erit, in suo quidque loco reponito.

[69] Dolia olearia sic inuito. Amurca inpleto dies VII, facito ut amurcam cotidie suppleas. Postea amurcam eximito et afarcito. Ubi arebit, cummim pridie in aquam infundito, eam postridie diluito. Postea dolium calfacito minus, quam si picare velis, tepeat satis est; lenibus lignis facito calescat. Ubi temperate tepebit, tum cummim indito, postea linito. Si recte leveris, in dolium quinquagenarium cummim P. IIII satis erit.

[70] Bubus medicamentum. Si morbum metues, sanis dato salis micas tres, folia laurea III, porri fibras III, ulpici spicas III, alii spicas III, turis grana tria, herbae Sabinae plantas tres, rutae folia tria, vitis albae caules III, fabulos albos III, carbones vivos III, vini S. III. Haec omnia sublimiter legi teri darique oportet. Ieiunus siet qui dabit. Per triduum de ea potione uni cuique bovi dato. Ita dividito, cum ter uni cuique dederis, omnem absumas, bosque ipsus et qui dabit facito ut uterque sublimiter stent. Vaso ligneo dato.

[71] Bos si aegrotare coeperit, dato continuo ei unum ovum gallinaceum crudum; integrum facito devoret. Postridie caput ulpici conterito cum hemina vini facitoque ebibat. Sublimiter terat et vaso ligneo det, bosque ipsus et qui dabit sublimiter stet. Ieiunus ieiuno bovi dato.

[72] Boves ne pedes subterant, priusquam in viam quoquam ages, pice liquida cornua infima unguito.

[73] Ubi uvae variae coeperint fieri, bubus medicamentum dato quotannis, uti valeant. Pellem anguinam ubi videris, tollito et condito, ne quaeras cum opus siet. Eam pellem et far et salem et serpullum, haec omnia una conterito cum

vino, dato bubus bibant omnibus. Per aestatem boves aquam bonam et liquidam bibant semper curato; ut valeant refert.

[74] Panem depsticum sic facito. Manus mortariumque bene lavato. Farinam in mortarium indito, aquae paulatim addito subigitoque pulchre. Ubi bene subegeris, defingito coquitoque sub testu.

[75] Libum hoc modo facito. Casei P. II bene disterat in mortario. Ubi bene distriverit, farinae siligineae libram aut, si voles tenerius esse, selibrum similaginis eodem indito permiscetoque cum caseo bene. Ovum unum addito et una permisceto bene. Inde panem facito, folia subdito, in foco caldo sub testu coquito leniter.

[76] Placentam sic facito. Farinae siligineae L. II, unde solum facias, in tracta farinae L. III et alicae primae L. II. Alicam in aquam infundito. Ubi bene mollis erit, in mortarium purum indito siccatoque bene. Deinde manibus depsito. Ubi bene subactum erit, farinae L. III paulatim addito. Id utrumque tracta facito. In qualo, ubi arescant, conponito. Ubi arebunt, conponito puriter. Cum facies singula tracta, ubi depsueris, panno oleo uncto tangito et circumtergeto ungitoque. Ubi tracta erunt, focum, ubi coquas, calfacito bene et testum. Postea farinae L. II conspargito condepsitoque. Inde facito solum tenue. Casei ovilli P: XIII ne acidum et bene recens in aquam indito. Ibi macerato, aquam ter mutato. Inde eximito siccatoque bene paulatim manibus, siccum bene in mortarium inponito. Ubi omne caseum bene siccaveris, in mortarium purum manibus condepsito conminuitoque quam maxime. Deinde cribrum farinarium purum sumito caseumque per cribrum facito transeat in mortarium. Postea indito mellis boni P. III S. Id una bene commisceto cum caseo. Postea in tabula pura, quae pateat P. I, ibi balteum ponito, folia laurea uncta supponito, placentam fingito. Tracta singula in totum solum primum ponito, deinde de mortario tracta linito, tracta addito singulatim, item linito usque adeo, donec omne caseum cum melle abusus eris. In summum tracta singula indito, postea solum contrahito ornatoque focum + de ve primo + temperatoque, tunc placentam inponito, testo caldo operito, pruna insuper et circum operito. Aperito, dum inspicias, bis aut ter. Ubi cocta erit, eximito et melle unguito. Haec erit placenta semodialis.

[77] Spiram sic facito. Quantum voles pro ratione, ita uti placenta fit, eadem omnia facito, nisi alio modo fingito. In solo tracta cum melle oblinito bene. Inde tamquam restim tractes facito, ita inponito in solo, simplicibus completo bene arte. Cetera omnia, quasi placentam facias, facito coquitoque.

[78] Scriblitam sic facito. In balteo tractis caseo ad eundem modum facito, uti placentam, sine melle.

[79] Globos sic facito. Caseum cum alica ad eundem modum misceto. Inde quantos voles facere facito. In ahenum caldum unguen indito. Singulos aut binos

coquito versatoque crebro duabus rudibus, coctos eximito, eos melle unguito,
papaver infriato, ita ponito.

SECTIONS 80-99

[80] Encytum ad eundem modum facito, uti globos, nisi calicem pertusum cavum habeat. Ita in unguen caldum fundito. Honestum quasi spiram facito idque duabus rudibus vorsato praestatoque. Item unguito coloratoque caldum ne nimium. Id cum melle aut cum mulso adponito.

[81] Erneum sic facito tamquam placentam. Eadem omnia indito, quae in placentam. Id permisceto in alveo, id indito in irneam fictilem, eam demittito in aulam aheneam aquae calidae plenam. Ita coquito ad ignem. Ubi coctum erit, irneam confringito, ita ponito.

[82] Spaeritam sic facito, ita uti spiram, nisi sic fingito. De tractis caseo melle spaeras pugnum altas facito. Eas in solo conponito densas, eodem modo conponito atque spiram itemque coquito.

[83] Votum pro bubus, uti valeant, sic facito. Marti Silvano in silva interdius in capita singula boum votum facito. Farris L. III et lardi P. IIII S et pulpae P. IIII S, visi S. III, id in unum vas liceto coicere, et vinum item in unum vas liceto coicere. Eam rem divinam vel servus vel liber licebit faciat. Ubi res divina facta erit, statim ibidem consumito. Mulier ad eam rem divinam ne adsit neve videat quo modo fiat. Hoc votum in annos singulos, si voles, licebit vovere.

[84] Savillum hoc modo facito. Farinae selibram, casei P. II S una conmisceto quasi libum, mellis P. * et ovum unum. Catinum fictile oleo unguito. Ubi omnia bene conmiscueris, in catinum indito, catinum testo operito. Videto ut bene percoquas medium, ubi altissimum erit. Ubi coctum erit, catinum eximito, papaver infriato, sub testum subde paulisper, postea eximito. Ita pone cum catillo et lingua.

[85] Pultem Punicam sic coquito. Libram alicae in aquam indito, facito uti bene madeat. Id infundito in alveum purum, eo casei recentis P. III, mellis P. S, ovum unum, omnia una permisceto bene. Ita insipito in aulam novam.

[86] Graneam triticeam sic facito. Selibram tritici puri in mortarium purum indat, lavet bene corticemque deterat bene eluatque bene. Postea in aulam indat et aquam puram cocatque. Ubi coctum erit, lacte addat paulatim usque adeo, donec cremor crassus erit factus.

[87] Amulum sic facito. Siliginem purgato bene, postea in alvum indat, eo addat aquam bis in die. Die decimo aquam exsiccato, exurgeto bene, in alveo puro misceto bene, facito tamquam faex fiat. Id in linteum novum indito, exprimito cremorem in patinam novam aut in mortarium. Id omne ita facito et

refricato denuo. Eam patinam in sole ponito, arescat. Ubi arebit, in aulam novam indito, inde facito cum lacte coquat.

[88] Salem candidum sic facito. Amphoram defracto collo puram inpleto aquae purae, in sole ponito. Ibi fiscellam cum sale populari suspendito et quassato suppletoque identidem. Id aliquotiens in die cotidie facito, usque adeo donec sal desiverit tabescere biduum. Id signi erit: menam aridam vel ovum demittito; si natabit, ea muries erit, vel carnem vel caseos vel salsamenta quo condas. Eam muriam in labella vel in patinas in sole ponito. Usque adeo in sole habeto, donec concreverit. Inde flos salis fiet. Ubi nubilabitur et noctu sub tecto ponito; cotidie, cum sol erit, in sole ponito.

[89] Gallinas et anseres sic farcito. Gallinas teneras, quae primum parient, concludat. Polline vel farina hordeacia consparsa turundas faciat, eas in aquam intingat, in os indat, paulatim cotidie addat; ex gula consideret, quod satis sit. Bis in die farciat et meridie bibere dato; ne plus aqua sita siet horam unam. Eodem modo anserem alito, nisi prius dato bibere et bis in die, bis escam.

[90] Palumbum recentem sic farcito. Ubi pressus erit, ei fabam coctam tostam primum dato, ex ore in eius os inflato, item aquam. Hoc dies VII facito. Postea fabam fresam puram et far purum facito et fabae tertia pars ut infervescat, tum far insipiat, puriter facito et coquito bene. Id ubi excluderis, deposito bene, oleo manum unguito, primum pusillum, postea magis deposes, oleo tangito depositoque, dum poterit facere turundas. Ex aqua dato, escam temperato.

[91] Aream sic facito. Locum ubi facies confodito. Postea amurca conspargito bene sinitoque conbibat. Postea conminuito glebas bene. Deinde coaequato et paviculis verberato. Postea denuo amurca conspargito sinitoque arescat. Si ita feceris, neque formicae nocebunt neque herbae nascentur.

[92] Frumento ne noceat curculio neu mures tangant. Lutum de amurca facito, palearum paulum addito, sinito macerescant bene et subigito bene; eo granarium totum oblinito crasso luto. Postea conspargito amurca omne quod lutaveris. Ubi aruerit, eo frumentum refrigeratum condito; curculio non nocebit.

[93] Olea si fructum non feret, ablaqueato. Postea stramenta circumponito. Postea amurcam cum aqua conmisceto aequas partes. Deinde ad oleam circumfundito. Ad arborem maxumam urnam conmixti sat est; ad minores arbores pro ratione indito. Et idem hoc si facies ad arbores feraces, eae quoque meliores fient. Ad eas stramenta ne addideris.

[94] Fici uti grossos teneant, facito omnia quo modo oleae, et hoc amplius, cum ver adpetet, terram adaggerato bene. Si ita feceris, et grossi non cadent et fici scabrae non fient et multo feraciores erunt.

[95] Convolvulus in vinia ne siet. Amurcam condito, puram bene facito, in vas aheneum indito congios II. Postea igni leni coquito, rudicula agitato crebro

usque adeo, dum fiat tam crassum quam mel. Postea sumito bituminis tertiarium et sulphuris quartarium. Conterito in mortario seorsum utrumque. Postea infriato quam minutissime in amurcam caldam et simul rudicula misceto et denuo coquito sub dio caelo. Nam si in tecto coquas, cum bitumen et sulphur additum est, excandescet. Ubi erit tam crassum quam viscum, sinito frigescat. Hoc vitem circum caput et sub brachia unguito; convolvus non nascetur.

[96] Oves ne scabrae fiant. Amurcam condito, puram bene facito, aquam in qua lupinus deferverit et faecem de vino bono, inter se omnia commisceto pariter. Postea cum detonderis, unguito totas, sinito biduum aut triduum consudent. Deinde lavito in mari; si aquam marinam non habebis, facito aquam salsam, ea lavito. Si haec sic feceris, neque scabrae fient et lanae plus et meliorem habebunt, et ricini non erunt molesti. Eodem in omnes quadripedes utito, si scabrae erunt.

[97] Amurca decocta axem unguito et lora et calciamenta et coria; omnia meliora facies.

[98] Vestimenta ne tiniae tangant. Amurcam decoquito ad dimidium, ea unguito fundum arcae et extrinsecus et pedes et angulos. Ubi ea adaruerit, vestimenta condito. Si ita feceris, tiniae non nocebunt. Et item ligneam supellectilem omnem si ungues, non putescet, et cum ea terseris, splendidior fiet. Item ahenea omnia unguito, sed prius extergeto bene. Postea cum unxeris, cum uti voles, extergeto. Splendidior erit, et aerugo non erit molesta.

[99] Fici aridae si voles uti integrae sint, in vas fictile condito. Id amurca decocta unguito.

SECTIONS 100-119

[100] Oleum si in metretam novam inditurus eris, amurca, ita uti est cruda, prius conluito agitatoque diu, ut bene conbibat. Id si feceris, metreta oleum non bibet, et oleum melius faciet, et ipsa metreta firmior erit.

[101] Virgas murteas si voles cum bacis servare et item aliud genus quod vis, et si ramos ficulneos voles cum foliis, inter se alligato, fasciculos facito, eos in amurcam demittito, supra stet amurca facito. Sed ea quae demissurus eris sumito paulo acerbiora. Vas, quo condideris, oblinito plane.

[102] Si bovem aut aliam quamvis quadrupedem serpens momorderit, melanthi acetabulum, quod medici vocant zmurnaem, conterito in vini veteris hemina: id per nares indito et ad ipsum morsum stercus suillum apponito. Et idem hoc, si usus evenerit, homini facito.

[103] Boves uti valeant et curati bene sint, et qui fastidient cibum, uti magis cupide adpetant, pabulum quod dabis amurca spargito; primo pabulum, dum consuescant, postea magis, et dato rarerer bibere conmixtam cum aqua aequabiliter. Quarto quinto quoque die hoc sic facies. Ita boves et corpore curatiores erunt, et morbus aberit.

[104] Vinum familiae per hiemem qui utatur. Musti Q. X in dolium indito, aceti acris Q. II eodem infundito, sapae Q. II, aquae dulcis Q. L. Haec rude misceto ter in die dies quinque continuos. Eo addito aquae marinae veteris sextarios LXIII et operculum in dolium inponito et oblinito post dies X. Hoc vinum durabit tibi usque ad solstitium. Siquid superfuerit post solstitium, acetum acerrimum et pulcherrimum erit.

[105] Qui ager longe a mari aderit, ibi vinum Graecum sic facito. Musti Q. XX in aheneum aut plumbeum infundito, ignem subdito. Ubi bullabit vinum, ignem subducito. Ubi id vinum refrixerit, in dolium quadragenarium infundito. Seorsum vas aquae dulcis Q. I infundito, salis M I, sinito muriam fieri. Ubi muria facta erit, eodem in dolium infundito. Schoenum et calamum in pila contundito, quod satis siet, sextarium unum eodem in dolium infundito, ut odoratum siet. Post dies XXX dolium oblinito. Ad ver diffundito in amphoras. Biennium in sole sinito positum esse. Deinde in tectum conferto. Hoc vinum deterius non erit quam Coum.

[106] Aquae marinae concinnatio. Aquae marinae Q. I ex alto sumito, quo aqua dulcis non accedit. Sesquilibram salis frigito, eodem indito et rude misceto usque adeo, donec ovum gallinaceum coctum natabit, desinito miscere. Eodem vini veteris vel Aminnii vel miscelli albi congios II infundito, misceto probe. Postea

vas picatum confundito et oblinito. Siquid plus voles aquae marinae concinnare, pro portione ea omnia facito.

[107] Quo labra doliorum circumlinas, ut bene odorata sint et nequid viti in vinum accedat. Sapaе congios VI quam optimaе infundito in aheneum aut in plumbeum et iris aridaе contusae heminam et sertam Campanicam P. V bene odoratam una cum iri contundas quam minutissime, per cribrum cernas et una cum sapa coquas sarmentis et levi flamma. Commoveto, videto ne aduras. Usque coquito, dum dimidium excoquas. Ubi refrixerit, confundito in vas picatum bene odoratum et oblinito et utito in labra doliorum.

[108] Vinum si voles experiri duraturum sit necne, polentam grandem dimidium acetabuli in caliculum novum indito et vini sextarium de eo vino quod voles experiri eodem infundito et inponito in carbones; facito bis aut ter inferveat. Tum id percolato, polentam abicito. Vinum ponito sub dio. Postridie mane gustato. Si id sapiet, quod in dolio est, scito duraturum; si subacidum erit, non durabit.

[109] Vinum asperum quod erit lene et suave si voles facere, sic facito. De ervo farinam facito libras IIII et vini cyathos IIII conspargito sapa. Postea facito laterculos. Sinito conbibant noctem et diem. Postea commisceto cum eo vino in dolio et oblinito post dies LX. Id vinum erit lene et suave et bono colore et bene odoratum.

[110] Odorem deteriorem demere vino. Testam de tegula crassam puram calfacito in igni bene. Ubi calebit, eam picato, resticula alligato, testam demittito in dolium infimum leniter, sinito biduum oblitum dolium. Si demptus erit odor deterior, id optime; si non, saepius facito, usque dum odorem malum dempseris.

[111] Si voles scire, in vinum aqua addita sit necne, vasculum facito de materia hederacia. Vinum id, quod putabis aquam habere, eo demittito. Si habebit aquam, vinum effluet, aqua manebit. Nam non continet vinum vas hederaceum.

[112] Vinum Coum si voles facere, aquam ex alto marinam sumito mari tranquillo, cum ventus non erit, dies LXX ante vindemiam, quo aqua dulcis non perveniet. Ubi hauseris de mari, in dolium infundito, nolito implere, quadrantalibus quinque minus sit quam plenum. Operculum inponito, relinquito qua interspiret. Ubi dies XXX praeterierint, transfundito in alterum dolium puriter et leniter, relinquito in imo quod desiderit. Post dies XX in alterum dolium item transfundito; ita relinquito usque ad vindemiam. Unde vinum Coum facere voles, uvas relinquito in vinea, sinito bene coquantur, et ubi pluerit et siccaverit, tum deligito et ponito in sole biduum aut triduum sub dio, si pluviae non erunt. Si pluvia erit, in tecto cratibus conponito, et siqua acina corrupta erunt, depurgato. Tum sumito aquam marinam Q. S. S. E, in dolium quinquagenarium infundito aquae marinae Q. X. Tum acina de uvis miscellis

decarpito de scopione in idem dolium, usque dum inpleveris. Manu conprimito acina, ut conbibant aquam marinam. Ubi inpleveris dolium, operculo operito, relinquito qua interspiret. Ubi triduum praeterierit, eximito de dolio et calcato in torculario et id vinum condito in dolia lauta et pura et sicca.

[113] Ut odoratum bene sit, sic facito. Sumito testam picatam, eo prunam lenem indito, suffito sarta et schoeno et palma, quam habent unguentarii, ponito in dolio et operito, ne odor exeat, antequam vinum indas. Hoc facito pridie quam vinum infundere voles. De lacu quam primum vinum in dolia indito, sinito dies XV operata, antequam oblinas, relinquito qua interspiret, postea oblinito. Post dies XL diffundito in amphoras et addito in singulas amphoras sapae sextarium unum. Amphoras nolito implere nimium, ansarum infimarum fini, et amphoras in sole ponito, ubi herba non siet, et amphoras operito, ne aqua accedat, et ne plus quadriennium in sole siveris. Post quadriennium in cuneum conponito et instipato.

[114] Vinum si voles concinnare, ut alvum bonam faciat, secundum vindemiam, ubi vites ablaqueantur, quantum putabis ei rei satis esse vini, tot vites ablaqueato et signato. Earum radices circumsecato et purgato. Veratri atri radices contundito in pila, eas radices dato circum vitem et stercus vetus et cinerem veterem et duas partes terrae circumdato radices vitis. Terram insuper inicito. Hoc vinum seorsum legito. Si voles servare in vetustatem ad alvum movendam, servato, ne commisceas cum etero vino. De eo vino cyathum sumito et misceto aqua et bibito ante cenam. Sine periculo alvum movebit.

[115] In vinum mustum veratri atri manipulum coicito in amphoram. Ubi satis efferverit, de vino manipulum eicito. Id vinum servato ad alvum movendam. Vinum ad alvum movendam concinnare. Vites cum ablaqueabuntur, signato rubrica, ne admisceas cum cetero vino. Tris fasciculos veratri atri circumponito circum radices et terram insuper inicito. Per vindemiam de iis vitibus quod delegeris, seorsum servato, cyathum in ceteram potionem indito. Alvum movebit et postridie pepurgabit sine periculo.

[116] Lentim quo modo servare oporteat. Laserpicium aceto diluito, permisceto lentim aceto laserpicato et ponito in sole. Postea lentim oleo perfricato, sinito arescat. Ita integra servabitur recte.

[117] Oleae albae quo modo condiantur. Antequam nigrae fiant, contundantur et in aquam deiciantur. Crebro aquam mutet. Deinde, ubi satis maceratae erunt, exprimat et in acetum coiciat et oleum addat, salis selibram in modium olearum. Feniculum et lentiscum seorsum condat in acetum. Si una admiscere voles, cito utito. In orculam calcato. Manibus siccis, cum uti voles, sumito.

[118] Oleam albam, quam secundum vindemiam uti voles, sic condito. Musti tantumdem addito, quantum aceti. Cetera item condito ita, uti supra scriptum est.

[119] Epityrum album nigrum variumque sic facito. Ex oleis albis nigris variisque nucleos eicito. Sic condito. Concido ipsas, addito oleum, acetum coriandrum, cuminum feniculum rutam, mentam. In orcuam condito, oleum supra siet. Ita utito.

SECTIONS 120-139

[120] Mustum si voles totum annum habere, in amphoram mustum indito et corticem oppicato, demittito in piscinam. Post dies XXX eximito. Totum annum mustum erit.

[121] Mustaceos sic facito. Farinae siligineae modium unum musto conspargito. Anesum, cuminum, adipis P. II, casei libram, et de virga lauri deradito, eodem addito, et ubi definxeris, lauri folia subtus addito, cum coques.

[122] Vinum concinnare, si lotium difficilius transibit. Capreidam vel iunipirum contundito in pila, libram indito, in duobus congiis vini veteris in vase aeneo vel in plumbeo defervefacito. Ubi refrixerit, in lagonam indito. Id mane ieiunus sumito cyathum; proderit.

[123] Vinum ad isc[h]iacos sic facito. De iunipiro materiem semipedem crassam concidito minutim. Eam infervefacito cum congio vini veteris. Ubi refrixerit, in lagonam confundito et postea id utito cyathum mane ieiunus; proderit.

[124] Canes interdium clausos esse oportet, ut noctu acriores et vigilantiores sint.

[125] Vinum murteum sic facito. Murtam nigram arfacito in umbra. Ubi iam passa erit, servato ad vindemiam, in urnam musti contundito murtae semodium, id oblinito. Id est ad alvum crudam et ad lateris dolorem et ad coeliacum.

[126] Ad tormina, et si alvus non consistet, et si taeniae et lumbrici molesti erunt. XXX mala Punica acerba sumito, contundito, indito in urceum et vini nigri austeri congios III. Vas oblinito. Post dies XXX aperito et utito; ieiunus heminam bibito.

[127] Ad dyspepsiam et stranguriam mederi. Malum Punicum ubi florebit, conligito, tris minas in amphoram infundito, vini Q. I veteris addito et feniculi radicem puram contusam minam. Oblinito amphoram et post dies XXX aperito et utito. Ubi voles cibum concoquere et lotium facere, hinc bibito quantum voles sine periculo. Idem vinum taenias perpurgat et lumbricos, si sic concinnes. Incenatum iubeto esse. Postridie turis drachmam unam conterito et mel coctum drachmam unam et vini sextarium organiti. Dato ieiuno, et puero pro aetate triobolum et vini hemina. Supra pilam inscendat et saliat decies et deambulet.

[128] Habitationem delutare. Terram quam maxime cretosam vel rubricosam, eo amurcam infundito, paleas indito. Sinito quadriduum fracescat. Ubi bene fracuerit, rutro concidito. Ubi concideris, delutato. Ita neque aspergo nocebit, neque mures cava facient, neque herba nascetur, neque lutamenta scindent se.

[129] Aream, ubi frumentum teratur, sic facito. Confodiatur minute terra, amurca bene conspargatur et conbibat quam plurimum. Conminuito terram et cylindro aut pavicula coaequato. Ubi coaequata erit, neque formicae molestae erunt, et cum pluerit, lutum non erit.

[130] Codicillos oleagineos et cetera ligna amurca cruda perspargito et in sole ponito, perbibant bene. Ita neque fumosa erunt et ardebunt bene.

[131] Piro florente dapem pro bubus facito. Postea verno arare incipito. Ea loca primum arato, quae rudecta harenosaeque erunt. Postea uti quaeque gravissima et aquosissima erunt, ita postremo arato.

[132] Dapem hoc modo fieri oportet. Iovi dapali culignam vini quantam vis polluceto. Eo die feriae bubus et bubulcis et qui dapem facient. Cum pollucere oportebit, sic facies: “Iuppiter dapalis, quod tibi fieri oportet in domo familia mea culignam vini dapi, eius rei ergo macte hac illace dape polluenda esto.” Manus interluito postea vinum sumito: “Iuppiter dapalis, macte istace dape polluenda esto, macte vino inferio esto.” Vestae, si voles, dato. Daps Iovi assaria pecuina urna vini. Iovi caste profanato sua contagione. Postea dape facta serito milium, panicum, alium, lentim.

[133] Propagatio pomorum ceterarumque arborum. Arboribus abs terra pulli qui nati erunt, eos in terram deprimito, extollito, uti radicem capere possint. Inde, ubi tempus erit, effodito seritoque recte. Ficum, oleam, malum Punicum, mala strutea, cotonea aliaque mala omnia, laurum Cypriam, Delphicam, prunum, murtum coniugulum et murtum album et nigrum, nuces Abellanas, Praenestinas, platanum haec omnia genera a capitibus propagari eximique ad hunc modum oportebit. Quae diligentius seri voles, in calicibus seri oportet. In arboribus radices uti capiant, calicem pertusum sumito tibi aut quasillum; per eum ramulum trasserito; eum quasillum terra inpleto caecatoque, in arbore relinquito. Ubi bimum erit, ramum tenerum infra praecidito, cum quasillo serito. Eo modo quod vis genus arborum facere poteris uti radices bene habeant. Item vitem in quasillum propagato terraque bene operito, anno post praecidito, cum qualo serito.

[134] Priusquam messim facies, porcam praecidaneam hoc modo fieri oportet. Cereri porca praecidanea porco femina, priusquam hasce fruges condas, far, triticum, hordeum, fabam, semen rapicium. Ture vino Iano Iovi Iunoni praefato, priusquam porcum feminam immolabis. Iano struem [c]ommoveto sic: “Iane pater, te hac strue [c]ommovenda bonas preces precor, uti sies volens propitius mihi liberisque meis domo familiaeque meae”. Fertum Iovi [c]ommoveto et mactato sic: “Iuppiter, te hoc fertu obmovendo bonas preces precor uti sies volens propitius mihi liberisque meis domo familiaeque meaemactus hoc fertu”. Postea Iano vinum dato sic: “Iane pater, uti te strue [c]ommovenda bonas preces

bene precatus sum, eiusdem rei ergo macte vino inferio esto.” Postea porcam praecidaneam inmolato. Ubi exta prosecta erunt, Iano struem ommoveto mactatoque item, uti prius obmoveris. Iovi fertum obmoveto mactatoque item, uti prius feceris. Item Iano vinum dato et Iovi vinum dato, item uti prius datum ob struem obmovendam et fertum libandum. Postea Cereri exta et vinum dato.

[135] Romae tunicas, togas, saga, centones, sculponeas; Calibus et Minturnis cuculliones, ferramenta, falces, palas, ligones, secures, ornamenta, murices, catellas; Venafri palas. Suessae et in Lucanis plostra, treblae Albae, Romae dolia, labra; tegulae ex Venafro. Aratra in terram validam Romanica bona erunt; in terram pullam Campanica; iuga Romanica optima erunt; vomeris indutilis optimus erit. Trapeti Pompeis, Nolae ad Rufri maceriam; claves, clostra Romae; hamae oleariae, urcei aquarii, urnae vinariae, alia vasa ahenea Capuae, Nolae; fiscinae Campanicae Capuae utiles sunt. Funes subductarios, spartum omne Capuae; fiscinas Romanicas Suessae, Casino+ * * * optimae erunt Romae.

Funem torculum siquis faciet, Casini L. Tunnus, Venafri C. Mennius L. f. Eo indere oportet coria bona III nostratia, recentia quae depsta sient, quam minimum sallis habeant. Ea depsero et unguere unguine prius oportet, tum siccare. Funem exordiri oportet longum P. LXXII. Toros III habeat, lora in toros singulos VIII lata digitos II. Cum tortus erit, longus P. XLVIII. In commissura abibit P. III, rel. erit P. XLVI. Ubi extentus erit, accedent P. V: longus erit P. LI. Funem torculum extentum longum esse oportet P. LV maximis vasis, minoribus P. LI. Funem loreum in plostrum iustum P. LX, semifunium P. XLV, lora retinacula in plostrum P. XXXVI, ad aratrum P. XXVI, lora praeductoria P. XXVII S, subiugia in plostrum lora P. XIX, funiculum P. XV, in aratrum subiugia lora P. XII, funiculum P. IIX.

Trapetos latos maximos P. III S, orbis altos P. III S, orbis medios, ex lapicaedinis cum eximet, crassos pedem et palmum, inter miliarium et labrum P. I digitos II, labra crassa digitos V. Secundarium trapetum latum P. IIII et palmum, inter miliarium et labrum pes unus digitus unus, labra crassa digitos V, orbis altos P. III et digitos V, crassos P. I et digitos III. Foramen in orbis semipedem quoquo versum facito. Tertium trapetum latum P. IIII, inter miliarium et labrum P. I, labrum digitos V, orbis altos P. III digitos III, crassos P. I et digitos II. Trapetum ubi arvectum erit, ubi statues, ibi accommodato concinnatoque.

[136] Politionem quo pacto partiario dari oporteat. In agro Casinate et Venafro in loco bono parti octava corbi divicat, satis bono septima, tertio loco sexta; si granum modio dividet, parti quinta. In Venafro ager optimum nona parti corbi dividat. Si communiter pisunt, qua ex parte politori pars est, eam partem in pistrinum politor. Hordeum quinta modio, fabam quinta modio dividat.

[137] Vineam curandam partiario. Bene curet fundum, arbustum, agrum frumentarium. Partiario faenum et pabulum, quod bubus satis siet, qui illic sient. Cetera omnia pro indiviso.

[138] Boves feriis coniungere licet. Haec licet facere: arvehant ligna, fabalia, frumentum, quod conditurus erit. Mulis, equis, asinis feriae nullae, nisi si in familia sunt.

[139] Lucum conlucare Romano more sic oportet: porco piaculo facito, sic verba concipito: “Si deus, si dea es, quoiium illud sacrum est, uti tibi ius est porco piaculo facere illiusce sacri coercendi ergo harumque rerum ergo, sive ego sive quis iussu meo fecerit, uti id recte factum siet, eius rei ergo hoc porco piaculo immolando bonas preces precor, uti sies volens propitius mihi domo familiaeque meae liberisque meis: harumce rerum ergo macte hoc porco piaculo immolando esto”.

SECTIONS 140-162

[140] Si fodere voles, altero piaculo eodem modo facito, hoc amplius dicitō: “Operis faciundi causa”. Dum opus, cotidie per partes facito. Si intermiseris aut feriae publicae aut familiares intercesserint, altero piaculo facito.

[141] Agrum lustrare sic oportet. Impera suovitaurlia circumagi: “Cum divis volentibus quodque bene eveniat, mando tibi, Mani, uti illace suovitaurlia fundum agrum terramque meam quota ex parte sive circumagi sive circumferenda censeas, uti cures lustrare.” Ianum Iovemque vino praefamino, sic dicitō:

“ Mars pater te precor quaesoque
uti sies volens propitius
mihi domo familiaeque nostrae;
quocius rei ergo
agrum terram fundumque meum
suovitaurlia circum agi iussi:
uti tu morbos visos invisosque
viduertatem vastitudinemque,
calamitates intemperiasque
prohibessis defendas averruncesque;
uti tu fruges frumenta vineta virgultaque
grandire dueneque evenire siris,
pastores pecuaque salva servassis;
duisque duonam salutem valetudinemque
mihi domo familiaeque nostrae:
harunce rerum ergo
fundi terrae agrique mei
lustrandi lustrique faciundi ergo,
sic ut dixi,
macte hisce suovitaurlibus
lactentibus immolandis esto:
Mars pater,
eiusdem rei ergo
macte hisce suovitaurlibus
lactentibus immolandis esto.”

Item cultro facito struem et fertum uti adsiet, inde obmoveto. Ubi porcum immolabis, agnum vitulumque, sic oportet:

“eiusdem rei ergo
macte hisce suovitautilibus
immolandis esto.”

Nominare vetat Martem neque agnum vitulumque. Si minus in omnis litabit, sic verba concipito:

“Mars pater, quod tibi illoc porco neque satisfactum est, te hoc porco piaculo”.

[142] Vilici officia quae sunt, quae dominus praecepit, ea omnia quae in fundo fieri oportet quaeque emi pararique oportet, quo modoque cibaria, vestimenta familiae dari oportet, eadem uti curet faciatque moneo domino dicto audiens sit. Hoc amplius, quo modo vilicam uti oportet et quo modo eae imperari oportet, uti adventu domini quae opus sunt parentur curenturque diligenter.

[143] Vilicae quae sunt officia curato faciat; si eam tibi dederit dominus uxorem, esto contentus; ea te metuat facito; ne nimium luxuriosa siet; vicinas aliasque mulieres quam minimum utatur neve domum neve ad sese recipiat; ad coenam ne quo eat neve ambulatrix siet; rem divinam ni faciat neve mandet qui pro ea faciat iniussu domini aut dominae: scito dominum pro tota familia rem divinam facere. Munda siet: villam conversam mundeque habeat; focum purum circumversum cotidie, priusquam cubitum eat, habeat. Kal., Idibus, Nonis, festus dies cum erit, coronam in focum indat, per eosdemque dies lari familiari pro copia supplicet. Cibum tibi et familiae curet uti coctum habeat. Gallinas multas et ova uti habeat. Pira arida, sorba, ficos, uvas passas, sorba in sapa et piras et uvas in doliis et mala strutha, uvas in vinaciis et in urceis in terra obrutas et nuces Praenestinas recentes in urceo in terra obrutas habeat. Mala Scantiana in doliis et alia quae condi solent et silvatica, haec omnia quotannis diligenter uti condita habeat. Farinam bonam et far suptile sciat facere.

[144] Oleam legendam hoc modo locare oportet. Oleam cogito recte omnem arbitrato domini, aut quem custodem fecerit, aut cui olea venierit. Oleam ne stringito neve verberato iniussu domini aut custodis. Si adversus ea quis fecerit, quod ipse eo die delegerit, pro eo nemo solvet neque debebitur. Qui oleam legerint, omnes iuranto ad dominum aut ad custodem sese oleam non subripuisse neque quemquam suo dolo malo ea oletate ex fundo L. Manli. Qui eorum non ita iuraverit, quod is legerit omne, pro eo argentum nemo dabit neque debebitur. Oleam cogi recte satis dato arbitrato L. Manli. Scalae ita uti datae erunt, ita reddito, nisi quae vetustate fractae erunt. Si non erunt redditae, aequom viri boni

arbitratu deducetur. Siquid redemptoris opera domino damni datum erit, resolvito; id viri boni arbitratu deducetur. Legulos, quot opus erit, praebeto et strictores. Si non praebuerit, quanti conductum erit aut locatum erit, deducetur; tanto minus debebitur. De fundo ligna et oleam ne deportato. Qui oleam legerit, qui deportarit, in singulas deportationes SS. N. II deducuntur neque id debebitur. Omnem oleam puram metietur modio oleario. Adsiduos homines L praebeto, duas partes strictorum praebeto. Nequis concedat, quo olea legunda et faciunda carius locetur, extra quam siquem socium inpraesentiarum dixerit. Siquis adversum ea fecerit, si dominus aut custos volent, iurent omnes socii. Si non ita iuraverint, pro ea olea legunda et faciunda nemo dabit neque debebitur ei qui non iuraverit. Accessiones: in M xx CC accedit oleae salsae M V, olei puri P. VIII, in tota oletate aceti Q. V. Quod oleae salsae non acceperint, dum oleam legent, in modios singulos SS. V dabuntur.

[145] Oleam faciendam hac lege oportet locare. Facito recte arbitratu domini aut custodis, qui id negotium curabit. Si sex iugis vasis opus erit, facito. Homines eos dato, qui placebunt aut custodi aut quis eam oleam emerit. Si opus erit trapetis facito. Si operarii conducti erunt aut facienda locata erit, pro eo resolvito, aut deducetur. Oleum ne tangito utendi causa neque furandi causa, nisi quod custos dederit aut dominus. Si sumpserit, in singulas sumptiones SS. N. XL deducuntur neque debebitur. Factores, qui oleum fecerint, omnes iuranto aut ad dominum aut ad custodem sese de fundo L. Manli neque alium quemquam suo dolo malo oledum neque oleam subripuisse. Qui eorum ita non iuraverit, quae eius pars erit, omne deducetur neque debebitur. Socium nequem habeto, nisi quem dominus iusserit aut custos. Siquid redemptoris opera domino damni datum erit, viri boni arbitratu deducetur. Si viride oleum opus siet, facito. Accedet oleum et sale suae usioni quod satis siet, vasarium vict. II.

[146] Oleam pendentem hac lege venire oportet. Olea pendens in fundo Venafro venibit. Qui oleam emerit, amplius quam quanti emerit omnis pecuniae centesima accedet, praeconium praesens SS. L, et oleum: Romanici P. xx D, viridis P. CC, oleae caducae M L, strictivae M X modio oleario mensum dato, unguinis P. X; ponderibus modiisque domini dato frugis primae cotulas duas. Dies argento ex K. Nov. mensum X oleae legendae faciendae quae locata est, et si emptor locarit, Idibus solvito. Recte haec dari fierique satisque dari domino, aut cui iusserit, promittito satisque dato arbitratu domini. Donicum solutum erit aut ita satis datum erit, quae in fundo inlata erunt, pigneri sunt; nequid eorum de fundo deportato; siquid deportaverit, domini esto. Vasa torcula, funes, scalas, trapetos, siquid et aliud datum erit, salva recte reddito, nisi quae vetustate fracta erunt. Si non reddet aequom solvito. Si emptor legulis et factoribus, qui illic

opus fecerint, non solverit, cui dari oportebit, si dominus volet, solvat. Emptor domino debeto et id satis dato, proque ea re ita uti S. S. E item pignori sunt.

[147] Hac lege vinum pendens venire oportet. Vinaceos inlutos et faecem relinquito. Locus vinis ad K. Octob. primas dabitur. Si non ante ea exportaverit, dominus vino quid volet faciet. Cetera lex, quae oleae pendenti.

[148] Vinum in doliis hoc modo venire oportet. Vini in culleos singulos quadragenae et singulae urnae dabuntur. Quod neque aceat neque muceat, id dabitur. In triduo proximo viri boni arbitrato degustato. Si non ita fecerit, vinum pro degustato erit. Quot dies per dominum mora fuerit, quo minus vinum degustet, totidem dies emptori procedent. Vinum accipito ante K. Ian. primas. Si non ante acceperit, dominus vinum admietietur. Quod admensus erit, pro eo resolvito. Si emptor postularit, dominus ius iurandum dabit verum fecisse. Locus vinis ad K. Octobres primas dabitur. Si ante non deportaverit, dominus vino quid volet faciet. Cetera lex, quae oleae pendenti.

[149] Qua lege pabulum hibernum venire oporteat. Qua vendas fini dicito. Pabulum frui occipito ex Kal. Septembribus. Prato sicco decedat, ubi prius florere coeperit; prato inriguo, ubi super inferque vicinus permittet, tum decedito, vel diem certam utrique facito. Cetero pabulo Kal. Martiis decedito. Bubus domitis binis, cantherio uni, cum emptor pascet, domino pascere recipitur. Holeris, asparagis, lignis, aqua, itinere, actu domini usioni recipitur. Siquid emptor aut pastores aut pecus emptoris domino damni dederit, viri boni arbitrato resolvat. Siquid dominus aut familia aut pecus emptori damni dederit, viri boni arbitrato resolvetur. Donicum pecuniam solverit aut satisfecerit aut deligarit, pecus et familia, quae illic erit, pigneri sunt. Siquid de iis rebus controversiae erit, Romae iudicium fiat.

[150] Fructum ovium hac lege venire oportet. In singulas casei P. I S dimidium aridum, lacte feriis quod mulserit dimidium et praeterea lactis urnam unam; hisce legibus, agnus diem et noctem qui vixerit in fructum; et Kal. Iun. emptor fructu decedat; si interkalatum erit, K. Mais. Agnos XXX ne amplius promittat. Oves quae non pepererint binae pro singulis in fructu cedent. Ex quo die lanam et agnos vendat menses X ab coactore releget. Porcos serarios in oves denas singulos pascat. Conductor duos menses pastorem praebeat. Donec domino satisfecerit aut solverit, pignori esto.

[151] Semen cupressi quo modo legi seri propagarique oporteat et quo pacto cupresseta seri oporteat, Minius Percennius Nolanus ad hunc modum monstravit. Semen cupressi Tarentinae per ver legi oportet; materiem, ubi hordeum flavescit. Id ubi legeris, in sole ponito, semen purgato. Id aridum condito, uti aridum expositum siet. Per ver serito in loco ubi terra tenerrima erit, quam pullam vocant, ubi aqua propter siet. Eum locum stercolato primum bene stercore

caprino aut ovillo, tum vortito bipalio, terram cum stercore bene permisceto, depurgato ab herba graminibusque, bene terram conminuito. Areas facito pedes latas quaternos; subcavas facito, uti aquam continere possint; inter eas sulcos facito, qua herbas de areis purgare possis. Ubi areae factae erunt, semen serito crebrum, ita uti linum seri solet. Eo cribro terram incernito, dimidiatum digitum terram altam succernito. Id bene tabula aut manibus aut pedibus conplanato. Siquando non pluet, uti terra sitiatur, aquam inrigato leniter in areas. Si non habebis unde inrigues, gerito inditoque leniter. Quotiescumque opus erit, facito uti aquam addas. Si herbae natae erunt, facito uti ab herbis purges. Per aestatem ita uti dictum est fieri oportet, et ubi semen satum siet, stramentis operiri; ubi germinascere coeperit, tum demi.

[152] De scopis virgeis, Q. A. M. Manlii monstraverunt. In diebus XXX, quibus vinum legeris, aliquotiens facito scopas virgeas ulmeas aridas, in asserculo alligato, eabus latera doliis intrinsecus usque bene perfricato, ne faex in lateribus adhaerescat.

[153] Vinum faecatatum sic facito. Fiscinas olearias Campanicas duas illae rei habeto. Eas faecis inpleto sub prelumque subdito exprimitoque.

[154] Vinum emptoribus sine molestia quo modo admetiaris. Labrum culleare illae rei facito. Id habeat ad summum ansas IIII, uti transferri possitur. Id imum pertundito; ea fistulam subdito, uti opturari recte possit; et ad summum, qua fini culleum capiet, pertundito. Id in suggestu inter dolia positum habeto, uti in culleum de dolio vinum salire possit. Id inpleto, postea obturato.

[155] Per hiemen aquam de agro depelli oportet. In monte fossas inciles puras habere oportet. Prima autumnitate cum pulvis est, tum maxime ab aqua periculum est. Cum plueret incipiet, familiam cum ferreis sarculisque exire oportet, incilia aperire, aquam diducere in vias et curare oportet uti fluat. In villa, cum pluet, circumire oportet, sicubi perpluat, et signare carbone, cum desierit plueret, uti tegula mutetur. Per segetem in frumentis aut in segete aut in fossis sicubi aqua sonstat aut aliquid aquae obstat, id emittere, patefieri removerique oportet.

[156] De brassica quod concoquit. Brassica est quae omnibus holeribus antistat. Eam esto vel coctam vel crudam. Crudam si edes, in acetum intinguito. Mirifice concoquit, alvum bonam facit, lotiumque ad omnes res salubre est. Si voles in convivio multum bibere cenareque libenter, ante cenam esto crudam quantum voles ex aceto, et item, ubi cenaveris, comesto aliqua V folia; reddet te quasi nihil ederis, bibesque quantum voles.

Alvum si voles deicere superiorem, sumito brassicae quae levissima erit P. IIII inde facito manipulos aequales tres conligatoque. Postea ollam statuito cum aqua. Ubi occipiet fervere, paulisper demittito unum manipulum, fervere

desistet. Postea ubi occipiet fervere, paulisper demittito ad modum dum quinque numeres, eximito. Item facito alterum manipulum, item tertium. Postea conicito, contundito, item eximito in linteum, exurgeto sucum quasi heminam in pocillum fictile. Eo indito salis micam quasi ervum et cumini fricti tantum quod oleat. Postea ponito pocillum in sereno noctu. Qui poturus erit, lavet calida, bibat aquam mulsam, cubet incenatus. Postea mane bibat sucum deambuletque horas III, agat, negoti siquid habebit. Ubi libido veniet, nausia adprehendet, decumbat purgetque sese. Tantum bilis pituitaeque eiciet, uti ipse miretur, unde tantum siet. Postea ubi deorsum versus ibit, heminam aut paulo plus bibat. Si amplius ibit, sumito farinae minutae concas duas, infriet in aquam, paulum bibat, constituet. Verum quibus tormina molesta erunt, brassicam in aqua macerare oportet. Ubi macerata erit, coicito in aquam calidam, coquito usque donec conmadebit bene, aquam defundito. Postea salem addito et cumini paululum et pollinem polentae eodem addito et oleum. Postea fervefacito, infundito in catinum, uti frigescat. Eo interito quod volet cibi, postea edit. Sed si poterit solam brassicam esse, edit. Et si sine febre erit, dato vini atri duri aquatum bibat quam minimum; si febris erit, aquam. Id facito cotidie mane. Nolito multum dare, ne pertaedescat, uti possit porro libenter esse. Ad eundem modum viro et mulieri et puero dato. Nunc de illis, quibus aegre lotium it quibusque substillum est. Sumito brassicam, coicito in aquam ferventem, coquito paulisper, uti subcruda siet. Postea aquam defundito non omnem. Eo addito oleum bene et salem et cumini paululum, infervefacito paulisper. Postea inde iusculum frigidum sorbere et ipsam brassicam esse, uti quam primum excoquatur. Cotidie id facito.

[157] De brassica Pythagorea, quid in ea boni sit salubritatisque. Principium te cognoscere oportet, quae genera brassicae sint et cuius modi naturam habeant. Omnia ad salutem temperat conmutatque sese semper cum calore, arida simul et umida et dulcis et amara et acris. Sed quae vocantur septem bona in conmixtura, natura omnia haec habet brassica. Nunc uti cognoscas naturam earum, prima est levis quae nominatur; ea est grandis, latis foliis, caule magno, validam habet naturam et vim magnam habet. Altera est crispa, apiacon vocatur; haec est natura et aspectu bona, ad curationem validior est quam quae supra scripta est. Et item est tertia, quae lenis vocatur, minutis caulibus, tenera, et acerrima omnium est istarum, tenui suco vehementissima. Et primum scito, de omnibus brassicis nulla est illius modi medicamento. Ad omnia vulnera tumores eam contritam inponito. Haec omnia ulcera purgabit sanaque faciet sine dolore. Eadem tumida concoquit, eadem erumpit, eadem vulnera putida canceresque purgabit sanosque faciet, quod aliud medicamentum facere non potest. Verum prius quam id inponas, aqua calida multa lavato; postea bis in die contritam inponito; ea omnem

putorem adimet. Cancer ater, is olet et saniem spurcam mittit; albus purulentus est, sed fistulosus et subtus suppurat sub carne. In ea vulnera huiusce modi teras brassicam, sanum faciet; optima est ad huiusce modi vulnus. Et luxatum siquid est, bis die aqua calida foveto, brassicam tritam opponito, cito sanum faciet; bis die id opponito, dolores auferet. Et siquid contusum est, erumpet; brassicam tritam opponito, sanum faciet. Et siquid in mammis ulceris natum et carcinoma, brassicam tritam opponito, sanum faciet. Et si ulcus acrimoniam eius ferre non poterit, farinam hordeaceam misceto, ita opponito. Huiusce modi ulcera omnia haec sana faciet, quod aliud medicamentum facere non potest neque purgare. Et puero et puellae si ulcus erit huiusce modi, farinam hordeaceam addito. Et si voles eam consectam lautam siccam sale aceto sparsam esse, salubrius nihil est. Quo libentius edis, aceto mulso spargito; lautam siccam et rutam coriandrum sectam sale sparsam paulo libentius edes. Id bene faciet et mali nihil sinet in corpore consistere et alvum bonam faciet. Hanc mane esse oportet ieiunum. Et si bilis atra est et si lienes turgent et si cor dolet et si iecur aut pulmones aut praecordia, uno verbo omnia sana faciet intro quae dolitabunt. Eodem silpium inradito, bonum est. Nam venae omnes ubi sufflatae sunt ex cibo, non possunt perspirare in toto corpore; inde aliqui morbus nascitur. Ubi ex multo cibo alvus non it, pro portione brassica si uteris, id ut te moneo, nihil istorum usu veniet morbis. Verum morbum articularium nulla res tam purgat, quam brassica cruda, si edes concisam et rutam et coriandrum concisam siccam et sirpicium inrasum et brassicam ex aceto oxymeli et sale sparsam. Haec si uteris, omnis articulos poteris experiri. Nullus sumptus est, et si sumptus esset, tamen valetudinis causa experires. Hanc oportet mane ieiunum esse. Insomnis vel siquis est seniosus, hac eadem curatione sanum facies. Verum assam brassicam et unctam caldam, salis paulum dato homini ieiuno. Quam plurimum ederit, tam citissime sanus fiet ex eo morbo. Tormina quibus molesta erunt, sic facito. Brassicam macerato bene, postea in aulam coicito, defervefacito bene. Ubi cocta erit bene, aquam defundito. Eo addito oleum bene et salis paululum et cuminum et pollinem polentae. Postea ferve bene facito. Ubi ferverit, in catinum indito. Dato edit, si poterit, sine pane; si non, dato panem purum ibidem madefaciat. Et si febrim non habebit, dato vinum atrum bibat; cito sanus fiet. Et hoc siquando usus venerit, qui debilis erit, haec res sanum facere potest: brassicam edit ita uti S. S. E. Et hoc amplius lotium conservato eius qui brassicam essitarit, id calfacito, eo hominem demittito, cito sanum facies hac cura; expertum hoc est. Item pueros pusillos si laves eo lotio, numquam debiles fient. Et quibus oculi parum clari sunt, eo lotio inunguito, plus videbunt. Si caput aut cervices dolent, eo lotio caldo lavito, desinent dolere. Ei si mulier eo lotio locos fovebit, numquam miseri

fient, et fovere sic oportet: ubi in scutra fervefeceris, sub sellam supponito pertusam. Eo mulier adsidat, operito, circum vestimenta eam dato.

Brassica erratica maximam vim habet. Eam arfacere et conterere oportet bene minutam. Siquem purgare voles, pridie ne cenet, mane ieiuno dato brassicam tritam, aquae cyathos II. Nulla res tam bene purgabit, neque elleborum neque scamonium, et sine periculo, et scito salubrem esse corpori. Quos diffidas sanos facere, facies. Qui hac purgatione purgatus erit, sic eum curato. Sorbitione liquida hoc per dies septem dato. Ubi esse volet, carnem assam dato. Si esse non volet, dato brassicam coctam et panem, et bibat vinum lene dilutum, lavet raro, utatur unctione. Qui sic purgatus erit, diutina valetudine utetur, neque ullus morbus veniet nisi sua culpa. Et siquis ulcus taetrum vel recens habebit, hanc brassicam erraticam aqua spargito, opponito; sanum facies. Et si fistula erit, turundam intro trudit. Si turundam non recipiet, diluito, indito in vesicam, eo calamum alligato, ita premito, in fistulam introeat; ea res sanum faciet cito. Et ad omnia ulcera vetera et nova contritam cum melle opponito, sanum faciet. Et si polypus in naso intro erit, brassicam erraticam aridam tritam in manum conicito et ad nasum admoveto, ita subducito susum animam quam plurimum poteris; in triduo polypus excidet. Et ubi exciderit, tamen aliquot dies idem facito, ut radices polypi persanas facias. Auribus si parum audies, terito cum vino brassicam, sucum exprimito, in aurem intro tepidum instillato; cito te intelleges plus audire. Depetigini spurcae brassicam opponito, sanam faciet et ulcus non faciet.

[158] Alvim deicere hoc modo oportet, si vis bene tibi deicere. Sume tibi ollam, addito eo aquae sextarios sex et eo addito ungulam de perna. Si ungulam non habebis, addito de perna frustum P. S quam minime pingue. Ubi iam coctum incipit esse, eo addito brassicae coliculos duos, betae coliculos duos cum radice sua, feliculae pullum, herbae Mercurialis non multum, mitulorum L. II, piscem capitonem et scorpionem I, cochleas sex et lentis pugillum. Haec omnia decoquito usque ad sextarios III iuris. Oleum ne addideris. Indidem sume tibi sextarium unum tepidum, adde vini Coi cyathum unum, bibe, interquiesce, deinde iterum eodem modo, deinde tertium: purgabis te bene. Et si voles insuper vinum Coum mixtum bibere, licebit bibas. Ex iis tot rebus quod scriptum est unum, quod eorum vis, alvim deicere potest. Verum ea re tot res sunt, uti bene deicias, et suave est.

[159] Intertigini remedium. In viam cum ibis, apsinthi Pontici surculum sub anulo habeto.

[160] Luxum siquod est, hac cantione sanum fiet. Harundinem prende tibi viridem P. IIII aut quinque longam, mediam diffinde, et duo homines teneant ad coxendices. Incipe cantare: “Motas uaeta daries dardares astaries dissunapiter”

usque dum coeant. Ferrum insuper iactato. Ubi coierint et altera alteram tetigerint, id manu prehende et dextera sinistra praecide, ad luxum aut ad fracturam alliga, sanum fiet. Et tamen cotidie cantato et luxato vel hoc modo: "huat haut haut istasis tarsis ardannabou dannaustra".

[161] Asparagus quo modo seratur. Locum subigere oportet bene qui habeat humorem aut loco crasso; ubi erit subactus, areas facito, uti possis dextra sinistraque sarire, runcare, ne calcetur; cum areas deformabis, intervallum facito inter areas semipedem latum in omnes partes; deinde serito ad lineam palo, grana bina aut terna demittito et eodem palo cavum terrae operito; deinde supra areas stercus spargito bene; serito secundum aequinoctium vernum. Ubi erit natum, herbas crebro purgato cavetoque ne asparagus una cum herba vellatur; quo anno severis, sum stramentis per hiemem operito, ne praeuratur; deinde primo vere aperito, sarito runcatoque. Post annum tertium quam severis, incendito vere primo; deinde ne ante sarueris quam asparagus natus erit, ne in sariendo radices laedas. Tertio aut quarto anno asparagum vellito ab radice. Nam si defringes, stirpes fient et intermorientur. Usque licebit vellas, donicum in semen videbis ire. Semen maturum fit ad autumnum. Ita, cum sumpseris semen, incendito, et cum coeperit asparagus nasci, sarito et sterco. Post annos VIII aut novem, cum iam est vetus, digerito et in quo loco posturus eris terram bene subigito et sterco. Deinde fossulas facito, quo radices asparagi demittas. Intervallum sit ne minus pedes singulos inter radices asparagi. Evellito, sed circumfodito, ut facile vellere possis; caveto ne frangatur. Stercus ovillum quam plurimum fac ingeras; id est optimum ad eam rem; aliud stercus herbas creat.[

[162] Salsura pernarum ofellae Puteolanae. Pernas sallire sic oportet in dolio aut in seria. Cum pernas emeris, unguas earum praecidito. Salis Romaniensis moliti in singulas semodios. In fundo dolii aut seriae sale sternito, deinde pernam ponito, cutis deorsum spectet, sale obruito totam. Deinde alteram insuper ponito, eodem modo obruito. Caveto ne caro carnem tangat. Ita omnes obruito. Ubi iam omnes conposueris, sale insuper obrue, ne caro appareat; aequale facito. Ubi iam dies quinque in sale fuerint, eximito omnis cum suo sale. Quae tum summae fuerint, imas facito eodemque modo obruito et conponito. Post dies omnino XII pernas eximito et salem omnem detergeto et suspendito in vento biduum. Die tertio extergeto spongea bene, perunguito oleo, suspendito in fumo biduum. Tertio die demito, perunguito oleo et aceto conmixto, suspendito in carnario. Nec tinia nec vermes tangent.

The Dual Text



Roman ruins at Tarentum, an ancient coastal city in Apulia, Southern Italy — Cato served on the side of Fabius at the siege of Tarentum, 209 BC.

DUAL LATIN AND ENGLISH TEXT



Translated by W. D. Hooper and H. B. Ash, 1934

In this section, readers can view a section by section text of Cato's *De Agri Cultura*, alternating between the original Latin and Hooper and Ash's English translation.

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PREFACE

Est interdum praestare mercaturis rem quaerere, nisi tam periculosum sit, et item foenerari, si tam honestum. Maiores nostri sic habuerunt et ita in legibus posiverunt: furem dupli condemnari, foeneratorem quadrupli. Quanto peiorem civem existimarint foeneratorem quam furem, hinc licet existimare. Et virum bonum quom laudabant, ita laudabant: bonum agricolam bonumque colonum; amplissime laudari existimabatur qui ita laudabatur. Mercatorem autem strenuum studiosumque rei quaerendae existimo, verum, ut supra dixi, periculosum et calamitosum. At ex agricolis et viri fortissimi et milites strenuissimi gignuntur, maximeque pius quaestus stabilissimusque consequitur minimeque invidiosus, minimeque male cogitantes sunt qui in eo studio occupati sunt. Nunc, ut ad rem redeam, quod promisi institutum principium hoc erit.

It is true that to obtain money by trade is sometimes more profitable, were it not so hazardous; and likewise money-lending, if it were as honourable. Our ancestors held this view and embodied it in their laws, which required that the thief be mulcted double and the usurer fourfold; how much less desirable a citizen they considered the usurer than the thief, one may judge from this.² And when they would praise a worthy man their praise took this form: "good husbandman, good farmer"; one so praised was thought to have received the greatest commendation.³ The trader I consider to be an energetic man, and one bent on making money; but, as I said above, it is a dangerous career and one subject to disaster.⁴ On the other hand, it is from the farming class that the bravest men and the sturdiest soldiers come, their calling is most highly respected, their livelihood is most assured and is looked on with the least hostility, and those who are engaged in that pursuit are least inclined to be disaffected. And now, to come back to my subject, the above will serve as an introduction to what I have undertaken.

SECTIONS 1-19

[1] Praedium quom parare cogitabis, sic in animo habeto: uti ne cupide emas neve opera tua parcas visere et ne satis habeas semel circumire; quotiens ibis, totiens magis placebit quod bonum erit. Vicini quo pacto niteant, id animum advertito: in bona regione bene nitere oportebit. Et uti eo introeas et circumspecies, uti inde exire possis. Uti bonum caelum habeat; ne calamitosum siet; solo bono, sua virtute valeat. Si poteris, sub radice montis siet, in meridiem spectet, loco salubri; operariorum copia siet, bonumque aquarium, oppidum validum prope siet; aut mare aut amnis, qua naves ambulant, aut via bona celerisque. Siet in his agris qui non saepe dominum mutant: qui in his agris praedia vendiderint, eos pigeat vendidisse. Uti bene aedificatum siet. Caveto alienam disciplinam temere contempnas. De domino bono bonoque aedificatore melius emetur. Ad villam cum venies, videto vasa torcula et dolia multane sient: ubi non erunt, scito pro ratione fructum esse. Instrumenti ne magni siet, loco bono siet. Videto quam minimi instrumenti sumptuosusque ager ne siet. Scito idem agrum quod hominem, quamvis quaestuusus siet, si sumptuosus erit, relinqui non multum. Praedium quod primum siet, si me rogabis, sic dicam: de omnibus agris optimoque loco iugera agri centum, vinea est prima, vel si vino multo est; secundo loco hortus irriguus; tertio salictum; quarto oletum; quinto pratum; sexto campus frumentarius; septimo silva caedua; octavo arbustum; nono glandaria silva.

[1] ¹ When you are thinking of acquiring a farm, keep in mind these points: that you be not over-eager in buying nor spare your pains in examining, and that you consider it not sufficient to go over it once. However often you go, a good piece of land will please you more at each visit. ² Notice how the neighbours keep up their places; if the district is good, they should be well kept. Go in and keep your eyes open, so that you may be able to find your way out. It should have a good climate, not subject to storms; the soil should be good, and naturally strong. ³ If possible, it should lie at the foot of a mountain and face south; the situation should be healthful, there should be a good supply of labourers, it should be well watered, and near it there should be a flourishing town, or the sea, or a navigable stream, or a good and much travelled road. ⁴ It should lie among those farms which do not often change owners; where those who have sold farms are sorry to have done so. It should be well furnished with buildings. Do not be hasty in despising the methods of management adopted by others. It will be better to

purchase from an owner who is a good farmer and a good builder. When you reach the steading, observe whether there are numerous oil presses and wine vats; ⁵ if there are not, you may infer that the amount of the yield is in proportion. The farm should be one of no great equipment, but should be well situated. See that it be equipped as economically as possible, and that the land be not extravagant. ⁶ Remember that a farm is like a man — however great the income, if there is extravagance but little is left. ⁷ If you ask me what is the best kind of farm, I should say: a hundred iugera of land, comprising all sorts of soils, and in a good situation; a vineyard comes first if it produces bountifully wine of a good quality; second, a watered garden; third, an osier-bed; fourth, an oliveyard; fifth, a meadow; sixth, grain land; seventh, a wood lot; eighth, an arbustum; ninth, a mast grove.

[2] Pater familias, ubi ad villam venit, ubi larem familiarem salutavit, fundum eodem die, si potest, circumeat; si non eodem die, at postridie. Ubi cognovit quo modo fundus cultus siet, opera quaeque facta infectaque sient, postridie eius diei vilicum vocet, roget quid operis siet factum, quid restet, satisne temperi opera sient confecta, possitne quae reliqua sient conficere, et quid factum vini, frumenti aliarumque rerum omnium. Ubi ea cognovit, rationem inire oportet operarum, dierum. Si ei opus non apparet, dicit vilicus sedulo se fecisse, servos non valuisse, tempestates malas fuisse, servos aufugisse, opus publicum effecisse. Ubi eas aliasque causas multas dixit, ad rationem operum operarumque revoca. Cum tempestates pluviae fuerint, quae opera per imbrem fieri potuerint: dolia lavari, picari, villam purgari, frumentum transferri, stercus foras efferi, stercilinum fieri, semen purgari, funes sarciri, novos fieri, centones, cuculiones familiam oportuisse sibi sarcire; per ferias potuisse fossas veteres tergeri, viam publicam muniri, vepres recidi, hortum fodiri, pratium purgari, virgas vinciri, spinas runcari, expinsi far, munditias fieri; cum servi aegrotarint, cibaria tanta dari non oportuisse. Ubi cognita aequo animo sient quae reliqua opera sient, curari uti perficiantur. Rationes putare argentariam, frumentariam, pabuli causa quae parata sunt; rationem vinariam, oleariam, quid venerit, quid exactum siet, quid reliquum siet, quid siet quod veneat; quae satis accipiunda sient, satis accipiantur; reliqua quae sient, uti compareant. Si quid desit in annum, uti paretur; quae supersint, uti veneant; quae opus sient locato, locentur; quae opera fieri velit et quae locari velit, uti imperet et ea scripta relinquat. Pecus consideret. Auctionem uti faciat: vendat oleum, si pretium habeat; vinum, frumentum quod supersit, vendat; boves vetulos, armenta delicula, oves deliculas, lanam, pelles, plostrum vetus, ferramenta vetera, servum senem, servum morbosum, et si quid aliud supersit, vendat. Patrem familias vendacem, non emacem esse oportet.

[2] ¹ When the master arrives at the farmstead, after paying his respects to the god of the household, let him go over the whole farm, if possible, on the same day; if not, at least on the next. When he has learned the condition of the farm, what work has been accomplished and what remains to be done, let him call in his overseer the next day and inquire of him what part of the work has been completed, what has been left undone; whether what has been finished was done betimes, and whether it is possible to complete the rest; and what was the yield of wine, grain, and all other products. ² Having gone into this, he should make a calculation of the labourers and the time consumed. If the amount of work does not seem satisfactory, the overseer claims that he has done his best, but that the slaves have not been well, the weather has been bad, slaves have run away, he has had public work to do; when he has given these and many other excuses, call the overseer back to your estimate of the work done and the hands employed. ³ If it has been a rainy season, remind him of the work that could have been done on rainy days: scrubbing and pitching wine vats, cleaning the farmstead, shifting grain, hauling out manure, making a manure pit, cleaning seed, mending old harness and making new; and that the hands ought to have mended their smocks and hoods. ⁴ Remind him, also, that on feast days old ditches might have been cleaned, road work done, brambles cut, the garden spaded, a meadow cleared, faggots bundled, thorns rooted out, spelt ground, and general cleaning done. When the slaves were sick, such large rations should not have been issued. ⁵ After this has been gone into calmly, give orders for the completion of what work remains; run over the cash accounts, grain accounts, and purchases of fodder; run over the wine accounts, the oil accounts — what has been sold, what collected, balance due, and what is left that is saleable; where security for an account should be taken, let it be taken; ⁶ and let the supplies on hand be checked over. Give orders that whatever may be lacking for the current year be supplied; that what is superfluous be sold; that whatever work should be let out be let. Give directions as to what work you want done on the place, and what you want let out, and leave the directions in writing. ⁷ Look over the live stock and hold a sale. Sell your oil, if the price is satisfactory, and sell the surplus of your wine and grain. Sell worn-out oxen, blemished cattle, blemished sheep, wool, hides, an old wagon, old tools, an old slave, a sickly slave, and whatever else is superfluous. The master should have the selling habit, not the buying habit.

[3] *Prima adulescentia patrem familiae agrum conserere studere oportet. Aedificare diu cogitare oportet, conserere cogitare non oportet, sed facere oportet. Ubi aetas accessit ad annos XXXVI, tum aedificare oportet, si agrum consitum habeas. Ita aedifices, ne villa fundum quaerat nec fundus villam.*

Patrem familiae villam rusticam bene aedificatam habere expedit, cellam oleariam, vinariam, dolia multa, uti lubeat caritatem exspectare: et rei et virtuti et gloriae erit. Torcularia bona habere oportet, ut opus bene effici possit. Olea ubi lecta siet, oleum fiat continuo, ne corrumpatur. Cogitato quotannis tempestates magnas venire et oleam deicere solere. Si cito sustuleris et vasa parata erunt, damni nihil erit ex tempestate et oleum viridius et melius fiet. Si in terra et tabulato olea nimium diu erit, putescet, oleum fetidum fiet. Ex quavis olea oleum viridius et bonum fieri potest, si temperi facies. In iugera oleti CXX vasa bina esse oportet, si oletum bonum beneque frequens cultumque erit. Trapetos bonos privos in pares esse oportet, si orbis contriti sient, ut conmutare possis, funes loreos privos, vectes senos, fibulas duodenas, medipontos privos loreos.

Trochileas Graecanicas binis funis sparteis ducunt: orbiculis superioribus octonis, inferioribus senis citius duces; si rotas voles facere, tardius ducetur, sed minore labore.

[3] ¹ In his youth the owner should devote his attention to planting. He should think a long time about building, but planting is a thing not to be thought about but done. When you reach the age of thirty-six you should build, if you have your land planted. In building, you should see that the steading does not lag behind the farm nor the farm behind the steading. ² It is well for the master to have a well-built barn and storage room and plenty of vats for oil and wine, so that he may hold his products for good prices; it will redound to his wealth, his self-respect, and his reputation. He should have good presses, so that the work may be done thoroughly. Let the olives be pressed immediately, to prevent the oil from spoiling. Remember that high winds come every year and are apt to beat off the olives; ³ if you gather them at once and the presses are ready, there will be no loss on account of the storm, and the oil will be greener and better. ⁴ If the olives remain too long on the ground or the floor they will spoil, and the oil will be rancid. Any sort of olive will produce a good and greener oil if it is pressed betimes. ⁵ For an oliveyard of 120 iugera there should be two pressing equipments, if the trees are vigorous, thickly planted, and well cultivated. The mills should be stout and of different sizes, so that if the stones become worn you may change. Each should have its own leather ropes, six sets of hand bars, six double sets of pins, and leather belts. Greek blocks run on double ropes of Spanish broom; ⁶ you can work more rapidly with eight pulleys above, and six below; if you wish to use wheels it will work more slowly but with less effort.

[4] Bubilia bona, bonas praesepis, faliscas clatratas, clatros inesse oportet pede. Si ita feceris, pabulum boves non eicient. Villam urbanam pro copia aedificato.

In bono praedio si bene aedificaveris, bene posiveris, ruri si recte habitaveris, libentius et saepius venies; fundus melis erit, minus peccabitur, fructi plus capies; frons occipitio prior est. Vicinis bonus esto; familiam ne siveris peccare. Si te libenter vicinitas videbit, facilius tua vendes, opera facilius locabis, operarios facilius conduces; si aedificabis, operis, iumentis, materie adiuvabunt; siquid bona salte usus venerit, benigne defendent.

[4] 1 Have good stalls, stout pens, and latticed feed-racks. The rack bars should be a foot apart; if you make them in this way the cattle will not scatter their feed. Build your dwelling-house in accordance with your means. If you build substantially on a good farm, placing the house in a good situation, so that you can live comfortably in the country, you will like to visit it, and will do so oftener; the farm will improve, there will be less wrongdoing, and you will receive greater returns; the forehead is better than the hindhead. Be a good neighbor, and do not let your people commit offences. If you are popular in the neighbourhood it will be easier for you to sell your produce, easier to let out your work, easier to secure extra hands. If you build, the neighbours will help you with their work, their teams, and their materials; if trouble comes upon you, which God forbid, they will be glad to stand by you.

[5] Haec erunt vilici officia. Disciplina bona utatur. Feriae serventur. Alieno manum absteineat, sua servet diligenter. Litibus familia supersedeat; siquis quid deliquerit, pro noxa bono modo vindicet. Familiae male ne sit, ne algeat, ne esuriat; opere bene exerceat, facilius malo et alieno prohibebit. Vilicus si nolet male facere, non faciet. Si passus erit, dominus inpune ne sinat esse.

Pro beneficio gratiam referat, ut aliis recte facere libeat. Vilicus ne sit ambulator, sobrius siet semper, ad cenam nequo eat. Familiam exerceat, consideret, quae dominus imperaverit fiant. Ne plus censeat sapere se quam dominum. Amicos domini, eos habeat sibi amicos. Cui iussus siet, auscultet. Rem divinam nisi Conpitalibus in conpito aut in foco ne faciat. Iniussu domini credat nemini: quod dominus crediderit, exigat. Satui semen, cibaria, far, vinum, oleum mutuuum dederit nemini. Duas aut tres familias habeat, unde utenda roget et quibus det, praeterea nemini. Rationem cum domino crebro putet. Operarium, mercennarium, politorem diutius eundem ne habeat die. Nequid emisse velit insciente domino, neu quid dominum celavisse velit. Parasitum nequem habeat. Haruspicem, augurem, hariolum, Chaldaeum nequem consuluisse velit. Segetem ne defrudet: nam id infelix est. Opus rusticum omne curet uti sciat facere, et id faciat saepe, dum ne lassus fiat; si fecerit, scibit in mente familiae quid sit, et illi animo aequiore facient. Si hoc faciet, minus libebit ambulare et valebit rectius et

dormibit libentius. Primus cubitu surgat, postremus cubitum eat. Prius villam videat clausa uti siet, et uti suo quisque loco cubet et uti iumenta pabulum habeant. Boves maxima diligentia curatos habeto. Bubulcis opsequito partim, quo libentius boves curent. Aratra vomeresque facito uti bonos habeas. Terram cariosam cave ne ares, neve plostrum neve pecus inpellas. Si ita non caveris, quo inpuleris, trienni fructum amittes. Pecori et bubus diligenter substernatur, unguulae curentur. Scabiem pecoris et iumentis caveto; id ex fame et si inpluit fieri solet. opera omnia mature conficias face. Nam res rustica sic est, si unam rem sero feceris, omnia opera sero facies. Stramenta si deerunt, frondem illigineam legito, eam substernito ovibus bubusque. Stercilinum magnum stude ut habeas. Stercus sedulo conserva; cum exportabis, purgato et conminuito; per autumnum evehito. Circum oleas autumnitate ablaqueato et stercus addito. Frondem populneam, ulmeam, querneam caedito per tempus: eam condito non peraridam, pabulum ovibus. Item faenum cordum, sicillimenta de prato, ea arida condito. Post imbrem autumnum rapinam, pabulum lupinumque serito.

[5] ¹ The following are the duties of the overseer: — He must show good management. The feast days must be observed. He must withhold his hands from another's goods and diligently preserve his own. He must settle disputes among the slaves; and if anyone commits an offence he must punish him properly in proportion to the fault. ² He must see that the servants are well provided for, and that they do not suffer from cold or hunger. Let him keep them busy with their work — he will more easily keep them from wrongdoing and meddling. If the overseer sets his face against wrongdoing, they will not do it; if he allows it, the master must not let him go unpunished. He must express his appreciation of good work, so that others may take pleasure in well-doing. The overseer must not be a gadabout, he must always be sober, and must not go out to dine. He must keep the servants busy, and see that the master's orders are carried out. He must not assume that he knows more than the master. ³ He must consider the master's friends his own friends. He must pay heed to anyone to whom he has been bidden to listen. He must perform no religious rites, except on the occasion of the Compitalia at the cross-roads, or before the hearth. He must extend credit to no one without orders from the master, and must collect the loans made by the master. He must lend to no one seed-grain, fodder, spelt, wine, or oil. He must have two or three households, no more, from whom he borrows and to whom he lends. ⁴ He must make up accounts with the master often. He must not hire the same day-labourer or servant or caretaker for longer than a day. He must not want to make any purchases without the knowledge of the master, nor want to keep anything hidden from the master. He must have no hanger-on. He must not

consult a fortune-teller, or prophet, or diviner, or astrologer. He must not stint the seed for sowing, for that brings bad fortune. He must see to it that he knows how to perform all the operations of the farm, and actually does perform them often, but not to the point of becoming exhausted; ⁵ by so doing he will learn what is in his servants' minds, and they will perform their work more contentedly. Also, he will be less disposed to gad about, will be in better health, and will enjoy his sleep more. He must be the first out of bed, the last to go to bed. Before then he must see that the farmstead is closed, that each one is asleep in his proper place, and that the stock have fodder.

⁶ See that the draft oxen are looked after with the greatest care, and be somewhat indulgent to the teamsters to make them look after their stock with more pleasure. See that you keep your ploughs and ploughshares in good condition. Be careful not to plough land which is cariosa or drive a cart over it, or turn cattle into it; if you are not careful about this, you will lose three years' crop of the land on which you have turned them. ⁷ Litter the cattle and flocks carefully, and see that their hoofs are kept clean. Guard against the scab in flocks and herds; it is usually caused by under-feeding and exposure to wet weather. See that you carry out all farm operations betimes, for this is the way with farming; if you are late in doing one thing you will be late in doing everything. If bedding runs short, gather oak leaves and use them for bedding down sheep and cattle. See that you have a large dunghill; ⁸ save the manure carefully, and when you carry it out, clean it of foreign matter and break it up. Autumn is the time to haul it out. During the autumn also dig trenches around the olive trees and manure them. Cut poplar, elm, and oak leaves betimes; store them before they are entirely dry, as fodder for sheep. Second-crop hay and after-math should also be stored dry. Sow turnips, forage crops, and lupines after the autumn rains.

[6] Agrum quibus locis conseras, sic observari oportet. Ubi ager crassus et laetus est sine arboribus, eum agrum frumentarium esse oportet. Idem ager si nebulosus est, rapa, raphanos, milium, panicum, id maxime seri oportet. In agro crasso et caldo oleam conditivam, radium maiorem, Sallentinam, orcitem, poseam, Sergianam, Colminianam, albicerem, quam earum in iis locis optimam dicent esse, eam maxime serito. Hoc genus oleae in XXV aut in XXX pedes conserito. Ager oleto conserundo, qui in ventum favonium spectabit et soli ostentus erit, alius bonus nullus erit. Qui ager frigidior et macrior erit, ibi oleam Licinianam seri oportet. Si in loco crasso aut calido severis, hostus nequam erit et ferundo arbor peribit et muscus ruber molestus erit. Circum coronas et circum vias ulmos serito et partim populos, uti frondem ovibus et bubus habeas, et materies, siquo

opus sit, parata erit. Sicubi in iis locis ripae aut locus umectus erit, ibi cacumina populorum serito et harundinetum. Id hoc modo serito: bipalio vortito, ibi oculos harundinis pedes ternos alium ab alio serito. Ibi corrudam serito, unde asparagi fiant. Nam convenit harundinetum cum corruda, eo quia foditur et incenditur et umbram per tempus habet. Salicem Graecam circum harundinetum serito, uti siet qui vineam alliges.

Vineam quo in agro seri oporteat, sic observato. Qui locus vino optimus dicitur esse et ostentus soli, Aminnium minusculum et geminum eugeneum, helvolum minusculum conserito. Qui locus crassus erit aut nebulosior, ibi Aminnium maius aut Murgentinum, Apicium, Lucanum serito. Ceterae vites, miscellae maxime, in quemvis agrum conveniunt.

[6] ¹ This rule should be observed as to what you should plant in what places: — Grain should be sown in heavy, rich, treeless soil; and if this sort of soil is subject to fogs it should preferably be sown with rape, turnips, millet, and panic-grass. In heavy, warm soil plant olives — those for pickling, the long variety, the Sallentine, the orcites, the posea, the Sergian, the Colminian, the waxy-white; choose especially the varieties which are commonly agreed to be the best for these districts. Plant this variety of olives at intervals of twenty-five or thirty feet. ² Land which is suitable for olive planting is that which faces the west and is exposed to the sun; no other will be good. Plant the Licinian olive in colder and thinner soil. If you plant it in heavy or warm soil the yield will be worthless, the tree will exhaust itself in bearing, and a reddish scale will injure it. ³ Around the borders of the farm and along the roads plant elms and some poplars, so that you may have leaves for the sheep and cattle; and the timber will be available if you need it. Wherever there is a river bank or wet ground, plant poplar cuttings and a reed thicket. The method of planting is as follows: — turn the ground with the mattock and then plant the eyes of the reed three feet apart. Plant there also the wild asparagus, so that it may produce asparagus; ⁴ for a reed thicket goes well with the wild asparagus, because it is worked and burned over, and furnishes a shade when shade is needed. Plant Greek willows along the border of the thicket, so that you may have withes for tying up vines.

Choose soil for laying out a vineyard by the following rules: — In soil which is thought to be best adapted for grapes and which is exposed to the sun, plant the small Aminnian, the double eugeneum, and the small parti-coloured; in soil that is heavy or more subject to fogs plant the large Aminnian, the Murgentian, the Apician, and the Lucanian. The other varieties, and especially the hybrids, grow well anywhere.

[7] Fundum suburbanum arbustum maxime convenit habere; et ligna et virgae venire possunt, et domino erito qui utatur. In eodem fundo suum quidquid conseri oportet; vitem compluria genera Aminnium minusculum et maius et Apicium. Uvae in olla in vinaceis conduntur; eadem in sapa, in musto, in lora recte conduntur. Quas suspendas duracinas Aminnias maiores, vel ad fabrum ferrarium pro passis eae recte servantur. Poma, mala strutea, cotonea Scantiana, Quiriniana, item alia conditiva, mala mustea et Punica (eo lotium suillum aut stercus ad radicem addere oportet, uti pabulum malorum fiat), pira volaema, Aniciana sementiva (haec conditiva in sapa bona erunt), Tarentina, mustea, cucurbitiva, item alia genera quam plurima serito aut inserito. Oleas orcites, posias; eae optime conduntur vel virides in muria vel in lentisco contusae, vel orcites ubi nigrae erunt et siccae, sale confriato dies V; postea salem excutito, in sole ponito biduum, vel sine sale in defrutum condito. Sorba in sapa condere vel siccare; arida facias. Item pira facias.

[7] ¹ It is especially desirable to have a plantation on a suburban farm, so that firewood and faggots may be sold, and also may be furnished for the master's use. On the same farm should be planted anything adapted to the soil, and several varieties of grapes, such as the small and large Aminnian and the Apician. Grapes are preserved in grape-pulp in jars; ² also they keep well in boiled wine, or must, or after-wine. You may hang up the hard-berried and the larger Aminnian and they will keep as well dried before the forge fire as when spread in the sun. ³ Plant or ingraft all kinds of fruit — sparrow-apples, Scantian and Quirinian quinces, also other varieties for preserving, must-apples and pomegranates (the urine or dung of swine should be applied around the roots of these to serve as food for the fruit); of pears, the volema, the Anician frost-pears (these are excellent when preserved in boiled wine), ⁴ the Tarentine, the must-pear, the gourd-pear, and as many other varieties as possible; of olives, the orcite and posea, which are excellent when preserved green in brine or bruised in mastic oil. When the orcites are black and dry, powder them with salt for five days; then shake off the salt, and spread them in the sun for two days, or pack them in boiled must without salt. Preserve sorbs in boiled must; or you may dry them; make them quite free from moisture. Preserve pears in the same way.

[8] Ficos Marsicas in loco cretoso et aperto serito; Africanas et herculaneas, Sacontinas, hibernas, Tellanas atras pediculo longo, eas in loco crassiore aut stercoreato serito. Pratum si inrigivum habebis, si non erit siccum, ne faenum desiet, summitto. Sub urbe hortum omne genus, coronamenta omne genus, bulbos Megaricos, murtum coniugulum et album et nigrum, loream Delphicam

et Cypriam et silvaticam, nuces calvas, Abellanas, Praenestinas, Graecas, haec facito uti serantur. Fundum suburbanum, et qui eum fundum solum habebit, ita paret itaque conserat, uti quam sollertissimum habeat.

[8] ¹ Plant mariscan figs in chalky, open soil. The African, Herculean, Saguntine, the winter variety, the black Tellanian with long pedicles, in soil which is richer or manured. Lay down a meadow, so that you may have a supply of hay — a water meadow if you have it, if not, a dry meadow. ² Near a town it is well to have a garden planted with all manner of vegetables, and all manner of flowers for garlands — Megarian bulbs, conjugulan myrtle, white and black myrtle, Delphian, Cyprian, and wild laurel, smooth nuts, such as Abellan, Praenestine, and Greek filberts. The suburban farm, and especially if it be the only one, should be laid out and planted as ingeniously as possible.

[9] Salicta locis aquosis, umectis, umbrosis, propter amnes ibi seri oportet; et id videto uti aut domino opus siet aut ut vendere possit. Prata inrigiva, si aquam habebis, id potissimum facito; si aquam non habebis, sicca quam plurima facito. Hoc est praedium quod ubi vis expedit facere.

[9] ¹ Osier-beds should be planted in damp, marshy, shady ground, near a stream. But be sure that the master will need them or that he can find a market for them. If you have a water supply, pay particular attention to water meadows; if not, have all the dry meadows possible. This is the sort of farm which it is profitable to make anywhere.

[10] Quo modo oletum agri iugera CCXL instruere oporteat. Vilicum, vilicam, operarios quinque, bubulcos III, asinarium I, subulcum I, opilionem I, summa homines XIII; boves trinos, asinos ornatos clitellarios qui stercus vectent tris, asinum molarium I, oves C; vasa olearia instructa iuga V, ahenum quod capiat Q. XXX, operculum aheni, uncos ferreos III, urceos aquarios III, infidibula II, ahenum quod capiat Q. V, operculum aheni, uncos III, labellum pollulum I, amphoras olearias II, urnam quinquagenariam unam, trullas tris, situlum aquarium I, pelvim I, matellionem I, trullium I, scutriscum I, matellam I, nassiternam I, trullam I, candelabrum I, sextarium I; plostra maiora III, aratra cum vomeribus VI, iuga cum loris ornata III, ornamenta bubus VI; irpicem I, crates stercerarias IIII, sirpeas stercerarias III, semuncias III, instrata asinis III; ferramenta: ferreas VIII, sarcula VIII, palas IIII, rutra V, rastros quadridentes II, falces faenarias VIII, stramentarias V, arborarias V, securis III, cuneos III, fistulam ferrariam I, forcipis II, rutabulum I, foculos II; dolia olearia C, labra XII, dolia quo vinacios condat X, amurcaria X, vinaria X, frumentaria XX,

labrum lupinarium I, serias X, labrum eluacrum I, solium I, labra aquaria II, opercula doliis seriis priva; molas asinarias unas et trusatilis unas, Hispaniensis unas, molilia III, abacum I, orbis aheneos II, mensas II, scamna magna III, scamnum in cubiculo I, lectos loris subtentos IIII et lectos III; pilam ligneam I, fullonicam I, telam togalem I, pilas II, pilum fabrarium I, farrearium I, seminarium I, qui nucleos succernat I, modium I, semodium I; culcitas VIII, instragula VIII, pulvinos XVI, operimenta X, mappas III, centones pueris VI.

[10] ¹ This is the proper equipment for an oliveyard of 240 iugera: An overseer, a housekeeper, 5 labourers, 3 teamsters, 1 muleteer, 1 swineherd, 1 shepherd — a total of 13 persons; 3 yoke of oxen, 3 pack-asses to carry manure, 1 ass for the mill, and 100 sheep; ² 5 complete oil-pressing equipments, 1 copper vessel holding 30 quadrantals, with copper cover, 3 iron hooks, 3 water-pots, 2 funnels, 1 copper vessel holding 5 quadrantals, with copper cover, 3 hooks, 1 small bowl, 2 oil jars, 1 jar holding 50 heminae (?), 1 water bucket, 1 basin, 1 small pot, 1 ewer, 1 platter, 1 chamber-vessel, 1 watering-pot, 1 ladle, 1 candlestick, 1 sextarius measure; 3 large carts, 6 ploughs and ploughshares, 3 yokes fitted with straps, 6 sets of ox harness; ³ 1 harrow, 4 manure hampers, 3 manure baskets, 3 pack-saddles, 3 pads for the asses; tools: 8 forks, 8 hoes, 4 spades, 5 shovels, 2 four-toothed rakes, 8 scythes, 5 straw-hooks, pruning-hooks, 3 axes, 3 wedges, 1 hand-mill, 2 tongs, 1 poker, 2 braziers; ⁴ 100 oil-jars, 12 pots, 10 jars for holding grape pulp, 10 for holding amurca, 10 wine jars, 20 grain jars, 1 lupine vat, 10 large jars, 1 wash-tub, 1 bath-tub, 2 water-basins, several covers for jars and pots; 1 donkey-mill, 1 hand-mill, 1 Spanish mill, 3 collars and traces, 1 small table, 2 copper disks, 2 tables, 3 large benches, 1 bedroom stool, ⁵ 3 stools, 4 chairs, 2 arm-chairs, 1 bed in the bedroom, 4 beds on cords, and 3 common beds; 1 wooden mortar, 1 fuller's mortar, 1 loom, 2 mortars, 4 pestles — one for beans, one for grain, one for seed, one for cracking kernels; 1 modius measure, 1 half-modius measure; 8 mattresses, 8 coverlets, 16 cushions, 10 table covers, 3 napkins, 6 servants' hoods.

[11] Quo modo vineae iugera C instruere oporteat. Vilicum, vilicam, operarios X, bubulcum I, asinarium I, salictarium I, subulcum I, summa homines XVI; boves II, asinos plostrarios II, asinum molarium I; vasa torcula instructa III, dolia ubi quinque vindemiae esse possint culeum DCCC, dolia ubi vinaceos condat XX, frumentaria XX, opercula doliorum et tectoria priva, urnas sparteas VI, amphoras sparteas IIII, infidibula II, cola vitilia III, colia qui florem demat III, urceos mustarios X; plostra II, aratra II, iugum plostrarium I, iugum vinarium I, iugum asinarium I, orbem aheneum I, molile I; ahenum quod capiat culleum I,

operculum aheni I, uncus ferreos III, ahenum coculum quod capiat culleum I, urceos aquarios II, nassiternam I, pelvim I, matellionem I, trulleum I, situlum aquarium I, scutrisum I, trullam I, candelabrum I, matellam I, lectos IIII, scamnum I, mensas II, abacum I, arcam vestiariam I, armarium promptarium I, scamna longa VI, rotam aquarium I, modium praeferratum I, semodium I, labrum eluacrum I, solium I, labrum lupinarium I, serias X; ornamenta bubus II, ornamenta asinis instrata III, semuncias III, sportas faecarias III, molas asinarias III, molas trusatilis unas; ferramenta: falces sirpiculas V, falces silvaticas VI, arborarias III, secures V, cuneos IIII, vomeres II, ferreas X, palas VI, rutra IV, rastros quadridentes II, crates stercorarias IV, sirpam stercorariam I, falculas viniaticas XL, falculas rustarias X, foculos II, forcipes II, rutabulum I, corbular Amerinas XX, quala sataria vel alveos XL, palas ligneas XL, luntris II, culcitas IIII, instragula IIII, pulvinos VI, operimenta VI, mappas III, centones pueris VI.

[11] ¹ This is the proper equipment for a vineyard of 100 iugera: An overseer, a housekeeper, 10 labourers, 1 teamster, 1 muleteer, 1 willow-worker, 1 swineherd — a total of 16 persons; 2 oxen, 2 draft donkeys, 1 for the mill; 3 complete presses, vats for holding five vintages of 800 cullei, 20 jars for holding grape pulp, ² 20 for grain, and the necessary covers and tops; 6 pots covered with Spanish broom, 4 amphorae of the same kind, 2 funnels, 3 wicker strainers, 3 strainers for removing the flower, 10 vessels for juice; 2 carts, 2 ploughs, 1 wagon yoke, 1 iugum vinarium, 1 donkey yoke; 1 copper disk, 1 mill harness, 1 copper vessel holding a culleus, 1 copper cover, 3 iron hooks, 1 copper boiler holding a culleus, ³ 2 water pots, 1 watering-pot, 1 basin, 1 small pot, 1 wash-basin, 1 water-bucket, 1 platter, 1 ladle, 1 candlestick, 1 chamber-vessel, 4 beds, 1 bench, 2 tables, 1 small table, 1 clothes chest, 1 wardrobe, 6 long benches, 1 iron-bound modius measure, 1 half-modius measure, 1 wash-tub, 1 bath-tub, 1 lupine vat, 10 large pots; ⁴ 2 complete sets of ox-harness, 3 of donkey-harness, 3 pack-saddles, 3 baskets for wine-lees, 3 donkey-mills, 1 hand-mill; tools: 5 rush-hooks, 6 tree-hooks, 3 pruning-hooks, 5 axes and 4 wedges, 2 ploughs, 10 forks, 6 spades, 4 shovels, 2 four-toothed rakes, 4 manure-hampers, 1 manure-basket; 40 grape-knives, 10 broom-hooks, 2 braziers, 2 tongs; 1 poker; ⁵ 20 Amerine baskets, 40 planting-baskets or troughs, 40 wooden scoops, 2 trays, 4 mattresses, 4 coverlets, 6 cushions, 6 table covers, 3 napkins, 6 servants' hoods.

[12] In torcularium quae opus sunt. Vasis quinis prela temperata V, supervacanea III, sucular V, supervacaneam I, funes loreos V, subductarios V, melipontos V, trochileas X, capistra V, assercula ubi prela sita sinet V, serias III, vectes XL,

fibulas XL, constibilibus ligneas, qui arbores conprimat, si dishiascent, et cuneos VI, trapetos V, cupas minusculas X, alveos X, palas ligneas X, rutra ferrea V.

[12] ¹ This is the necessary equipment for the pressing-room: For 5 vats, 5 mounted press-beams, with 3 spares; 5 windlasses with 1 spare; 5 leather ropes; 5 hoisting ropes, 5 cables; 10 pulleys; 5 bands; 5 posts for the press-beams to rest on; 3 large jars; 40 levers; 40 stout wooden pins to brace the anchor-posts if they spread, and 6 wedges; 5 mills, 10 small casks, 10 troughs, 10 wooden spades, 5 iron shovels.

[13] In torcularium in usu quod opus est. Urceum unum, ahenum quod capiat Q. V, uncos ferreos III, orbem aheneum I, molas, cribrum I, incerniculum I, securim I, scamnum I, seriam vinariam unam, clavem torculari I, lectum stratum ubi duo custodes liberi cubent (tertius servus una cum factoribus uti cubet), fiscinas novas, veteres, epidromum I, pulvinum I, lucernas, corium I, craticulas duas, carnarium I, scalas unas.

In cellam oleariam haec opus sunt. Dolia olearia, opercula, labra olearia XIII, concas maioris II et minoris II, trullas aheneas tris, amphoras olearias II, urceum aquarium unum, urnam quinquagenariam I, sextarium olearium I, labellum I, infidibula II, spongeas II, urceos fictiles II, urnales II, trullas ligneas II, claves cum clostris in cellas II, trutinam I, centumpondium I, et pondera cetera.

[13] ¹ The following equipment is needed for the pressing-room at the time of pressing: A pitcher, 1 copper vessel holding 5 quadrantals, 3 iron hooks, 1 copper disk, — millstones, 1 strainer, 1 sieve, 1 axe, 1 bench, 1 large wine-jar, 1 key for the pressing-room, 1 complete bed for two free workmen who act as watchmen to sleep on (while the third, who is a slave, should sleep with the labourers), — new and — old baskets, 1 net-cord, 1 cushion, — lanterns, 1 hide, 2 gridirons, 1 meat-rack, 1 ladder.

² The following equipment is needed for the oil cellar: Oil jars and covers, 14 oil vats, 2 large and 2 small oil flasks, 3 copper ladles, 2 oil amphorae, ³ 1 water-jar, 1 jar holding fifty heminae (?), 1 sextarius oil-measure, 1 pan, 2 funnels, 2 sponges, 2 earthenware pitchers, 2 half-amphora measures, 2 wooden ladles, 2 locks with bars for the cellar, 1 set of scales, 1 one-hundred-pound weight, and other weights.

[14] Villam aedificandam si locabis novam ab solo, faber haec faciat oportet. Parietes omnes, uti iussitur, calce et caementis, pilas ex lapide angulari, tigna omnia, quae opus sunt, limina, postes, iugumenta, asseres, fulmentas, praesepis

bubus hibernas aestivas faliscas, equile, cellas familiae, carnaria III, orbem, ahenea II, haras X, focum, ianuam maximam et alternam quam volet dominus, fenestras, clatros in fenestras maioris bipedis X, luminaria VI, scamna III, sellas V, telas togalis II, paullulam pilam ubi triticum pinsat I, fulloniam I, antepagmenta, vasa torcula II. Hae rei materiem et quae opus sunt dominus praebabit et ad opus dabit, serram I, lineam I (materiem dumtaxat succidet, dolabit, secabit facietque conductor), lapidem, calcem, harenam, aquam, paleas, terram unde lutum fiat. Si de caelo villa tacta siet, de ea re verba uti fiant. Huic operi pretium ab domino bono, quae bene praebeat quae opus sunt et nummos fide bona solvat, in tegulas singulas II S. Tectum sic numerabitur: tegula integra quae erit, unde quarta pars abierit, duae pro una, conciliares quae erunt pro binis putabuntur; vallus quot erunt, in singulas quaternae numerabuntur.

Villa lapide calce. Fundamenta supra terram pede, ceteros parietes ex latere, iugumenta et antepagmenta quae opus erunt indito. Cetera lex uti villae ex calce caementis. Pretium in tegulas singulas II S. Loco salubri bono domino haec quae supra pretia posita sunt: ex signo manipretium erit. Loco pestilenti, ubi aestate fieri non potest, bono domino pars quarta preti accedat.

[14] 1 If you are contracting for the building of a new steading from the ground up, the contractor should be responsible for the following: — All walls as specified, of quarry-stone set in mortar, pillars of solid masonry, all necessary beams, sills, uprights, lintels, door-framing, supports, winter stables and summer feed racks for cattle, a horse stall, 2 quarters for servants, 3 meat-racks, a round table, 2 copper boilers, 10 coops, a fireplace, 1 main entrance and another at the option of the owner, windows, 10 two-foot lattices for the larger windows, 6 window-shutters, 3 benches, 5 stools, 2 looms, 1 small mortar for crushing wheat, 1 fuller's mortar, trimmings, and 2 presses. 3 The owner will furnish the timber and necessary material for this and deliver it on the ground, and also 1 saw and 1 plumb-line (but the contractor will fell, hew, square, and finish the timber), stone, lime, sand, water, straw, and earth for making mortar. If the steading should be struck by lightning an expiatory prayer must be offered. The price of this work from an honest owner, who furnishes duly all necessary materials and pays conscientiously, one sesterce per tile. 4 The roof will be reckoned as follows: On the basis of a whole tile, one which is one-fourth broken is counted two for one; all gutter tiles are counted each as two; and all joint-tiles each as four.

In a steading of stone and mortar groundwork, carry the foundation one foot above ground, the rest of the walls of brick; add the necessary lintels and

trimmings. ⁵ The rest of the specifications as for the house of rough stone set in mortar. The cost per tile will be one sesterce. The above prices are for a good owner, in a healthful situation. The cost of workmanship will depend upon the count. In an unwholesome situation, where summer work is impossible, the generous owner will add a fourth to the price.

[15] *Macerias ex calce caementis silice. Uti dominus omnia ad opus praebeat, altam P. V et columen P. I, crassam P. I S, longam P. XIV, et uti sublinat locari oportet. Parietes villae si locet in P. C, id est P. X quoquo versum, libellis in ped. V et perticam I P. VIC. N. X. Sesquipedalem parietem dominus fundamenta faciat et ad opus praebeat calcis in P. singulos in longitudinem modium unum, harenae modios duos.*

[15] ¹ Construct the enclosure walls of mortar, rough stone, and rubble (the owner furnishing all the materials) five feet high, 1½ feet thick, with a one-foot coping, ¹⁴ feet long, and let out the plastering. If he lets the walls of the steading by the hundred feet, that is, ten feet on every side, ⁵ libellae to the foot, and ¹⁰ victoriati for a strip one foot by ten. The owner shall build the foundation 1½ feet thick, and will furnish one modius of lime and two modii of sand for each linear foot.

[16] *Calcem partiario coquendam qui dant, ita datur. Perficit et coquit et ex fornace calcem eximit calcarius et ligna conficit ad fornacem. Dominus lapidem, ligna ad fornacem, quod opus siet, praebet.*

[16] ¹ The following are proper terms of a contract for burning lime on shares: The burner prepares the kiln, burns the lime, takes it from the kiln, and cuts the wood for the kiln. The owner furnishes the necessary stone and wood for the kiln.

[17] *Robus materies item ridica, ubi solstitium fuerit ad brumam semper tempestiva est. Cetera materies quae semen habet, cum semen maturum habet, tum tempestiva est.*

Quae materies semen non habet, cum glubebit, tum tempestiva est. Pinus eo, quia semen viride et maturum habet (id semen de cupresso, de pino quidvis anni legere possis), item quidvis anni matura est et tempestiva. Ibidem sunt nuces bimae, inde semen excidet, et anniculae, eae ubi primum incipiunt maturae esse, postea usque adeo sunt plus menses VIII. Hornotinae nuces virides sunt. Ulmus, cum folia cadunt, tum iterum tempestiva est.

[17] ¹ Oak wood and also wood for vine props is always ripe for cutting at the time of the winter solstice. Other species which bear seed are ripe when the seeds are

mature, while those which are seedless are ripe when they shed bark. The pine, because it has both green and ripe seed (such seed may be gathered from the cypress and the pine at any season) is ripe and ready at any season.² The same tree has second-year cones from which the seed will fall, and first-year cones; when the latter are just beginning to open, they are ready for gathering. They begin to ripen at seed-time, and continue to ripen then for more than eight months. The first-year cones are green. The elm is fit for cutting a second time when the leaves fall.

[18] Torcularium si aedificare voles quadrinis vasis, uti contra ora sient, ad hunc modum vasa conponito. Arbores crassas P. II, altas P. VIII cum cardinibus, foramina longa P. III S exsculpta digit. VI, ab solo foramen primum P. I S, inter arbores et parietes P. II, in II arbores P. I, arbores ad stipitem primum directas P. XVI, stipites crassos P. II, altos cum cardinibus P. X. suculam praeter cardines P. VIII, prelum longum P. XXV, inibi lingulam P. II S, pavimentum binis vasis cum canalibus duabus P: XXX, IIII trapetibus locum dextra sinistra pavimentum P. XX, inter binos stipites vectibus locum P. XXII, alteris vasis exadversum ab stipite extremo ad parietem qui pone arbores est P. XX; summa torculario vasis quadrinis latitudine P: LXVI, longitudine P: LII. Inter parietes, arbores ubi stant, fundamenta bona facito alta P. V, inibi lapides silices, totum forum longum P. V, latum P. II S, crassum P. I S. Ibi foramen pedicinis duobus facito, ibi arbores pedicino in lapide statuito. Inter suas arbores quod loci supererit robore expleto, eo plumbum infundito. Superiorem partem arborum digitos VI altam facito siet, eo capitulum robustum indito, uti siet stipites ubi stent. Fundamenta P. V facito, ibi silicem longum P. II S, latum P. II S, crassum P. I S planum statuito, ibi stipites statuito. Item alterum stipitem statuito. Insuper arbores stipitesque trabem planam inponito latam P. II, crassam P: I, longam P. XXXVII, vel duplices indito, si solidas non habebis. Sub eas trabes inter canalis et parietes extremos, ubi trapeti stent, trabeculam pedum XXIII S inponito sesquipedalem, aut binas pro singulis eo supponito. In iis trabeculis trabes, quae insuper arbores stipites stant, conlocato; in iis tignis parietes exstruito iungitoque materiae, uti oneris satis habeat. Aram ubi facies, pedes V fundamenta alta facito, lata P. VI, aram et canalem rutundam facito latam P. III S, ceterum pavimentum totum fundamenta P. II facito. Fundamenta primum festucato, postea caementis minutis et calce harenato semipedem unum quodque corium struito. Pavimenta ad hunc modum facito: ubi libraveris, de glarea et calce harenato primum corium facito, id pilis subigito, idem alterum corium facito; eo calcem cribro subcretam indito alte digitos duo, ibi de testa arida pavimentum struito; ubi structum erit, pavito fricatoque, uti pavimentum bonum siet. Arbores

stipites robustas facito aut pineas. Si trabes minores facere voles, canalis extra columnam expolito. Si ita feceris, trabes P. XXII longae opus erunt. Orbem olearium latum P. IIII Punicanis coagmentis facito, crassum digitos VI facito, subscudes iligneas adindito. Eas ubi confixeris, clavis corneis occludito. In eum orbem tris catenas indito. Eas catenas cum orbi clavis ferreis corrigito. Orbem ex ulmo aut ex corylo facito: si utrumque habebis, alternas indito.

[18] ¹ If you wish to build a pressing-room with four vats facing each other, lay off the vats as follows: Anchor-posts ² feet thick, ⁹ feet high, including tenons; ² openings hollowed out ^{3½} feet long, ⁶ fingers wide, the bottom of the opening ^{1½} feet from the ground; ² feet between anchor-post and wall; ¹ foot between the two anchor-posts, and ¹⁶ feet straight to the first guide-posts; guide-posts ² feet in diameter and ¹⁰ feet high, including the tenons; windlass ⁹ feet high, exclusive of mortice; press-beam ²⁵ feet long, and the tongue on it ^{2½} long. Allow ³⁰ feet of floor space for each pair of vats, with their conduits, and ²⁰ feet for four mills, right and left. ³ Allow ²² feet between the guide-posts of one press and those of the next for the levers. Allow ²⁰ feet for the second set of vats facing them, from the last guide-post to the wall behind the anchor-posts. Total for the pressing-room with four vats, ⁶⁶ feet by ⁵² feet. Between the walls, where you intend to mount the anchor-posts, make solid foundations ⁵ feet deep; cover the whole area ⁵ feet by ^{2½} feet with hard stones to a depth of ^{1½} feet; ⁴ in this clear a place for two bolts, and fix the posts firmly in the stone with the bolt. Fill the interval between the two anchor-posts with oak, and pour lead over it. Let the head of the anchor-posts project six fingers, and cap it with an oak head so as to make a place for the posts to stand. ⁵ Make a ⁵-foot foundation and lay on it a flat stone, ^{2½} by ^{2½} by ^{1½} feet, and set the posts on it. Mount the corresponding posts in the same way. Above the anchor-posts and the guide-posts lay a horizontal beam, ² feet by ¹, ³⁷ feet long, or two beams if you have no solid ones of that size. Under these beams, between the conduits and the end walls, in the position of the mills, run a beam ^{1½} feet square and ^{23½} feet long, or two pieces. ⁶ On these rest the beams which stand above the main posts, and on these timbers build a wall and join it to the timber to give it sufficient weight. Where you are to build a seat for the press make a foundation ⁵ feet deep, ⁶ feet across; the seat and circular conduit ^{4½} feet in diameter. For the rest of the pavement make the foundation uniformly ² feet deep. First pack down the bottom, and then spread successive half-foot layers of finely crushed stone and sanded lime. Construct the pavement as follows: After levelling, spread the first layer of gravel and sanded lime, and tamp it down; then spread a similar layer over it, sift lime with a sieve to the depth of two fingers, and then lay a pavement of dry potsherds.

When completed, pack and rub down so as to have a smooth surface. ⁸ All anchor-posts and guide-posts should be of oak or pine. If you wish to use shorter timbers, cut conduits on the outside; if this method is employed you will need 22-foot timbers. ⁹ Make the disk ⁴ feet in diameter, ⁶ fingers thick, constructed in sections in the Punic style with dovetailed oak. When you have fitted them together, fasten with pins of dogwood. Fit three crossbars to the disk, and fasten them with iron nails. Make the disk of elm or hazel; if you have both, lay them alternately.

[19] ¹ In vasa vinaria stipites arboresque binis pedibus altiores facito, supra foramina arborum, pedem quaeque uti absiet, unae fibulae locum facito. Semipedem quoque versum in suculam sena foramina indito. Foramen quod primum facies semipedem ab cardine facito, cetera dividito quam rectissime. Porculum in media sucula facito. Inter arbores medium quod erit, id ad mediam conlibrato, ubi porculum figere oportebit, uti in medio prelum recte situm siet. Lingulam cum facies, de medio prelo conlibrato, ut inter arbores bene conveniat, digitum pollicem laxamenti facito. Vectes longissimos P. XIIX, secundos P. XVI, tertios P. XV, remissarios P. XII, alteros P. X, tertios P. VIII.

[19] ¹ For a wine press make the guide-posts and anchor-posts two feet higher, and above the holes in the anchor-posts, which should be one foot apart, make a place for one pin. Cut six openings, a half-foot square, in each of the windlass beams, ² placing the first a half-foot from the tenon, and the others at equal intervals. Set a hook in the middle of the windlass; the centre of the distance between the anchor-posts should correspond with the middle of the windlass, where the hook should be set, in order to have the press-beam exactly in the middle. When you set the tongue, measure from the centre of the press-beam so that it may be exactly midway between the anchor-posts; allow one thumb width play. The longest levers are ¹⁸ feet, the second size 16, the third 15; the hand-spikes are 12, 10, and 8 feet respectively.

SECTIONS 20-39

[20] Trapetum quo modo concinnare oporteat. Columellam ferream, quae in miliario stat, eam rectam stare oportet in medio ad perpendicularum, cuneis salignis circumfigi oportet bene, eo plumbum effundere, caveat ni labet columella. Si movebitur, eximito; denuo eodem modo facito, ne se moveat. Modiolos in orbis oleagineos ex orcite olea facito, eos circumplumbato, caveto ne laxi sient. In cupam eos indito. Cunicas solidas latas digitum pollicem facito, labeam bifariam faciat habeant, quas figat clavis duplicibus, ne cadant.

[20] ¹ Method of mounting the mill. The iron pivot which stands on the post must stand straight upright in the centre; it should be fastened firmly on all sides with willow wedges, and lead should be poured over it to prevent it from shaking; if it moves, take it out and fasten it again in the same way, so that it will not move. ² Make the sockets for the stones of orcite olive wood, and fasten them with lead, being careful to keep them tight. Fix them on the axle. Make one piece bushings, a thumb wide, flanged at both ends and double-nailed to keep them from falling out.

[21] Cupam facito P. X, tam crassam quam modioli postulabunt, media inter orbis quae convenient. Crassam quam columella ferrea erit, eam mediam pertundito, uti columellam indere possis. Eo fistulam ferream indito, quae in columellam conveniat et in cupam. Inter cupam dextra sinistra pertundito late digitos primoris IIII, alte digitos primoris III, sub cupa tabulam ferream, quam lata cupa media erit, pertusam figito, quae in columellam conveniat. Dextra sinistra, foramina ubi feceris, lamnis circumplectito. Replicato in inferiorem partem cupae omnis quattuor lamminas; utrimque secus lamminas sub lamminas pollulas minutas supponito, eas inter sese configito, ne foramina maiora fiant, quo cupulae minusculae indentur. Cupa qua fini in modiolos erit, utrimque secus imbricibus ferreis quattuor de suo sibi utrimque secus facito qui figas. Imbrices medias clavulis figito. Supra imbrices extrinsecus cupam pertundito, qua clavus eat, qui orbem cludat. Insuper foramen ferreum digitos sex latum indito, pertusum utrimque secus, qua clavus eat. Haec omnia eius rie causa fiunt, uti ne cupa in lapide coneratur. Armillas IIII facito, quas circum orbem indas, ne cupa et clavus conerantur intrinsecus. Cupam materia ulmea aut faginea facito. Ferrum factum quod opus erit uti idem faber figat; HS LX opus sunt. Plumbum in cupam emitto HS IIII. Cupam qui concinnet et modiolos qui indat et plumbet,

operas fabri dumtaxat HS VIII; idem trapetum oportet accommodet. Summa sumpti HS LXXII praeter adiutores.

[21] ¹ Make a ten-foot bar as thick as the sockets require, the mid-point to fit between the stones. Drill a hole in the middle as large as the iron pivot, so that the latter may be inserted in it. Insert here an iron casing to fit into the pivot and the bar. ² Make a hole in the bar, ⁴ finger-tips square and ³ finger-tips deep, and on the lower side of the bar fasten an iron plate of the breadth of the middle of the bar, perforated to fit over the pivot. After piercing the holes face them on both sides with metal plates, and bend back all four plates to the lower side of the bar; ³ under these plates fasten thin metal strips on both sides, and fasten them together so that the holes in which the small handles are fitted may not spread. At the point where the bar enters the sockets be careful to face them on both sides with four trough-shaped iron plates and fasten them in the middle with nails. Above these plates pierce the bar on the outside for the bolt to fasten the stone. ⁴ On top of the opening place a one-pound iron collar, ⁶ fingers wide, pierced on both sides to allow the bolt to enter. All this is for the purpose of preventing the bar from wearing on the stone. Make four rings to place around the stone to keep the bar and the bolt from wearing on the inside. Use elm or beech for the bar. ⁵ The same smith should make and set the necessary iron work, at a cost of 60 sesterces; you can buy lead for the bar for ⁴ sesterces; wages of the workman who assembles and sets the sockets with lead, at least ⁸ sesterces, and the same man should adjust the mill. Total cost, 72 sesterces, exclusive of helpers.

[22] Trapetum hoc modo accommodare oportet. Librator uti statuatur pariter ab labris. Digitum minimum orbem abesse oportet ab solo mortari. Orbes cavere oportet nequid mortarium terant. Inter orbem et miliarium unum digitum interesse oportet. Si plus intererit atque orbes nimium aberunt, funi circumligato miliarium arte crebro, uti expleas quod nimium interest. Si orbes altiores erunt atque nimium mortarium deorsum teret, orbiculos ligneos pertusos in miliarium in columella supponito, eo altitudinem temperato. Eodem modo latitudinem orbiculis ligneis aut armillis ferreis temperato, usque dum recte temperabitur. Trapetus emptus est in Suessano HS CCCC et olei P. L. Conposturae HS LX; vecturam boum, operas VI, homines VI cum bubulcis HS LXXII; cupam ornatam HS LXXII, pro oleo HS XXV; S. S. HS DCXXVIII. Pompeis emptus ornatus HS CCCXXCIIII; vecturam HS CCXXC; domi melius concinnatur et accommodatur, eo sumpti opus est HS LX: S. S. HS DCCXXIII. Si orbes in veteres trapetos parabis, medios crassos P. I digitos III, altos P. I, foramen

semipedem quoquo vorsum. Eos cum advexeris, ex trapeto temperato. Ii emuntur ad Rufri macerias HS CXXC, temperantur HS XXX. Tandem Pompeis emitur.

[22] ¹ The mill should be adjusted as follows: Level it so that the stones are set at equal distances from the rims and clearing the bottom of the mortar by a little finger's breadth; see that the stones do not rub the basin at all. There should be a finger's breadth between the stone and the column; if the space is greater and the stones are too far distant, ² wind a cord around the column tightly several times so as to fill in the excessive space. If the stones are set too deep and rub the bottom of the basin too much, place perforated wooden disks over the pivot and on the column and thus regulate the height. In the same way adjust the spread with wooden disks or iron rings until the stones fit accurately.

³ A mill is bought near Suessa for 400 sesterces and fifty pounds of oil. The cost of assembling is 60 sesterces, and the charge for transportation by oxen, with six days' wages of six men, drivers included, is 72 sesterces. The bar complete costs 72 sesterces, and there is a charge of 25 sesterces for oil; the total cost is 629 sesterces. At Pompeii one is bought complete for 384 sesterces, freight 280 sesterces. It is better to assemble and adjust on the ground, and this will cost 60 sesterces, making a total cost of 724 sesterces. ⁴ If you are fitting old mills with stones, they should be ¹ foot ³ fingers thick at the centre and ¹ foot in diameter, with a half-foot square opening; alter them to fit the mill after they have been hauled. These can be bought at the yard of Rufrius for 180 sesterces, and fitted for 30 sesterces. The price is the same at Pompeii.

[23] Fac ad vindemiam quae opus sunt ut parentur. Vasa laventur, corbulae sarciantur, picentur, dolia quae opus sunt picentur, quom pluet; quala parentur, sarciantur, far molatur, menae emantur, oleae caducae saliantur. Uvas miscellas, vinum praeligneum quod operarii bibant, ubi tempus erit, legito. Siccum puriter omnium dierum pariter in dolia dividito. Si opus erit, defrutum indito in mustum de musto lixivo coctum, partem quadragesimam addito defruti vel salis sesquilibram in culleum. Marmor si indes, in culleum libram indito; id indito in urnam, misceto cum musto; id indito in doleum. Resinam si indes, in culleum musti P. III, bene comminuito, indito in fiscellam et facito uti in doleo musti pendeat; eam quassato crebro, uti resina condeliquestat. Ubi indideris defrutum aut marmor aut resinam, dies XX permisceto crebro, tribulato cotidie. Tortivum mustum circumcidaneum suo cuique dolio dividito additoque pariter.

[23] ¹ Have everything that is needed ready for the vintage; let vats be cleaned, baskets mended and pitched, necessary jars be pitched on rainy days; let hampers be made ready and mended, spelt be ground, salt fish be bought, and windfall olives be salted. ² Gather the inferior grapes for the sharp wine for the hands to drink, when the time comes. Divide the grapes gathered each day, after cleaning and drying, equally between the jars. If necessary, add to the new wine a fortieth part of must boiled down from untrod grapes, or a pound and a half of salt to the culleus. ³ If you use marble dust, add one pound to the culleus; mix this with must in a vessel and then pour into the jar. If you use resin, pulverize it thoroughly, three pounds to the culleus of must, place it in a basket, and suspend it in the jar of must; shake the basket often so that the resin may dissolve. ⁴ When you use boiled must or marble dust or resin, stir frequently for twenty days and press down daily. Divide the must of the second pressing and add equally to each jar.

[24] *Vinum Graecum hoc modo fieri oportet. Uvas Apicias percoctas bene legito. Ubi delegeris, is eius musti culleum aquae marinae veteris Q. II indito vel salis puri modium; eum in fiscella suspendito sinitoque cum musto distabescat. Si helvolum vinum facere voles, dimidium helvoli, dimidium Apicii vini indito, defruti veteris partem tricesimam addito. Quidquid vini defrutabis, partem tricesimam defruti addito.*

[24] ¹ Directions for making Greek wine: Gather carefully well-ripened Apician grapes, and add to the culleus of must two quadrantals of old sea-water, or a modius of pure salt. If the latter is used, suspend it in a basket and let it dissolve in the must. If you wish to make a straw-coloured wine, take equal parts of yellow and Apician wine and add a thirtieth part of old boiled wine. Add a thirtieth part of concentrated must to any kind of blended wine.

[25] *Quom vinum coctum erit et quom legetur, facito uti servetur familiae primum suisque facitoque studeas bene percoctum siccumque legere, ne vinum nomen perdat. Vinaceos cotidie recentis succernito lecto restibus subtento, vel cribrum illi rei parato. Eos conculcato in dolia picata vel in lacum vinarium picatum. Id bene iubeto oblini, quod des bubus per hiemem. Indidem, si voles, lavito paulatim. Erit lora familiae quod bibat.*

[25] ¹ When the grapes are ripe and gathered, let the first be kept for household use. See that they are not gathered until they are thoroughly ripe and dry, that the wine may not lose its reputation. Sift the fresh husks daily through a bed stretched on cords, or make a sieve for the purpose, and after treading place them

in pitched jars or a pitched vat. Have this sealed tight, to feed to cattle through the winter; or if you wish you can soak some of it a while and you will have an after-wine for the hands to drink.

[26] *Vindemia facta vasa torcula, corbular, fiscinas, funis, patibula, fibulas iubeto quidquid suo loco condi. Dolia cum vino bis in die fac extergeantur, privasque scopulas in dolia facito habeas illi rei, qui labra doliorum circumfrices. Ubi erit lectum dies triginta, si bene dacinata erunt, dolia oblinito, Si voles de faece demere vinum, tum erit ei rei optimum tempus.*

[26] ¹ After the vintage is over order all the pressing utensils, hampers, baskets, ropes, props, and bars to be stored, each in its proper place. Have the jars containing wine wiped off twice a day, and see that you provide each jar with its own broom with which to wipe off the edges. Thirty days after the gathering, if the fermentation is complete, seal the jars. If you wish to draw off the wine from the lees, this will be the best time to do it.

[27] *Sementim facito, ocinum, viciam, faenum Graecum, fabam, ervum, pabulum bubus. Alteram et tertiam pabuli sationem facito. Deinde alias fruges serito. Scrobes in vervacto oleis, ulmis, vitibus, ficis; simul cum semine serito. Si erit locus siccus, tum oleas per sementim serito, et quae ante satae erunt, teneras tum supputato et arbores ablaqueato.*

[27] ¹ Sow clover, vetch, fenugreek, beans and bitter-vetch as forage for cattle. Make a second and a third sowing of forage; then plant the other crops. Dig trenches in fallow ground for olives, elms, vines, and figs, and plant at seed-time. If the ground is dry, transplant olives at seed-time, prune the young olives which had been planted before, and trench the trees.

[28] *Oleas, ulmos, ficos, poma, vites, pinos, cupressos cum seres, bene cum radicibus eximito cum terra sua quam plurima circumligatoque, uti ferre possis; in alveo aut in corbula ferri iubeto. Caveto, quom ventus siet aut imber, effodias aut feras; nam id maxime cavendum est. In scrobe quom pones, summam terram subdito; postea operito terra radicibus fini, deinde calcato pedibus bene, deinde festucis vectibusque calcato quam optime poteris; id erit ei rei primum. Arbores crassiores digitis V quae erunt, eas praecisas serito oblinitoque fimo summas et foliis alligato.*

[28] ¹ In transplanting olives, elms, figs, fruit trees, vines, pines, and cypresses, dig them up carefully, roots and all, with as much of their own soil as possible, and tie them up so that you can transport them. Have them carried in a box or basket.

Be careful not to dig them up or transport them when the wind is blowing or when it is raining, for this is especially to be avoided. ² When you place them in the trench, bed them in top soil, spread dirt over them to the ends of the roots, trample it thoroughly, and pack with rammers and bars as firmly as possible; this is the most important thing. Before transplanting, cut off the tops of trees which are more than five fingers in diameter and smear the scars with dung and wrap them in leaves.

[29] Stercus dividito sic. Partem dimidiam in segetem, ubi pabulum seras, et si ibi olea erit, simul ablaqueato stercusque addito: postea pabulum serito. Partem quartam circum oleas ablaqueatas, quom maxime opus erit, addito terraque stercus operito. Alteram quartam partem in pratium reservato idque, quom maxime opus erit, ubi favonius flabit, evehito luna silenti.

[29] ¹ Divide your manure as follows: Haul one-half for the forage crops, and when you sow these, if this ground is planted with olives, trench and manure them at this time; then sow the forage crops. Add a fourth of the manure around the trenched olives when it is most needed, and cover this manure with soil. Save the last fourth for the meadows, and when most needed, as the west wind is blowing, haul it in the dark of the moon.

[30] Bubus frondem ulmeam, populneam, querneam, ficulneam, usque dum habebis, dato. Ovibus frondem viridem, usque dum habebis, praebeto; ubi sementim facturus eris, ibi oves delectato; et frondem usque ad pabula matura. Pabulum aridum quod condideris in hiemem quam maxime conservato, cogitatoque hiemis quam longa siet.

[30] ¹ Feed the cattle elm, poplar, oak, and fig leaves as long as these last; and keep the sheep supplied with green leaves as long as you have them. Fold sheep on land which you intend to plant, and feed them leaves there until the forage is full grown. Save as carefully as possible the dry fodder which you have stored against winter, and remember how long winter lasts.

[31] Ad oleam cogendam quae opus erunt parentur. Vimina matura, salix per tempus legatur, uti sit unde corbulae fiant et veteres sarciantur. Fibulae unde fiant, aridae iligneae, ulmeae, nuceae, ficulneae, fac in stercus aut in aquam coniciantur; inde, ubi opus erit, fibulas facito. Vectes iligneos, acrufolios, laureos, ulmeos facito uti sient parati. Prelum ex carpino atra potissimum facito. Ulmeam, pineam, nuceam, hanc atque aliam materiem omnem cum effodies, luna decrescente eximito post meridiem sine vento austro. Tum erit tempestiva,

cum semen suum maturum erit, cavetoque per rorem trahas aut doles. Quae materies semen non habebit, cum glubebit, tempestitiva erit. Vento austro caveto nequam materiam neve vinum tractes nisi necessario.

[31] ¹ Let all necessary preparations be made for the olive harvest: Let ripe withes and willow branches be gathered betimes as material for making new baskets and mending old ones. Have dry oak, elm, nut, and fig sticks for making pins buried in the dunghill or in water, and make pins from them when needed. Have oak, ilex, laurel, and elm levers ready. Make the press-beam preferably of black hornbeam. ² Take out elm, pine, nut, and all other timber which you are felling, when the moon is on the wane, after noon, while there is no south wind. It is ready for cutting when the seed is ripe. Be careful not to haul it or work it in the wet. Timber that has no seed is ready for cutting when the bark peels. Do not handle any timber or vine when the south wind is blowing, unless you are compelled to do so.

[32] Vineas arboresque matura face incipias putare. Vites propages in sulcos; susum vorsum, quod eius facere poteris, vitis facito uti ducas. Arbores hoc modo potentur, rami uti divaricentur, quos relinques, et uti recte caedantur et ne nimium crebri relinquantur. Vites bene nodentur; per omnes ramos diligenter caveto ne vitem praecipites et ne nimium praestringas. Arbores facito uti bene maritae sint vitesque uti satis multae adserantur et, sicubi opus erit, de arbore deiciantur, uti in terram deprimentur, et biennio post praecidito veteres.

[32] ¹ See that you begin early to trim vines and trees. Layer vines into trenches, and, so far as possible, train them to grow vertically. The trees should be trimmed as follows: The branches which you leave should spread out, should be cut straight up, and should not be left too thick. ² The vines should be well knotted; and be especially careful not to bend them downward along any of the branches and not to tie them too tightly. See that the trees are well “wedded,” and that a sufficient number of vines are planted for them; and wherever it is necessary let these be detached from the trees and buried in the ground, and two years later cut them off from the old stock.

[33] Viniam sic facito uti curetur. Vitem bene nodatam deligato recte, fluxuosa uti ne sit, susum vorsum semper ducito, quod eius poteris. Vinarios custodesque recte relinquito. Quam altissimam viniam facito alligatoque recte, dum ne nimium constringas. Hoc modo eam curato. Capita vitium per sementiam ablaqueato. Vineam putatam circumfodito, arare incipito, ultro citroque sulcos perpetuos ducito. Vites teneras quam primum propagato, sic occato; veteres

quam minimum castrato, potius, si opus erit, deicito biennioque post praecidito. Vitem novellam rescari tum erit tempus, ubi valebit. Si vinea a vite calva erit, sulcos interponito ibique viveradicem serito, umbram ab sulcis removeto crebroque fodito. In vinea vetere serito ocinum, si macra erit (quod granum capiat ne serito), et circum capita addito stercus, paleas, vinaceas, aliquid horum, quo rectius valeat. Ubi vinea frondere coeperit, pampinato. Vineas novellas alligato crebro, ne caules praefringantur, et quae iam in perticam ibit, eius pampinos teneros alligato leviter corrigitoque, uti recte spectent. Ubi uva varia fieri coperit, vites subligato, pampinato uvasque expellito, circum capita sarito. Salictum suo tempore caedito, glubito arteque alligato. Librum conservato, cum opus erit in vinea, ex eo in aquam coicito, alligato. Viminae, unde corbulae fiant, conservato.

[33] ¹ Have the vineyard treated as follows: Tie a well-knotted vine straight up, keeping it from bending, and make it grow vertically, so far as you can. Leave fruit-bearing shoots and reserve stubs at proper intervals. Train the vines as high as possible and tie them firmly, but without choking them. Cultivate as follows: at seed-time trench the soil around the crown of the vine, ² and after pruning cultivate around it. Begin ploughing, and run straight furrows back and forth. Set out young vines as early as possible, then harrow; prune the old ones very slightly, or rather, if you need cuttings, layer the branches and take off the cuttings two years later. The proper time for cutting back the young plant is when it is strong. ³ If there are gaps in the rows, run furrows and plant rooted cuttings, keep the furrows clear of shade, and cultivate frequently. In an old vineyard sow clover if the soil is lean (do not sow anything that will form a head), and around the roots apply manure, straw, grape dregs, or anything of the sort, to make it stronger. ⁴ When the vine begins to form leaves, thin them. Tie up the young vines at frequent intervals to keep the stems from breaking, and when they begin to climb the props tie the tender branches loosely, and turn them so that they will grow vertically. When the grapes begin to turn, tie up the vines, strip the leaves so as to expose the grapes, and dig around the stocks.

⁵ Cut willows at the proper time, strip the bark, and tie them in tight bundles. Save the bark, and when you need it for the vines, steep some of it in water to make tapes. Save the withes for making baskets.

[34] Redeo ad sementim. Ubi quisque locus frigidissimus aquosissimusque erit, ibi primum serito. In caldissimis locis sementim postremum fieri oportet. Terram cave cariosam tractes. Ager rubicosus et terra pulla, materina, rudecta, harenosa, item quae aquosa non erit, ibi lupinum bonum fiet. In creta et uligine et rubrica

et ager qui aquosus erit, semen adorem potissimum serito. Quae loca sicca et non herbosa erunt, aperta ab umbra, ibi triticum serito.

[34] ¹ I return to the matter of planting. Plant the coldest and most humid ground first, and then the rest of the ground in turn to the warmest, which should come last. ² Do not work ground which is cariosa at all. Lupine will do well in soil that is reddish, and also in ground that is dark, or hard, or poor, or sandy, or not wet. Sow spelt preferably in soil that is chalky, or swampy, or red, or humid. Plant wheat in soil that is dry, free from weeds, and sunny.

[35] Fabam in locis validis non calamitosis serito. Viciam et faenum Graecum quam minime herbosis locis serito. Siliginem, triticum in loco aperto celso, ubi sol quam diutissime siet, seri oportet. Lentim in rudecto et rubricoso loco, qui herbosus non siet, serito. Hordeum, qui locus novus erit aut qui restibilis fieri poterit, serito. Trimestre, quo in loco sementim maturam facere non potueris et qui locus restibilis crassitudine fieri poterit, serri oportet. Rapinam et coles rapicii unde fiant et raphanum in loco stercoreto bene aut in loco crasso serito.

[35] ¹ Plant beans in strong soil which is protected from storms; vetch and fenugreek in places as clear of weeds as possible. Wheat and winter wheat should be sown on high, open ground, where the sun shines longest. Lentils should be planted in unfertile and reddish soil, free of weeds; ² barley in new ground, or ground which does not need to lie fallow. Spring wheat should be planted in ground in which you cannot ripen the regular variety, or in ground which, because of its strength, does not need to lie fallow. Plant turnips, kohlrabi seed, and radishes in land well manured or naturally strong.

[36] Quae segetem stercorent. Stercus columbinum spargere oportet in pratium vel in hortum vel in segetem. Caprinum, ovillum, bubulum, item ceterum sterces omne sedulo conservato. Amurcam spargas vel inriges ad arbores; circum capita maiora amphoras, ad minora urnas cum aquae dimidio addito, ablaqueato prius non alte.

[36] ¹ Fertilizers for crops: Spread pigeon dung on meadow, garden, and field crops. Save carefully goat, sheep, cattle, and all other dung. Spread or pour amurca around trees, an amphora to the larger, an urn to the smaller, diluted with half its volume of water, after running a shallow trench around them.

[37] Quae mala in segete sint. Si cariosam terram tractes. Cicer, quod vellitur et quod salsum est, eo malum est. Hordeum, faenum Graecum, ervum, haec omnia segetem exsugunt et omnia quae velluntur. Nucleos in segetem ne indideris.

Quae segetem stercorent fruges: lupinum, faba, vicia. Stercus unde facias: stramenta, lupinum, paleas, fabalia, acus, frondem iligneam, querneam. Ex segeti vellito ebulum, cicutam et circum salicta herbam altam uvamque; eam substernito ovibus bubusque, frondem putidam. Partem de nucleis succernito et in lacum coicito, eo aquam addito, permisceto rutro bene; inde lutum circum oleas ablaqueatas addito, nucleos combustos item addito. Vitis si macra erit, sarmenta sua concidito minute et ibidem inarato aut infodito. Per hiemem lucubratione haec facito: ridicas et palos, quos pridie in tecto posueris, siccis dolato, faculas facito, stercus egerito. Nisi intermestri lunaque dimidiata tum ne tangas materiem. Quam effodies aut praecides abs terra, diebus VII proximis, quibus luna plena fuerit, optime eximetur. Omnino caveto nequam materiem doles neu caedas neu tangas, si potes, nisi siccam neu gelidam neu rorulentam. Frumenta face bis sarias runcesque avenamque destringas. De vinea et arboribus putatis sarmenta degere et fascinam face et vitis et ligna in cacuminum ficulna et codicillos domino in acervum conpone.

[37] ¹ Things which are harmful to crops: If you work land which is cariosa; chick peas are harmful, because they are torn out by the roots and are salty; barley, fenugreek, bitter vetch, and all crops which are pulled out by the roots, exhaust the soil. Do not bury olive seeds in land intended for crops.

² Crops which fertilize land: Lupines, beans, and vetch.

You may make compost of straw, lupines, chaff, bean stalks, husks, and ilex and oak leaves. Pull up the elder and hemlock bushes which grow in the grain fields, and the high grass and sedge around the willow bed; use them for bedding down sheep, and decayed leaves for cattle. Separate part of the olive seeds and throw them into a pit, add water, and mix them thoroughly with a shovel. Make trenches around the olive trees and apply this mixture, adding also burned seeds.

³ If a vine is unhealthy, cut its shoots into small bits and plough or spade them in around it.

The following is evening work for winter: Work up into vine poles and stakes the wood which was brought under cover the day before to dry out; make faggots; and clear out manure. Do not touch timber except in the dark of the moon, or in its last phase. ⁴ The best time to take out timber which you dig up or fell is during the seven days following the full moon. Above all things, do not work, or fell, or, if you can avoid it, even touch timber which is wet, or frosted, or covered with dew. ⁵ Hoe and weed grain twice, and strip the wild oats. Remove the twigs from the prunings of vines and trees, and make them into

bundles; and heap the vine and fig sticks for the forge, and the split wood for the use of the master.

[38] Fornacem calcariam pedes latam X facito, altam pedes XX, usque ad pedes tres summam latam redigito. Si uno praefurnio coques, lacunam intus magnam facito, uti satis siet ubi cinerem concipiat, ne foras sit educendus. Fornacemque bene struito; facito fortax totam fornacem infimam complectatur. Si duobus praefurniis coques, lacuna nihil opus erit. Cum cinere eruto opus erit, altero praefurnio eruito, in altero ignis erit. Ignem caveto ne intermittas quin semper siet, neve noctu neve ullo tempore intermittatur caveto. Lapidem bonum in fornacem quam candidissimum, quam minime varium indito. Cum fornacem facies, fauces praecipites deorsum facito. Ubi satis foderis, tum fornaci locum facito, uti quam altissima et quam minime ventosa siet. Si parum altam fornacem habebis ubi facias, latere summam statuito aut caementis cum luto summam extrinsecus oblinito. Cum ignem subdideris, siquam flamma exhibit nisi per orbem summum, luto oblinito. Ventus ad praefurnium caveto ne accedat: inibi austrum caveto maxime. Hoc signi erit, ubi calx cocta erit, summos lapides coctos esse oportebit; item infimi lapides cocti cadent, et flamma minus fumosa exhibit.

Si ligna et virgas non poteris vendere neque lapidem habebis, unde calcem coquas, de lignis carboreas coquito, virgas et sarmenta, quae tibi ustioni supererunt, in segete conburito. Ubi conbusseris, ibi papaver serito.

[38] ¹ Build the lime-kiln ten feet across, twenty feet from top to bottom, sloping the sides in to a width of three feet at the top. If you burn with only one door, make a pit inside large enough to hold the ashes, so that it will not be necessary to clear them out. Be careful in the construction of the kiln; see that the grate covers the entire bottom of the kiln. ² If you burn with two doors there will be no need of a pit; when it becomes necessary to take out the ashes, clear through one door while the fire is in the other. Be careful to keep the fire burning constantly, and do not let it die down at night or at any other time. Charge the kiln only with good stone, as white and uniform as possible. ³ In building the kiln, let the throat run straight down. When you have dug deep enough, make a bed for the kiln so as to give to it the greatest possible depth and the least exposure to the wind. If you lack a spot for building a kiln of sufficient depth, run up the top with brick, or face the top on the outside with field stone set in mortar. ⁴ When it is fired, if the flame comes out at any point but the circular top, stop the orifice with mortar. Keep the wind, and especially the south wind, from reaching the door. The calcining of the stones at the top will show that the whole has calcined; also,

the calcined stones at the bottom will settle, and the flame will be less smoky when it comes out.

If you cannot sell your firewood and faggots, and have no stone to burn for lime, make charcoal of the firewood, and burn in the field the faggots and brush you do not need. Where you have burned them plant poppies.

[39] Ubi tempestates malae erunt, cum opus fieri non poterit, stercus in stercilinum egerito. Bubile, ovile, cohortem, villam bene purgato. Dolia plumbo vincito vel materie quereae vere sicca alligato. Si bene sarseris aut bene alligaveris et in rimas medicamentum indideris beneque picaveris, quodvis dolium vinarium facere poteris. Medicamentum in dolium hoc modo facito: cerae P. I, resinae P. I, sulphuris P. C' C'. Haec omnia in calicem novum indito, eo addito gypsum contritum, uti crassitudo fiat quasi emplastrum, eo dolia sarcito. Ubi sarseris, qui colorem eundem facias, cretae crudae partes duas, calcis tertiam commisceto; inde laterculos facito, coquito in fornace, eum conterito idque inducito.

Per imbrem in villa quaerito quid fieri possit. Ne cessetur, munditias facito. Cogitato, si nihil fiet, nihilo minus sumptum futurum.

[39] ¹ When the weather is bad and no other work can be done, clear out manure for the compost heap; clean thoroughly the ox stalls, sheep pens, barnyard, and farmstead; and mend wine-jars with lead, or hoop them with thoroughly dried oak wood. If you mend it carefully, or hoop it tightly, closing the cracks with cement and pitching it thoroughly, you can make any jar serve as a wine-jar. Make a cement for a wine-jar as follows: Take one pound of wax, one pound of resin, and two-thirds of a pound of sulphur, and mix in a new vessel. ² Add pulverized gypsum sufficient to make it of the consistency of a plaster, and mend the jar with it. To make the colour uniform after mending, mix two parts of crude chalk and one of lime, form into small bricks, bake in the oven, pulverize, and apply to the jar.

In rainy weather try to find something to do indoors. Clean up rather than be idle. Remember that even though work stops, expenses run on none the less.

SECTIONS 40-59

[40] Per ver haec fieri oportet. Sulcos et scrobes fieri, seminariis, vitariis locum verti, vites propagari, in locis crassis et umectis ulmos, ficos, poma, oleas seri oportet. Ficos, olea, mala, pira, vites inseri oportet luna silenti post meridiem sine vento austro. Oleas, ficos, pira, mala hoc modo inserito. Quem ramum insiturus eris, praecidito, inclinato aliquantum, ut aqua defluat; cum praecides, caveto ne librum convellas. Sumito tibi surculum durum, eum praeacuito, salicem Graecum discindito. Argillam vel cretam coaddito, harenae paululum et fimum bubulum, haec una bene condepsito, quam maxime uti lentum fiat. Capito tibi scissam salicem, ea stirpem praecisum circumligato, ne liber frangatur. Ubi id feceris, surculum praeacutum inter librum et stirpem artito primoris digitos II. Postea capito tibi surculum, quod genus inserere voles, eum primorem praeacuito oblicum primoris digitos II. Surculum aridum, quem artiveris, eximito, eo artito surculum, quem inserere voles. Librum ac librum vorsum facito, artito usque adeo, quo praeacueris. Idem alterum surculum, tertium, quartum facito; quot genera voles, tot indito. Salicem Graecam amplius circumligato, luto depsto stirpem oblinito digitos crassum tres. Insuper lingua bubula obtegito, si pluat, ne aqua in librum permanet. Eam linguam insuper libro alligato, ne cadat. Postea stramentis circumdato alligatoque, ne gelus noceat.

[40] ¹ The following work should be done in the spring: Trenches and furrows should be made, ground should be turned for the olive and vine nurseries, vines should be set out; elms, figs, fruit trees, and olives should be planted in rich, humid ground. Figs, olives, apples, pears, and vines should be grafted in the dark of the moon, after noon, when the south wind is not blowing. The following is a good method of grafting olives, figs, pears or apples: ² Cut the end of the branch you are going to graft, slope it a bit so that the water will run off, and in cutting be careful not to tear the bark. Get you a hard stick and sharpen the end, and split a Greek willow. Mix clay or chalk, a little sand, and cattle dung, and knead them thoroughly so as to make a very sticky mass. Take your split willow and tie it around the cut branch to keep the bark from splitting. ³ When you have done this, drive the sharpened stick between the bark and the wood two finger-tips deep. Then take your shoot, whatever variety you wish to graft, and sharpen the end obliquely for a distance of two finger-tips; take out the dry stick which you have driven in and drive in the shoot you wish to graft. Fit bark to bark, and drive it in to the end of the slope. In the same way you may graft a second, a third, a fourth

shoot, as many varieties as you please. ⁴ Wrap the Greek willow thicker, smear the stock with the kneaded mixture three fingers deep, and cover the whole with ox-tongue, so that if it rains the water will not soak into the bark; this ox-tongue must be tied with bark to keep it from falling off. Finally, wrap it in straw and bind tightly, to keep the cold from injuring it.

[41] Vitis insitio una est per ver, altera est cum uva floret, ea optuma est. Pirorum ac malorum insitio per ver et per solstitium dies L et per vindemiam. Oleae et ficorum insitio est per ver. Vitem sic inserito: praecidito quam inseres, eam mediam diffindito per medullam; eo surculos praeacutos artito; quos inseres, medullam cum medulla conponito. Altera insitio est: si vitis vitem continget, utriusque vitem teneram praeacuito, obliquo inter sese medullam cum medulla libro conligato. Tertia insitio est: terebra vitem quam inseres pertundito, eo duos suculos vitigineos, quod genus esse voles, insectos obliquos artito ad medullam; facito iis medullam cum medulla coniungas artitoque ea qua terebraveris alterum ex altera parte. Eos surculos facito sint longi pedes binos, eos in terram demittito replicatoque ad vitis caput, medias vitis vinclis in terram defigito terraque operito. Haec omnia luto depsto oblinito, alligato integitoque ad eundem modum, tamquam oleas.

[41] ¹ Vine grafting may be done in the spring or when the vine flowers, the former time being best. Pears and apples may be grafted during the spring, for fifty days at the time of the summer solstice, and during the vintage; ² olives and figs should be grafted during the spring. Graft the vine as follows: Cut off the stem you are grafting, and split the middle through the pith; in it insert the sharpened shoots you are grafting, fitting pith to pith. A second method is: If the vines touch each other, cut the ends of a young shoot of each obliquely, and tie pith to pith with bark. ³ A third method is: With an awl bore a hole through the vine which you are grafting, and fit tightly to the pith two vine shoots of whatever variety you wish, cut obliquely. Join pith to pith, and fit them into the perforation, one on each side. ⁴ Have these shoots each two feet long; drop them to the ground and bend them back toward the vine stock, fastening the middle of the vine to the ground with forked sticks and covering with dirt. Smear all these with the kneaded mixture, tie them up and protect them in the way I have described for olives.

[42] Ficos et oleas altero modo. Quod genus aut ficum aut oleam esse voles, inde librum scalpstro eximito, alterum librum cum gemma de eo fico, quod genus esse voles, eximito, adponito in eum locum unde exicaveris in alterum genus

facitoque uti conveniat. Librum longum facito digitos III S, latum digitos III. Ad eundem modum oblinito, integito, uti cetera.

[42] ¹ Another method of grafting figs and olives is: Remove with a knife the bark from any variety of fig or olive you wish, and take off a piece of bark containing a bud of any variety of fig you wish to graft. Apply it to the place you have cleared on the other variety, and make it fit. The bark should be three and a half fingers long and three fingers wide. Smear and protect as in the other operation.

[43] Sulcos, si locus aquosus erit, alveatos esse oportet, latos summos pedes tres, altos pedes quattuor, infimum latum P. I et palmum. Eos lapide consternito; si lapis non erit, perticis saligneis viridibus controversus conlatis consternito; si pertica non erit, sarmentis conligatis. Postea scrobes facito altos P. III S, latos P. IIII, et facito de scrobe aqua in sulcum defluat: ita oleas serito. Vitibus sulcos et propagines ne minus P. II S quoquo versus facito. Si voles vinea cito crescat et olea, quam severis, semel in mense sulcos et circum capita oleaginea quot mensibus, usque donec trimae erunt, fodere oportet. Eodem modo ceteras arbores procurato.

[43] ¹ Ditches, if the ground is swampy, should be dug trough-shaped, three feet wide at the top, four feet deep, sloping to a width of one foot one palm at the bottom. Blind them with stones, or lacking stones, with green willow sticks laid crosswise in layers; or, failing this, with bundles of brush. Then dig trenches three and a half feet deep, four feet wide, so placed that the water will run off from the trenches into the ditch; and so plant olives. ² Dig furrows and trenches for vines not less than two and a half feet deep and the same distance wide. If you wish the vines and olives which you have planted to grow fast, spade the furrows once a month, and dig around the foot of the olives every month until they are three years old. Treat other trees in the same way.

[44] Olivetum diebus XV ante aequinoctium vernalis incipito putare. Ex eo die dies XLV recte putabis. Id hoc modo putato. Qua locus recte ferax erit, quae arida erunt, et siquid ventus interfregerit, ea omnia eximito. Qua locus ferax non erit, id plus concidito aratoque. Bene enodato stripesque levis facito.

[44] ¹ The trimming of the olive-yard should begin fifteen days before the vernal equinox; you can trim to advantage from this time for forty-five days. Follow this rule: If the land is very fertile, clear out all dead branches only and any broken by the wind; if it is not fertile, trim more closely and plough. Trim clean, and smooth the stems.

[45] Taleas oleagineas, quas in scrobe saturis eris tripedaneas decidito diligenterque tractato, ne liber laboret, cum dolabis aut secabis. Quas in seminario saturus eris, pedalis facito, eas sic inserito. Locus bipalio subactus siet beneque terra tenera siet beneque glittus siet. Cum taleam demittes, pede taleam opprimito. Si parum descendet, malleo aut mateola adigito cavetoque ne librum scindas, cum adiges. Palo prius locum ne feceris, quo taleam demittas. Si ita severis uti stet talea, melius vivet. Taleae ubi trimae sunt, tum denique maturae sunt, ubi liber sese vertet. Si in scrobibus aut in sulcis seres, ternas taleas ponito easque divaricato, supra terram ne plus IIII digitos transvorsos emineant; vel oculos serito.

[45] ¹ Cut olive slips for planting in trenches three feet long, and when you chop or cut them off, handle them carefully so as not to bruise the bark. Those which you intend to plant in the nursery should be cut one foot long, and planted in the following way: The bed should be turned with the trenching spade until the soil is finely divided and soft. ² When you set the slip, press it in the ground with the foot; and if it does not go deep enough, drive it in with a mallet or maul, but be careful not to break the bark in so doing. Do not first make a hole with a stick, in which to set out the slip. It will thrive better if you plant it so that it stands as it did on the tree. ³ The slips are ready for transplanting at three years, when the bark turns. If you plant in trenches or furrows, plant in groups of three, and spread them apart. Do not let them project more than four finger-widths above the ground; or you may plant the eyes.

[46] Seminarium ad hunc modum facito. Locum quam optimum et apertissimum et stercorosissimum poteris et quam simillimum genus terrae eae, ubi semina positurus eris, et uti ne nimis longe semina ex seminario ferantur, eum locum bipalio vertito, delapidato circumque saepito bene et in ordine serito. In sesquipedem quoquo vorsum taleam demittito opprimitoque pede. Si parum deprimere poteris, malleo aut mateola adigito. Digitum supra terram facito semina emineant fimoque bubulo summam taleam oblinito signumque aput taleam adponito crebroque sarito, si voles cito semina crescant. Ad eundem modum alia semina serito.

[46] ¹ Make a nursery as follows: Choose the best, the most open, and the most highly fertilized land you have, with soil as nearly as possible like that into which you intend to transplant, and so situated that the slips will not have to be carried too far from the nursery. Turn this with a trench spade, clear of stones, build a stout enclosure, and plant in rows. Plant a slip every foot and a half in each direction, pressing into the ground with the foot; ² and if it does not go deep

enough, drive it in with a mallet or maul. Let the slips project a finger above the ground, and smear the tops with cow dung, placing a mark by each; hoe often if you wish the slips to grow rapidly. Plant other slips in the same way.

[47] Harundinem sic serito: ternos pedes oculos disponito. Vitiarium eodem modo facito seritoque. Ubi vitis bima erit, resicato; ubi trima erit, eximito. Si pecus pascetur, ubi vitem serere voles, ter prius resicato, quam in arborem ponas. Ubi V nodos veteres habebit, tum ad arborem ponito. Quotannis porrinam serito, quotannis habebis quo eximas.

[47] ¹ The reed bed should be planted as follows: Plant the eyes three feet apart.

Use the same method for making and planting the vine nursery. Cut back the vine when it is two years old and transplant when it is three. If the ground on which you wish to plant the vine is to be used for pasture, see that the vine has been cut back three times before it is tied up to the tree; it should not be trained on the tree until it has five old knots. Plant a leek-bed every year, and you will have something to take off every year.

[48] Pomarium seminarium ad eundem modum atque oleagineum facito. Suum quidquid genus talearum serito. Semen cupressi ubi seres, bipalio vertito. Vere primo serito. Porcas pedes quinos latas facito, eo stercus minutum addito, consarito glebasque conminuito. Porcam planam facito, paulum concavam. Tum semen serito crebrum tamquam linum, eo terram cribro incernito altam digitum transversum. Eam terram tabula aut pedibus conplanato, furcas circum offigito, eo perticas intendito, eo sarmenta aut cratis ficarias inponito, quae frigus defendant et solem. Uti subtus homo ambulare possit facito. Crebro runcato. Simul herbae inceperint nasci, eximito. Nam si herbam duram velles, cupressos simul evelles.

[48] ¹ In making the fruit nursery follow the method used in making the olive nursery. Plant separately each variety of slip.

Turn the ground with a trench spade where you are going to plant cypress seed, and plant at the opening of spring. ² Make ridges five feet wide, add well-pulverized manure, hoe it in, and break the clods. Flatten the ridge, forming a shallow trough. Plant the seed as thickly as flax, sifting dirt a finger-breadth deep over it with a sieve. Level the ground with a board or the foot, and set forked stakes around the edges. Lay poles in the forks, and on these hang brush or fig-curtains, to keep off cold and sun. Make the covering high enough for a person to walk under. Hoe often, and clear off the weeds as soon as they begin to

grow; for if you pull up the growth when it is hard, you will pull up the cypress with it.

³ Plant and cover pear and apple seed in the same way. use the same method for planting pine-nuts, but alter it slightly.

[49] Vineam veterem si in alium locum transferre voles, dumtaxat brachium crassam licebit. Primum deputato, binas gemmas ne amplius relinquo. Ex radicibus bene exfodito, usque radices persequito et caveto ne radices saucies. Ita uti fuerit, ponito in scrobe aut in sulco operitoque et bene occulcato, eodemque modo vineam statuito, alligato flexatoque, uti fuerit, crebroque fodito.

[49] ¹ You may transplant an old vine if you wish, up to the thickness of your arm. First prune back so as to leave not more than two buds on each branch; clear the dirt thoroughly from the roots over their full length, and be careful not to injure them. ² Replace the vine just as it was, in a trench or furrow, cover with soil, and trample firmly. Plant, tie, and train it just as it was, and work it often.

[50] Prata primo vere stercoreto luna silenti. Quae inrigiva non erunt, ubi favonius flare coeperit, cum prata defendes, depurgato herbasque malas omnis radicitus effodito. Ubi vineam deputaveris, acervum lignorum virgarumque facito. Ficos interputato et in vinea ficos subradito alte, ne eas vitis scandat. Seminaria facito et vetera resarcito. Haec facito, antequam vineam fodere incipias. Ubi daps profanata comestaque erit, verno arare incipito. Ea loca primum arato, quae siccissima erunt, et quae crassissima et aquosissima erunt, ea postremum arato, dum ne prius obdurescant.

[50] ¹ Manure meadows at the opening of spring, in the dark of the moon. When the west wind begins to blow and you close the dry meadows to stock, clean them and dig up all noxious weeds by the roots.

² After pruning vines, pile the wood and branches; prune fig trees moderately, and clear those in the vineyard to a good height, so that the vines will not climb them; make new nurseries and repair old ones. All this before you begin cultivating the vines.

As soon as the sacred feast has been offered and eaten, begin the spring ploughing, working first the driest spots and last the heaviest and wettest, provided they do not get hard in the meantime.

[51] Propagatio pomorum, aliarum arborum. Ab arbore abs terra pulli qui nascentur, eos in terram deprimito extollitoque primorem partem, uti radicem capiat; inde biennio post effodito seritoque. Ficum, oleam, malum Punicum, cotoneum aliaque mala omnia, laurum, murtum, nuces Praenestinas, platanum, haec omnia a capite propagari eximique serique eodem modo oportet.

[51] 1 Layering of fruit trees and other trees: Press into the earth the scions which spring from the ground around the trees, elevating the tip so that it will take root. Then two years later dig up and transplant them. Fig, olive, pomegranate, quince, and all other fruit trees, laurel, myrtle, Praenestine nuts, and planes should all be layered, dug, and transplanted in the same way.

[52] Quae diligentius propagari voles, in aullas aut in qualos pertusos propagari oportet et cum iis in scrobem deferri oportet. In arboribus, uti radices capiant, calicem pertundito; per fundum aut qualum ramum, quem radicem capere voles, traicito; eum qualum aut calicem terra inpleto calcatoque bene, in arbore relinquito. Ubi bimum fuerit, ramum sub qualo praecidito. Qualum incidito ex ima parte perpetuum, sive calix erit, conquassato. Cum eo qualo aut calice in scrobem ponito. Eodem modo vitem facito, eam anno post praecidito seritoque cum qualo. Hoc modo quod genus vis propagabis.

[52] 1 When you wish to layer more carefully you should use pots or baskets with holes in them, and these should be planted with the scion in the trench. To make them take root while on the tree, make a hole in the bottom of the pot or basket and push the branch which you wish to root through it. Fill the pot or basket with dirt, trample thoroughly, and leave on the tree. When it is two years old, cut off the branch below the basket; 2 cut the basket down the side and through the bottom, or, if it is a pot, break it, and plant the branch in the trench with the basket or pot. Use the same method with a vine, cutting it off the next year and planting it with the basket. You can layer any variety you wish in this way.

[53] Faenum, ubi tempus erit, secato cavetoque ne sero seces. Priusquam semen maturum siet, secato, et quod optimum faenum erit, seorsum condito, per ver cum arabunt, antequam ocinum des, quod edint boves.

[53] 1 Cut hay in season, and be careful not to wait too long. Harvest before the seed ripens, and store the best hay by itself for the oxen to eat during the spring ploughing, before you feed clover.

[54] Bubus pabulum hoc modo parari darique oportet. Ubi sementim patraveris, glandem parari legique oportet et in aquam conici. Inde semodios singulis bubus in dies dari oportet, et si non laborabunt, pascantur satius erit, aut modium vinaceorum, quos in dolium condideris. Interdiu pascito, noctu faeni P. XXV uni bovi dato. Si faenum non erit, frondem iligineam et hederaciam dato. Paleas

triticeas et hordeaceas, acus fabaginum, de vicia vel de lupino, item de ceteris frugibus, omnia condito. Cum stramenta condes, quae herbosissima erunt, in tecto condito et sale spargito, deinde ea pro faeno dato. Ubi verno dare coeperis, modium glandis aut vinaceorum dato aut modium lupini macerati et faeni P. XV. Ubi ocinum tempestivum erit, dato primum. Manibus carpito, id renascetur: quod falcula secuieris, non renascetur. Usque ocinum dato donec arescat: ita temperato. Postea viciam dato, postea panicum frondem ulmeam dato. Si populneam habebis, admisceto, ut ulmeae satis siet. Ubi ulmeam non habebis, querneam aut ficulneam dato. Nihil est quod magis expediat, quam boves bene curare. Boves nisi per hiemem, cum non arabunt, pasci non oportet. Nam viride cum edunt, semper id exspectant, et fiscellas habere oportet, ne herbam sectentur, cum arabunt.

[54] ¹ Feed for cattle should be prepared and fed as follows: When the sowing is over, gather the acorns and soak them in water. A half-modius of this should be fed each ox per day, though if the oxen are not working it will be better to let them forage; or feed a modius of the grape husks which you have stored in jars. During the day let them forage, and at night feed 25 pounds of hay a head; if you have no hay, feed ilex and ivy leaves. Store wheat and barley straw, husks of beans, of vetch, of lupines, and of all other crops. In storing litter, bring under cover that which has most leaves, sprinkle it with salt, and feed it instead of hay. When you begin feeding in spring, feed a modius of mast, or grape husks, or soaked lupine, and ¹⁵ pounds of hay. When clover is in season feed it first; pull it by hand and it will grow again, for if you cut it with the hook it will not. Continue to feed clover until it dries out, after which feed it in limited quantities; then feed vetch, then panic grass, and after this elm leaves. If you have poplar leaves, mix them with the elm to make the latter hold out; and failing elm, feed oak and fig leaves. There is nothing more profitable than to take good care of cattle. They should not be pastured except in winter, when they are not ploughing; for when they once eat green food they are always expecting it; and so they have to be muzzled to keep them from biting at the grass while ploughing.

[55] Ligna domino in tabulato condito, codicillos oleagineos, radices in acervo sub dio metas facito.

[55] ¹ Store firewood for the master's use on flooring, and cut olive sticks and roots and pile them out of doors.

[56] Familiae cibaria. Qui opus facient: per hiemem tritici modios IIII, per aestatem modios IIII S; vilico, vilicae, epistatae, opilioni: modios III; compeditis: per hiemem panis p. IIII, ubi vineam fodere coeperint panis p. V, usque adeo dum ficos esse coeperint; deinde ad p. IIII redito.

[56] ¹ Rations for the hands: Four modii of wheat in winter, and in summer four and a half for the field hands. The overseer, the housekeeper, the foreman, and the shepherd should receive three. The chain-gang should have a ration of four pounds of bread through the winter, increasing to five when they begin to work the vines, and dropping back to four when the figs ripen.

[57] Vinum familiae. Ubi vindemia facta erit, loram bibant menses tres; mense quarto: heminas in dies, id est in mense congios II S; mense quinto, sexto, septimo, octavo: in dies sextarios, id est in mense congios quinque; nono, decimo, undecimo, duodecimo: in dies heminas ternas, id est amphoram; hoc amplius Saturnalibus et Compitalibus in singulos homines gongios III S; summa vini in homines singulos inter annum Q. VII. Conpeditis, uti quidquid operis facient, pro portione addito; eos non est nimium in annos singulos vini Q. X ebibere.

[57] ¹ Wine ration for the hands: For three months following the vintage let them drink after-wine. In the fourth month issue a hemina a day, that is, 2½ congii a month; in the fifth, sixth, seventh, and eighth months a sextarius a day, that is, 5 congii a month; in the ninth, tenth, eleventh, and twelfth months 3 heminae a day, that is, an amphora a month. In addition, issue 3½ congii per person for the Saturnalia and the Compitalia. Total of wine for each person per year, 7 quadrantals; and an additional amount for the chain-gang proportioned to their work. Ten quadrantals of wine per person is not an excessive allowance for the year.

[58] Pulmentarium familiae. Oleae caducae quam plurimum condito; postea oleas tempestivas, unde minimum olei fieri poterit, eas condito: parcito uti quam diutissime durent. Ubi oleae comesae erunt, hallacem et acetum dato. Oleum dato in menses unicuique s. I; salis unicuique in anno modium satis est.

[58] ¹ Relish for the hands: Store all the windfall olives you can, and later the mature olives which will yield very little oil. Issue them sparingly and make them last as long as possible. When they are used up, issue fish-pickle and vinegar, and a pint of oil a month per person. A modius of salt a year per person is sufficient.

[59] Vestimenta familiae. Tunicam p. III S, saga alternis annis. Quotiens cuique tunicam aut sagum dabis, prius veterem accipito, unde centones fiant. Sculponias bonas alternis annis dare oportet.

[59] ¹ Clothing allowance for the hands: A tunic 3½ feet long and a blanket every other year. When you issue the tunic or the blanket, first take up the old one and have patchwork made of it. A stout pair of wooden shoes should be issued every other year.

SECTIONS 60-79

[60] Bubus cibaria annua in iuga singula lupini modios centum viginti aut glandis modios CCXL, faeni pondo DXX, ocini, fabae M. XX, viciae M. XXX. Praeterea granatui videto satis viciae seras. Pabulum cum seres, mulas sationes facito.

[60] ¹ The following is a year's ration for a yoke of steers: 120 modii of lupines, or 240 of mast; 520 pounds of hay, and . . . of clover; 20 modii of beans; and 30 modii of vetch. See also that you sow enough vetch to allow some to go to seed. Make several sowings of forage crops.

[61] Quid est agrum bene colere? Bene arare. Quid secundum? Arare. Quid tertium? Stercorare. Qui oletum saepissime et altissime miscebit, is tenuissimas radices exarabit. Si male arabit, radices susum abibunt, crassiores fient, et in radices vires oleae abibunt. Agrum frumentarium cum ares, bene et tempestivo ares, sulco vario ne ares. Cetera cultura est multum sarire et diligenter eximere semina et per tempus radices quam plurimas cum terra ferre; ubi radices bene operueris, calcare bene, ne aqua noceat. Siquis quaeret, quod tempus oleae serendae siet, agro sicco per sementim, agro laeto per ver.

[61] ¹ What is good cultivation? Good ploughing. What next? Ploughing. What third? Manuring.

The planter who works his olives very often and very deep will plough up the very slender roots; while bad ploughing will cause the roots to come to the surface and grow too large, and the strength of the tree will waste into the roots. When you plough grain land do it well and at the proper season, and do not plough with an irregular furrow. The rest of the cultivation consists in hoeing often, taking up shoots carefully, and transplanting, at the proper time, as many roots as possible, with their soil. When you have covered the roots well, trample them firmly so that the water will not harm them. If one should ask what is the proper time for planting olives, I should say, at seed-time in dry ground, and in spring in rich ground.

[62] Quot iuga boverum, mulorum, asinorum habebis, totidem plostra esse oportet.

[62] ¹ You should have as many carts as you have teams, either of oxen, mules, or donkeys.

[63] Funem torculum esse oportet extentum pedes LV, funem loreum in plostrum P. LX, lora retinacula longa P. XXVI, subiugia in plostrum P. XIIX, funiculum P. XV, in aratrum subiugia lora P. XVI, funiculum P. VIII.

[63] ¹ The press rope should be 55 feet long when stretched; there should be 60 feet of leather cordage for the cart, and 26 feet for reins; the yoke straps for the cart ¹⁸ feet, and the line 15; the yoke straps for the plough ¹⁶ feet and the line 8.

[64] Olea ubi matura erit, quam primum cogi oportet, quam minimum in terra et in tabulato esse oportet. In terra et in tabulato putescit. Leguli volunt uti olea caduca quam plurimum sit, quo plus legatur; factores, ut in tabulato diu sit, ut fracida sit, quo facilius efficiant. Nolito credere oleum in tabulato posse crescere. Quam citissime conficies, tam maxime expediet, et, totidem modiis collecta, et plus olei efficiet et melius. Olea quae diu fuerit in terra aut in tabulato, inde olei minus fiet et deterius. Oleum, si poteris, bis in die depleto. Nam oleum quam diutissime in amurca et in fracibus erit, tam taeterrimum erit.

[64] ¹ When the olives are ripe they should be gathered as soon as possible, and allowed to remain on the ground or the floor as short a time as possible, as they spoil on the ground or the floor. The gatherers want to have as many windfalls as possible, that there may be more of them to gather; and the pressers want them to lie on the floor a long time, so that they will soften and be easier to mill. Do not believe that the oil will be of greater quantity if they lie on the floor. The more quickly you work them up the better the results will be, and you will get more and better oil from a given quantity. Olives which have been long on the ground or the floor will yield less oil and of a poorer quality. If possible, draw off the oil twice a day, for the longer it remains on the amurca and the dregs, the worse the quality will be.

[65] Oleum viride sic facito. Oleam quam primum ex terra tollito. Si inquinata erit, lavito a foliis et stercore purgato. Postridie aut post diem tertium, quam lecta erit, facito. Olea ubi nigra erit, stringito. Quam acerbissima olea oleum facies, tam oleum optimum erit. Domino de matura olea oleum fieri maxime expediet. Si gelicidia erunt, cum oleam coges, triduum atque quatrimum post oleum facito. Eam oleam, si voles, sale spargito. Quam calidissimum torcularium et cellam habeto.

[65] 1 Observe the following directions in making green oil: Pick the olives off the ground as soon as possible, and if they are dirty, wash them and clean off leaves and dung. Mill them a day or two days after they have been gathered. Pick olives after they have turned black; the more acid the olives the better the oil will be, but the master will find it most profitable to make oil only from ripe olives. If frost has fallen on the olives, mill them three or four days after gathering. You may sprinkle such olives with salt, if you wish; and keep a high temperature in the pressing-room and the storeroom.

[66] Custodis et capulatoris officia. Servet diligenter cellam et torcularium. Caveat quam minimum in torcularium et in cellam introeat. Quam mundissime purissimeque fiat. Vaso aheneo neque nucleis ad oleum ne utatur. Nam si utetur, oleum male sapiet. Cortinam plumbeam in lacum ponito, quo oleum fluat. Ubi factores vectibus prement, continuo copulator conca oleum, quam diligentissime poterit, ne cesset. Amurcam caveat ne tollat. Oleum in labrum primum indito, inde in alterum doleum indito. De iis labris fraces amurcamque semper subtrahito. Cum oleum sustuleris de cortina, amurcam deorito.

[66] 1 Duties of the watchman and the ladler: The watchman must keep a close watch on the store-room and the pressing-room, and must see that there is as little passing in and out as possible. He must see that the work is done as neatly and cleanly as possible, that copper vessels are not used, and that no seeds are crushed for oil; otherwise it will have a bad flavour. Place a lead cauldron in the basin into which the oil flows. As soon as the workmen press down the levers, at once the ladler must take off the oil with a shell very carefully, and without stopping, being careful not to take off the amurca. Pour the oil into the first vessel, then into the second, each time removing the dregs and the amurca. When you take the oil from the cauldron, skim off the amurca.

[67] Item custodis officia. Qui in torculario erunt vasa pura habeant curentque uti olea bene perficiatur beneque siccetur. Ligna in torculario ne caedant. Oleum frequenter capiant. Factoribus det in singulos factus olei sextarios et in lucernam quod opus siet. Fraces cotidie reiciat. Amurcam conmutet usque adeo, donec in lacum qui in cella est postremum pervenerit. Fiscinas spongia effingat. Cotidie oleo locum conmutet, donec in dolium pervenerit. In torculario et in cella caveat diligenter nequid olei subripiatur.

[67] 1 Further duties of the watchman: Those in the pressing-room must keep their vessels clean and see that the olives are thoroughly worked up and that they are well dried. They must not cut wood in the pressing-room. They must skim the oil

frequently. He must give the workmen a sextarius of oil for each pressing, and what they need for the lamp. He must throw out the lees every day and keep cleaning the amurca until the oil reaches the last vat in the room. He must wipe off the baskets with a sponge, and change the vessel daily until the oil reaches the jar. He must be careful to see that no oil is pilfered from the pressing-room or the cellar.

[68] Ubi vindemia et oletas facta erit, prela extollito; funes torculos, melipontos, subductarios in carnario aut in prelo suspendito; orbes, fibulas, vectes, scutulas, fiscinas, corbulas, quala, scalas, patibula, omnia quis usus erit, in suo quidque loco ponito.

[68] ¹ When the vintage and the olive harvest are over, raise up the press beams, and hang up the mill ropes, cables, and cords on the meat-rack or the beam. Put the stones, pins, levers, rollers, baskets, hampers, grass baskets, ladders, props, and everything which will be needed again, each in its proper place.

[69] Dolia olearia sic inuito. Amurca inpleto dies VII, facito ut amurcam cotidie suppleas. Postea amurcam eximito et afarcito. Ubi arebit, cummim pridie in aquam infundito, eam postridie diluito. Postea dolium calfacito minus, quam si picare velis, tepeat satis est; lenibus lignis facito calescat. Ubi temperate tepebit, tum cummim indito, postea linito. Si recte leveris, in dolium quinquagenarium cummim P. IIII satis erit.

[69] ¹ To steep new oil jars: Fill them with amurca, maintaining a constant level, for seven days; then pour off the amurca and let the jars dry. When the drying is finished soak gum in water a day ahead, and the next day dilute it. Then heat the jar to a lower temperature than if you were to pitch it — it is sufficient for it to be warm, so heat it over a slow fire. When it is moderately warm, pour in the gum and rub it in. Four pounds of gum are enough for a jar holding 50 quadrantals, if you apply it properly.

[70] Bubus medicamentum. Si morbum metues, sanis dato salis micas tres, folia laurea III, porri fibras III, ulpici spicas III, alii spicas III, turis grana tria, herbae Sabinae plantas tres, rutae folia tria, vitis albae caules III, fabulos albos III, carbones vivos III, vini S. III. Haec omnia sublimiter legi teri darique oportet. Ieiunus siet qui dabit. Per triduum de ea potione uni cuique bovi dato. Ita dividito, cum ter uni cuique dederis, omnem absumas, bosque ipsus et qui dabit facito ut uterque sublimiter stent. Vaso ligneo dato.

[70] ¹ Remedy for oxen: If you have reason to fear sickness, give the oxen before they get sick the following remedy: 3 grains of salt, 3 laurel leaves, 3 leek leaves, 3 spikes of leek, 3 of garlic, 3 grains of incense, 3 plants of Sabine herb, 3 leaves of rue, 3 stalks of bryony, 3 white beans, 3 live coals, and 3 pints of wine. You must gather, macerate, and administer all these while standing, and he who administers the remedy must be fasting. Administer to each ox for three days, and divide it in such a way that when you have administered three doses to each you will have used it all. See that the ox and the one who administers are both standing, and use a wooden vessel.

[71] *Bos si aegrotare coeperit, dato continuo ei unum ovum gallinaceum crudum; integrum facito devoret. Postridie caput ulpici conterito cum hemina vini facitoque ebibat. Sublimiter terat et vaso ligneo det, bosque ipsus et qui dabit sublimiter stet. Ieiunus ieiuno bovi dato.*

[71] ¹ If an ox begins to sicken, administer at once one hen's egg raw, and make him swallow it whole. The next day macerate a head of leek with a hemina of wine, and make him drink it all. Macerate while standing, and administer in a wooden vessel. Both the ox and the one who administers must stand, and both be fasting.

[72] *Boves ne pedes subterant, priusquam in viam quoquam ages, pice liquida cornua infima unguito.*

[72] ¹ To keep oxen from wearing down their feet, smear the bottom of their hoofs with melted pitch before you drive them anywhere on a road.

[73] *Ubi uvae variae coeperint fieri, bubus medicamentum dato quotannis, uti valeant. Pellem anguinam ubi videris, tollito et condito, ne quaeras cum opus siet. Eam pellem et far et salem et serpullum, haec omnia una conterito cum vino, dato bubus bibant omnibus. Per aestatem boves aquam bonam et liquidam bibant semper curato; ut valeant refert.*

[73] ¹ Give the cattle medicine every year when the grapes begin to change colour, to keep them well. When you see a snake skin, pick it up and put it away, so that you will not have to hunt for one when you need it. Macerate this skin, spelt, salt, and thyme with wine, and give it to all the cattle to drink. See that the cattle always have good, clear water to drink in summer-time; it is important for their health.

[74] Panem depsticum sic facito. Manus mortariumque bene lavato. Farinam in mortarium indito, aquae paulatim addito subigitoque pulchre. Ubi bene subegeris, defingito coquitoque sub testu.

[74] ¹ Recipe for kneaded bread: Wash your hands and a bowl thoroughly. Pour meal into the bowl, add water gradually, and knead thoroughly. When it is well kneaded, roll out and bake under a crock.

[75] Libum hoc modo facito. Casei P. II bene disterat in mortario. Ubi bene distriverit, farinae siligineae libram aut, si voles tenerius esse, selibrum similaginis eodem indito permiscetoque cum caseo bene. Ovum unum addito et una permisceto bene. Inde panem facito, folia subdito, in foco caldo sub testu coquito leniter.

[75] ¹ Recipe for libum: Bray 2 pounds of cheese thoroughly in a mortar; when it is thoroughly macerated, add 1 pound of wheat flour, or, if you wish the cake to be more dainty, ½ pound of fine flour, and mix thoroughly with the cheese. Add 1 egg, and work the whole well. Pat out a loaf, place on leaves, and bake slowly on a warm hearth under a crock.

[76] Placentam sic facito. Farinae siligineae L. II, unde solum facias, in tracta farinae L. IIII et alicae primae L. II. Alicam in aquam infundito. Ubi bene mollis erit, in mortarium purum indito siccatoque bene. Deinde manibus depsito. Ubi bene subactum erit, farinae L. IIII paulatim addito. Id utrumque tracta facito. In qualo, ubi arescant, conponito. Ubi arebunt, conponito puriter. Cum facies singula tracta, ubi depsueris, panno oleo uncto tangito et circumtergeto ungitoque. Ubi tracta erunt, focum, ubi coquas, calfacito bene et testum. Postea farinae L. II conspargito condepsitoque. Inde facito solum tenue. Casei ovilli P: XIII ne acidum et bene recens in aquam indito. Ibi macerato, aquam ter mutato. Inde eximito siccatoque bene paulatim manibus, siccum bene in mortarium inponito. Ubi omne caseum bene siccaveris, in mortarium purum manibus condepsito conminuitoque quam maxime. Deinde cribrum farinarium purum sumito caseumque per cribrum facito transeat in mortarium. Postea indito mellis boni P. IIII S. Id una bene commisceto cum caseo. Postea in tabula pura, quae pateat P. I, ibi balteum ponito, folia laurea uncta supponito, placentam fingito. Tracta singula in totum solum primum ponito, deinde de mortario tracta linito, tracta addito singulatim, item linito usque adeo, donec omne caseum cum melle abusus eris. In summum tracta singula indito, postea solum contrahito ornatoque focum + de ve primo + temperatoque, tunc placentam inponito, testo caldo

operito, pruna insuper et circum operito. Aperito, dum inspicias, bis aut ter. Ubi cocta erit, eximito et melle unguito. Haec erit placenta semodialis.

[76] ¹ Recipe for placenta: Materials, 2 pounds of wheat flour for the crust, 4 pounds of flour and 2 pounds of prime groats for the tracta. Soak the groats in water, and when it becomes quite soft pour into a clean bowl, drain well, and knead with the hand; when it is thoroughly kneaded, work in the 4 pounds of flour gradually. From this dough make the tracta, and spread them out in a basket where they can dry; and when they are dry arrange them evenly. Treat each tractum as follows: After kneading, brush them with an oiled cloth, wipe them all over and coat with oil. When the tracta are moulded, heat thoroughly the hearth where you are to bake, and the crock. Then moisten the 2 pounds of flour, knead, and make of it a thin lower crust. Soak 14 pounds of sheep's cheese (sweet and quite fresh) in water and macerate, changing the water three times. Take out a small quantity at a time, squeeze out the water thoroughly with the hands, and when it is quite dry place it in a bowl. When you have dried out the cheese completely, knead it in a clean bowl by hand, and make it as smooth as possible. Then take a clean flour sifter and force the cheese through it into the bowl. Add 4½ pounds of fine honey, and mix it thoroughly with the cheese. Spread the crust on a clean board, one foot wide, on oiled bay leaves, and form the placenta as follows: Place a first layer of separate tracta over the whole crust, cover it with the mixture from the bowl, add the tracta one by one, covering each layer until you have used up all the cheese and honey. On the top place single tracta, and then fold over the crust and prepare the hearth . . . then place the placenta, cover with a hot crock, and heap coals on top and around. See that it bakes thoroughly and slowly, uncovering two or three times to examine it. When it is done, remove and spread with honey. This will make a half-modius cake.

[77] *Spiram sic facito. Quantum voles pro ratione, ita uti placenta fit, eadem omnia facito, nisi alio modo fingito. In solo tracta cum melle oblinito bene. Inde tamquam restim tractes facito, ita inponito in solo, simplicibus completo bene arte. Cetera omnia, quasi placentam facias, facito coquitoque.*

[77] ¹ Recipe for spira: For the quantity desired do everything in proportion just as for the placenta, except that you shape it differently. Cover the tracta on the crust thickly with honey; then draw out like a rope and so place it on the crust, filling it closely with plain tracta. Do everything else as in the case of the placenta, and so bake.

[78] Scriblitam sic facito. In balteo tractis caseo ad eundem modum facito, uti placentam, sine melle.

[78] ¹ Recipe for scriblita: Follow the same directions with respect to crust, tracta, and cheese, as for the placenta, but without honey.

[79] Globos sic facito. Caseum cum alica ad eundem modum misceto. Inde quantos voles facere facito. In ahenum caldum unguen indito. Singulos aut binos coquito versatoque crebro duabus rudibus, coctos eximito, eos melle unguito, papaver infriato, ita ponito.

[79] ¹ Recipe for globi: Mix the cheese and spelt in the same way, sufficient to make the number desired. Pour lard into a hot copper vessel, and fry one or two at a time, turning them frequently with two rods, and remove when done. Spread with honey, sprinkle with poppy-seed, and serve.

SECTIONS 80-99

[80] Encytum ad eundem modum facito, uti globos, nisi calicem pertusum cavum habeat. Ita in unguen caldum fundito. Honestum quasi spiram facito idque duabus rudibus vorsato praestatoque. Item unguito coloratoque caldum ne nimium. Id cum melle aut cum mulso adponito.

[80] ¹ Make the encytum the same way as the globus, except that you use a vessel with a hole in the bottom; press it through this hole into boiling lard, and shape it like the spira, coiling and keeping it in place with two rods. Spread with honey and glaze while moderately warm. Serve with honey or with mulsum.

[81] Erneum sic facito tamquam placentam. Eadem omnia indito, quae in placentam. Id permisceto in alveo, id indito in irneam fictilem, eam demittito in aulam aheneam aquae calidae plenam. Ita coquito ad ignem. Ubi coctum erit, irneam confringito, ita ponito.

[81] ¹ The erneum is made in the same way as the placenta, and has the same ingredients. Mix it in a trough, pour into an earthenware jar, plunge into a copper pot full of hot water, and boil over the fire. When it is done, break the jar and serve.

[82] Spaeritam sic facito, ita uti spiram, nisi sic fingito. De tractis caseo melle spaeras pugnum altas facito. Eas in solo conponito densas, eodem modo conponito atque spiram itemque coquito.

[82] ¹ The spaerita is made in the same way as the spira, except that you shape it as follows: Mould balls as large as the fist, of tracta, cheese, and honey; arrange them on the crust as closely as in the spira, and bake in the same way.

[83] Votum pro bubus, uti valeant, sic facito. Marti Silvano in silva interdius in capita singula boum votum facito. Farris L. III et lardi P. IIII S et pulpae P. IIII S, visi S. III, id in unum vas liceto coicere, et vinum item in unum vas liceto coicere. Eam rem divinam vel servus vel liber licebit faciat. Ubi res divina facta erit, statim ibidem consumito. Mulier ad eam rem divinam ne adsit neve videat quo modo fiat. Hoc votum in annos singulos, si voles, licebit vovere.

[83] ¹ Perform the vow for the health of the cattle as follows: Make an offering to Mars Silvanus in the forest during the daytime for each head of cattle: 3 pounds of meal, 4½ pounds of bacon, 4½ pounds of meat, and 3 pints of wine. You may

place the viands in one vessel, and the wine likewise in one vessel. Either a slave or a free man may make this offering. After the ceremony is over, consume the offering on the spot at once. A woman may not take part in this offering or see how it is performed. You may vow the vow every year if you wish.

[84] Savillum hoc modo facito. Farinae selibram, casei P. II S una conmisceto quasi libum, mellis P. * et ovum unum. Catinum fictile oleo unguito. Ubi omnia bene conmiscueris, in catinum indito, catinum testo operito. Videto ut bene percoquas medium, ubi altissimum erit. Ubi coctum erit, catinum eximito, papaver infriato, sub testum subde paulisper, postea eximito. Ita pone cum catillo et lingua.

[84] ¹ Recipe for the savillum: Take $\frac{1}{2}$ pound of flour, $2\frac{1}{2}$ pounds of cheese, and mix together as for the libum; add $\frac{1}{4}$ pound of honey and ¹ egg. Grease an earthenware dish with oil. When you have mixed thoroughly, pour into a dish and cover with a crock. See that you bake the centre thoroughly, for it is deepest there. When it is done, remove the dish, cover with honey, sprinkle with poppyseed, place back under the crock for a while, then remove from the fire. Serve in the dish, with a spoon.

[85] Pultem Punicam sic coquito. Libram alicae in aquam indito, facito uti bene madeat. Id infundito in alveum purum, eo casei recentis P. III, mellis P. S, ovum unum, omnia una permisceto bene. Ita insipito in aulam novam.

[85] ¹ Recipe for Punic porridge: Soak a pound of groats in water until it is quite soft. Pour it into a clean bowl, add ³ pounds of fresh cheese, $\frac{1}{2}$ pound of honey, and ¹ egg, and mix the whole thoroughly; turn into a new pot.

[86] Graneam triticeam sic facito. Selibram tritici puri in mortarium purum indat, lavet bene corticemque deterat bene eluatque bene. Postea in aulam indat et aquam puram cocatque. Ubi coctum erit, lacte addat paulatim usque adeo, donec cremor crassus erit factus.

[86] ¹ Recipe for wheat pap: Pour $\frac{1}{2}$ pound of clean wheat into a clean bowl, wash well, remove the husk thoroughly, and clean well. Pour into a pot with pure water and boil. When done, add milk slowly until it makes a thick cream.

[87] Amulum sic facito. Siliginem purgato bene, postea in alvum indat, eo addat aquam bis in die. Die decimo aquam exsiccato, exurgeto bene, in alveo puro misceto bene, facito tamquam faex fiat. Id in linteum novum indito, exprimito cremorem in patinam novam aut in mortarium. Id omne ita facito et refricato

denuo. Eam patinam in sole ponito, arescat. Ubi arebit, in aulam novam indito, inde facito cum lacte coquat.

[87] ¹ Recipe for starch: Clean hard wheat thoroughly, pour into a trough, and add water twice a day. On the tenth day drain off the water, squeeze thoroughly, mix well in a clean tray until it is of the consistency of wine-dregs. Place some of this in a new linen bag and squeeze out the creamy substance into a new pan or bowl. Treat the whole mass in the same way, and knead again. Place the pan in the sun and let it dry; then place in a new bowl and cook with milk.

[88] Salem candidum sic facito. Amphoram defracto collo puram inpleto aquae purae, in sole ponito. Ibi fiscellam cum sale populari suspendito et quassato suppletoque identidem. Id aliquotiens in die cotidie facito, usque adeo donec sal desiverit tabescere biduum. Id signi erit: menam aridam vel ovum demittito; si natabit, ea muries erit, vel carnem vel caseos vel salsamenta quo condas. Eam muriam in labella vel in patinas in sole ponito. Usque adeo in sole habeto, donec concreverit. Inde flos salis fiet. Ubi nubilabitur et noctu sub tecto ponito; cotidie, cum sol erit, in sole ponito.

[88] ¹ Recipe for bleaching salt: Break off the neck of a clean amphora, fill with clear water, and place in the sun. Suspend in it a basket filled with common salt and shake and renew from time to time. Do this daily several times a day until the salt ceases to dissolve for two days. You can find when it is saturated by this test: place a small dried fish or an egg in it, and if it floats you have a brine strong enough to pickle meat or cheese or salted fish. Place this brine in flat vessels or in pans and expose it to sun. Keep it in the sun until it solidifies, and you will have a pure salt. In cloudy weather or at night put it under cover, but expose it to the sun every day when there is sunshine.

[89] Gallinas et anseres sic farcito. Gallinas teneras, quae primum parient, concludat. Polline vel farina hordeacia consparsa turundas faciat, eas in aquam intingat, in os indat, paulatim cotidie addat; ex gula consideret, quod satis sit. Bis in die farciat et meridie bibere dato; ne plus aqua sita siet horam unam. Eodem modo anserem alito, nisi prius dato bibere et bis in die, bis escam.

[89] ¹ To cram hens or geese: Shut up young hens which are beginning to lay; make pellets of moist flour or barley-meal, soak in water, and push into the mouth. Increase the amount daily, judging from the appetite the amount that is sufficient. Cram twice a day, and give water at noon, but do not place water

before them for more than one hour. Feed a goose the same way, except that you let it drink first, and give water and food twice a day.

[90] Palumbum recentem sic farcito. Ubi pressus erit, ei fabam coctam tostam primum dato, ex ore in eius os inflato, item aquam. Hoc dies VII facito. Postea fabam fresam puram et far purum facito et fabae tertia pars ut infervescat, tum far insipiat, puriter facito et coquito bene. Id ubi excluderis, depsito bene, oleo manum unguito, primum pusillum, postea magis deposes, oleo tangito depsitoque, dum poterit facere turundas. Ex aqua dato, escam temperato.

[90] ¹ To cram squabs: After catching the squab feed it first boiled and toasted beans, blowing them from your mouth into its mouth, and water the same way; do this for seven days. Then clean crushed beans and spelt; let one-third the quantity of beans come to a boil, then pour in the spelt, keeping it clean, and boil thoroughly. When you have turned it out of the pot, knead it thoroughly, after greasing the hand with oil — a small quantity first, then more — greasing and kneading until you can make pellets. Feed the food in moderate quantities, after soaking it.

[91] Aream sic facito. Locum ubi facies confodito. Postea amurca conspargito bene sinitoque conbibat. Postea conminuito glebas bene. Deinde coaequato et paviculis verberato. Postea denuo amurca conspargito sinitoque arescat. Si ita feceris, neque formicae nocebunt neque herbae nascentur.

[91] ¹ To make a threshing-floor: Turn the soil for the floor and pour amurca over it thickly, letting it soak in. Then break up the clods carefully, level the ground, and pack it with rammers; then cover again with amurca and let it dry. If you build in this way the ants will not injure it, and weeds will not grow.

[92] Frumento ne noceat curculio neu mures tangant. Lutum de amurca facito, palearum paulum addito, sinito macerescant bene et subigito bene; eo granarium totum oblinito crasso luto. Postea conspargito amurca omne quod lutaveris. Ubi aruerit, eo frumentum refrigeratum condito; curculio non nocebit.

[92] ¹ To keep weevils and mice from injuring grain, make a slime of amurca with a little chaff added, leaving it quite thin and working thoroughly. Cover the whole granary with the thick slime, and then add a coat of amurca over the whole. After it has dried, store cooled grain there, and the weevils will not injure it.

[93] Olea si fructum non feret, ablaqueato. Postea stramenta circumponito. Postea amurcam cum aqua conmisceto aequas partes. Deinde ad oleam circumfundito. Ad arborem maxumam urnam conmixti sat est; ad minores arbores pro ratione indito. Et idem hoc si facies ad arbores feraces, eae quoque meliores fient. Ad eas stramenta ne addideris.

[93] ¹ If an olive tree is sterile, trench it and wrap it with straw. Make a mixture of equal parts of amurca and water and pour it around the tree; an urna is sufficient for a large tree, and a proportionate quantity for the smaller trees. If you do the same thing for bearing trees they will be even more productive; do not wrap these with straw.

[94] Fici uti grossos teneant, facito omnia quo modo oleae, et hoc amplius, cum ver adpetet, terram adaggerato bene. Si ita feceris, et grossi non cadent et fici scabrae non fient et multo feraciores erunt.

[94] ¹ To make fig trees retain their fruit, do everything as for the olive, and in addition bank them deep in early spring. If you do this the fruit will not drop prematurely, the trees will not be scaly, and they will be much more productive.

[95] Convolvulus in vinia ne siet. Amurcam condito, puram bene facito, in vas aheneum indito congios II. Postea igni leni coquito, rudicula agitato crebro usque adeo, dum fiat tam crassum quam mel. Postea sumito bituminis tertiarium et sulphuris quartarium. Conterito in mortario seorsum utrumque. Postea infriato quam minutissime in amurcam caldam et simul rudicula misceto et denuo coquito sub dio caelo. Nam si in tecto coquas, cum bitumen et sulphur additum est, excandescet. Ubi erit tam crassum quam viscum, sinito frigescat. Hoc vitem circum caput et sub brachia unguito; convolvus non nascetur.

[95] ¹ To keep caterpillars off the vines: Strain stored amurca and pour ² congii into a copper vessel; heat over a gentle fire, stirring constantly with a stick until it reaches the consistency of honey. Take one-third sextarius of bitumen, and one-fourth sextarius of sulphur, pulverize each in a mortar separately, and add in very small quantities to the warm amurca, at the same time stirring with a stick, and let it boil again in the open; for if you boil it under cover it will blaze up when the mixture of bitumen and sulphur is added. When it reaches the consistency of glue let it cool. Apply this around the trunk and under the branches, and caterpillars will not appear.

[96] Oves ne scabrae fiant. Amurcam condito, puram bene facito, aquam in qua lupinus deferverit et faecem de vino bono, inter se omnia conmisceto pariter.

Postea cum detonderis, unguito totas, sinito biduum aut triduum consudent. Deinde lavito in mari; si aquam marinam non habebis, facito aquam salsam, ea lavito. Si haec sic feceris, neque scabrae fient et lanae plus et meliorem habebunt, et ricini non erunt molesti. Eodem in omnes quadrupes utito, si scabrae erunt.

[96] ¹ To keep scab from sheep; Take equal parts of old strained amurca, water in which lupines have been boiled, and dregs of good wine, and mix all together. After shearing, smear the whole body with this, and let them sweat two or three days. Then wash them in the sea, or, if you have no sea-water, make a brine and wash them in it. If you do this as directed, they will not have the scab, will bear more wool and of better quality, and ticks will not bother them. Use the same remedy for all quadrupeds if they have the scab.

[97] Amurca decocta axem unguito et lora et calciamenta et coria; omnia meliora facies.

[97] ¹ Grease the axle, belts, shoes, and hides with boiled amurca; you will make them all better.

[98] Vestimenta ne tiniae tangant. Amurcam decoquito ad dimidium, ea unguito fundum arcae et extrinsecus et pedes et angulos. Ubi ea adaruerit, vestimenta condito. Si ita feceris, tiniae non nocebunt. Et item ligneam supellectilem omnem si ungues, non putescet, et cum ea terseris, splendidior fiet. Item ahenea omnia unguito, sed prius extergeto bene. Postea cum unxeris, cum uti voles, extergeto. Splendidior erit, et aerugo non erit molesta.

[98] ¹ To protect clothing from moths: Boil amurca down to one-half its volume and rub it over the bottom, the outside, the feet, and the corners of the chest. After it is dry, store the clothing and the moths will not attack it. Also, if you rub it over the whole surface of wooden furniture it will prevent decay, and the article when rubbed will have a higher polish. You may also use it as a polish for any kind of copper vessel, after cleaning the article thoroughly. After applying the amurca, rub the vessel when it is to be used; it will have a lustre, and will be protected from rust.

[99] Fici aridae si voles uti integrae sint, in vas fictile condito. Id amurca decocta unguito.

[99] ¹ If you wish to keep dried figs from spoiling, place them in an earthenware vessel and coat this with boiled amurca.

SECTIONS 100-119

[100] Oleum si in metretam novam inditurus eris, amurca, ita uti est cruda, prius conluito agitatoque diu, ut bene conbibat. Id si feceris, metreta oleum non bibet, et oleum melius faciet, et ipsa metreta firmior erit.

[100] 1 If you intend to store oil in a new jar, first wash down the jar with crude amurca, shaking for a long time so that it may soak up the amurca thoroughly. If you do this, the jar will not soak up the oil, it will make the oil better, and the jar itself will be stronger.

[101] Virgas murteas si voles cum bacis servare et item aliud genus quod vis, et si ramos ficulneos voles cum foliis, inter se alligato, fasciculos facito, eos in amurcam demittito, supra stet amurca facito. Sed ea quae demissurus eris sumito paulo acerbiora. Vas, quo condideris, oblinito plane.

[101] 1 To preserve myrtle or any other twigs with the berries, or fig branches with the leaves, tie them together into bundles and plunge them into amurca until they are covered. But the fruit to be preserved should be picked a little before it is ripe, and the vessel in which it is stored should be sealed tight.

[102] Si bovem aut aliam quamvis quadrupedem serpens momorderit, melanthi acetabulum, quod medici vocant zmurnaeum, conterito in vini veteris hemina: id per nares indito et ad ipsum morsum stercus suillum apponito. Et idem hoc, si usus evenerit, homini facito.

[102] 1 When a serpent has bitten an ox or any other quadruped, macerate an acetabulum of fennel flower, which the physicians call smyrnaeum, in a hemina of old wine. Administer through the nostrils, and apply swine's dung to the wound itself. Treat a person in the same way if occasion arises.

[103] Boves uti valeant et curati bene sint, et qui fastidient cibum, uti magis cupide adpetant, pabulum quod dabis amurca spargito; primo pabulum, dum consuescant, postea magis, et dato rarerer bibere conmixtam cum aqua aequabiliter. Quarto quinto quoque die hoc sic facies. Ita boves et corpore curatiores erunt, et morbus aberit.

[103] 1 To keep cattle well and strong, and to increase the appetite of those which are off their feed, sprinkle the feed which you give with amurca. Feed in small quantities at first to let them grow accustomed to it, and then increase. Give them

less often a draught of equal parts of amurca and water. Do this every fourth or fifth day. This treatment will keep them in better condition, disease will stay away from them.

[104] Vinum familiae per hiemem qui utatur. Musti Q. X in dolium indito, aceti acris Q. II eodem infundito, sapae Q. II, aquae dulcis Q. L. Haec rude misceto ter in die dies quinque continuos. Eo addito aquae marinae veteris sextarios LXIII et operculum in dolium inponito et oblinito post dies X. Hoc vinum durabit tibi usque ad solstitium. Siquid superfuerit post solstitium, acetum acerrimum et pulcherrimum erit.

[104] 1 Wine for the hands to drink through the winter: Pour into a jar 10 quadrantals of must, 2 quadrantals of sharp vinegar, 2 quadrantals of boiled must, 50 quadrantals of fresh water. Stir with a stick thrice a day for five consecutive days. Then add 64 sextarii of old sea-water, cover the jar, and seal ten days later. This wine will last you until the summer solstice; whatever is left over after the solstice will be a very sharp and excellent vinegar.

[105] Qui ager longe a mari aderit, ibi vinum Graecum sic facito. Musti Q. XX in aheneum aut plumbeum infundito, ignem subdito. Ubi bullabit vinum, ignem subducito. Ubi id vinum refrixerit, in dolium quadragenarium infundito. Seorsum vas aquae dulcis Q. I infundito, salis M I, sinito muriam fieri. Ubi muria facta erit, eodem in dolium infundito. Schoenum et calamum in pila contundito, quod satis siet, sextarium unum eodem in dolium infundito, ut odoratum siet. Post dies XXX dolium oblinito. Ad ver diffundito in amphoras. Biennium in sole sinito positum esse. Deinde in tectum conferto. Hoc vinum deterius non erit quam Coum.

[105] 1 If your place is far from the sea, you may use this recipe for Greek wine: Pour 20 quadrantals of must into a copper or lead boiler and heat. As soon as the wine boils, remove the fire; and when the wine has cooled, pour into a jar holding 40 quadrantals. Pour 1 modius of salt and 1 quadrantal of fresh water into a separate vessel, and let a brine be made; and when the brine is made pour it into the jar. Pound rush and calamus in a mortar to make a sufficient quantity, and pour 1 sextarius into the jar to give it an odour. Thirty days later seal the jar, and rack off into amphorae in the spring. Let it stand for two years in the sun, then bring it under cover. This wine will not be inferior to the Coan.

[106] Aquae marinae concinnatio. Aquae marinae Q. I ex alto sumito, quo aqua dulcis non accedit. Sesquibram salis frigito, eodem indito et rude misceto usque adeo, donec ovum gallinaceum coctum natabit, desinito miscere. Eodem vini veteris vel Aminnii vel miscelli albi congios II infundito, misceto probe. Postea

vas picatum confundito et oblinito. Siquid plus voles aquae marinae concinnare, pro portione ea omnia facito.

[106] ¹ Preparation of sea-water: Take ¹ quadrantal of water from the deep sea where no fresh water comes; parch $1\frac{1}{2}$ pounds of salt, add it, and stir with a rod until a boiled hen's egg will float; then stop the stirring. Add ² congi of old wine, either Aminnian or ordinary white, and after mixing thoroughly pour into a pitched jar and seal. If you wish to make a larger quantity of sea-water, use a proportionate amount of the same materials.

[107] Quo labra doliorum circumlinas, ut bene odorata sint et nequid viti in vinum accedat. Sapaе congios VI quam optimaе infundito in aheneum aut in plumbeum et iris aridaе contusae heminaм et sertam Campanicaм P. V bene odorataм una cum iri contundas quam minutissime, per cribrum cernas et una cum sapa coquas sarmentis et levi flamma. Commoveto, videto ne aduras. Usque coquito, dum dimidium excoquas. Ubi refrixerit, confundito in vas picatum bene odoratum et oblinito et utito in labra doliorum.

[107] ¹ To coat the brim of wine jars, so as to give a good odour and to keep any blemish from the wine: Put ⁶ congi of the best boiled must in a copper or lead vessel; take a hemina of dry crushed iris and ⁵ pounds of fragrant Campanian melilot, grind very fine with the iris, and pass through a sieve into the must. Boil the whole over a slow fire of faggots, stirring constantly to prevent scorching; continue the boiling, until you have boiled off a half. When it has cooled, pour into a sweet smelling jar covered with pitch, seal, and use for the brims of wine jars.

[108] Vinum si voles experiri duraturum sit necne, polentam grandem dimidium acetabuli in caliculum novum indito et vini sextarium de eo vino quod voles experiri eodem infundito et inponito in carbones; facito bis aut ter inferveat. Tum id percolato, polentam abicito. Vinum ponito sub dio. Postridie mane gustato. Si id sapiet, quod in dolio est, scito duraturum; si subacidum erit, non durabit.

[108] ¹ If you wish to determine whether wine will keep or not, place in a new vessel half an acetabulum of large pearl barley and a sextarius of the wine you wish to test; place it on the coals and bring it to a boil two or three times; then strain, throw away the barley, and place the wine in the open. Taste it the next morning. If it is sweet, you may know that the wine in the jar will keep; but if it is slightly acid it will not.

[109] Vinum asperum quod erit lene et suave si voles facere, sic facito. De ervo farinam facito libras IIII et vini cyathos IIII conspargito sapa. Postea facito laterculos. Sinito conbibant noctem et diem. Postea commisceto cum eo vino in dolio et oblitino post dies LX. Id vinum erit lene et suave et bono colore et bene odoratum.

[109] ¹ To make sharp wine mild and sweet: Make 4 pounds of flour from vetch, and mix 4 cyathi of wine with boiled must; make into small bricks and let them soak for a night and a day; then dissolve with the wine in the jar, and seal sixty days later. The wine will be mild and sweet, of good colour and of good odour.

[110] Odorem deteriolem demere vino. Testam de tegula crassam puram calfacito in igni bene. Ubi calebit, eam picato, resticula alligato, testam demittito in dolium infimum leniter, sinito biduum oblitum dolium. Si demptus erit odor deterior, id optime; si non, saepius facito, usque dum odorem malum dempseris.

[110] ¹ To remove a bad odour from wine: Heat a thick clean piece of roofing-tile thoroughly in the fire. When it is hot coat it with pitch, attach a string, lower it gently to the bottom of the jar, and leave the jar sealed for two days. If the bad odour is removed the first time, that will be best; if not, repeat until the bad odour is removed.

[111] Si voles scire, in vinum aqua addita sit necne, vasculum facito de materia hederacia. Vinum id, quod putabis aquam habere, eo demittito. Si habebit aquam, vinum effluet, aqua manebit. Nam non continet vinum vas hederaceum.

[111] ¹ If you wish to determine whether wine has been watered or not: Make a vessel of ivy wood and put in it some of the wine you think has water in it. If it contains water, the wine will soak through and the water will remain, for a vessel of ivy wood will not hold wine.

[112] Vinum Coum si voles facere, aquam ex alto marinam sumito mari tranquillo, cum ventus non erit, dies LXX ante vindemiam, quo aqua dulcis non perveniet. Ubi hauseris de mari, in dolium infundito, nolito implere, quadrantalibus quinque minus sit quam plenum. Operculum inponito, relinquito qua interspiret. Ubi dies XXX praeterierint, transfundito in alterum dolium puriter et leniter, relinquito in imo quod desiderit. Post dies XX in alterum dolium item transfundito; ita relinquito usque ad vindemiam. Unde vinum Coum facere voles, uvas relinquito in vinea, sinito bene coquantur, et ubi pluerit et siccaverit, tum deligito et ponito in sole biduum aut triduum sub dio, si pluviae non erunt. Si pluvia erit, in tecto cratibus conponito, et siqua acina corrupta erunt, depurgato. Tum sumito aquam

marinam Q. S. S. E, in dolium quinquagenarium infundito aquae marinae Q. X. Tum acina de uvis miscellis decarpito de scopione in idem dolium, usque dum impleveris. Manu conprimito acina, ut conbibant aquam marinam. Ubi impleveris dolium, operculo operito, relinquito qua interspiret. Ubi triduum praeterierit, eximito de dolio et calcato in torculario et id vinum condito in dolia lauta et pura et sicca.

[112] ¹ Recipe for Coan wine: Take sea-water at a distance from the shore, where fresh water does not come, when the sea is calm and no wind is blowing, seventy days before vintage. After taking it from the sea, pour into a jar, filling it not fully but to within five quadrantals of the top. Cover the jar, leaving space for air, and thirty days later pour it slowly and carefully into another jar, leaving the sediment in the bottom. Twenty days later pour in the same way into a third jar, and leave until vintage. Allow the grapes from which you intend to make the Coan wine to remain on the vine, let them ripen thoroughly, and pick them when they have dried after a rain. Place them in the sun for two days, or in the open for three days, unless it is raining, in which case put them under cover in baskets; clear out any berries which have rotted. Then take the above-mentioned sea-water and pour ¹⁰ quadrantals into a jar holding 50; then pick the berries of ordinary grapes from the stem into the jar until you have filled it. Press the berries with the hand so that they may soak in the sea-water. When the jar is full, cover it, leaving space for air, and three days later remove the grapes from the jar, tread out in the pressing-room, and store the wine in jars which have been washed clean and dried.

[113] Ut odoratum bene sit, sic facito. Sumito testam picatam, eo prunam lenem indito, suffito sarta et schoeno et palma, quam habent unguentarii, ponito in dolio et operito, ne odor exeat, antequam vinum indas. Hoc facito pridie quam vinum infundere voles. De lacu quam primum vinum in dolia indito, sinito dies XV aperta, antequam oblinas, relinquito qua interspiret, postea oblinito. Post dies XL diffundito in amphoras et addito in singulas amphoras sapae sextarium unum. Amphoras nolito implere nimium, ansarum infimarum fini, et amphoras in sole ponito, ubi herba non siet, et amphoras operito, ne aqua accedat, et ne plus quadriennium in sole siveris. Post quadriennium in cuneum conponito et instipato.

[113] ¹ To impart a sweet aroma: Take a tile covered with pitch, spread over it warm ashes, and cover with aromatic herbs, rush and the palm which the perfumers keep, place in a jar and cover, so that the odour will not escape before you pour in the wine. Do this the day before you wish to pour in the wine. Pour

the wine into the jars from the vat immediately, let them stand covered for fifteen days before sealing, leaving space for air, and then seal. Forty days later pour off into amphorae, and add one sextarius of boiled must to the amphora. Do not fill the amphorae higher than the bottom of the handles, and place them in the sun where there is no grass. Cover the amphorae so that water cannot enter, and let them stand in the sun not more than four years; four years later, arrange them in a wedge, and pack them closely.

[114] Vinum si voles concinnare, ut alvum bonam faciat, secundum vindemiam, ubi vites ablaqueantur, quantum putabis ei rei satis esse vini, tot vites ablaqueato et signato. Earum radices circumsecato et purgato. Veratri atrii radices contundito in pila, eas radices dato circum vitem et stercus vetus et cinerem veterem et duas partes terrae circumdato radices vitis. Terram insuper inicito. Hoc vinum seorsum legito. Si voles servare in vetustatem ad alvum movendam, servato, ne conmiscas cum etero vino. De eo vino cyathum sumito et misceto aqua et bibito ante cenam. Sine periculo alvum movebit.

[114] ¹ If you wish to make a laxative wine: After vintage, when the vines are trenched, expose the roots of as many vines as you think you will need for the purpose and mark them; isolate and clear the roots. Pound roots of black hellebore in the mortar, and apply around the vines. Cover the roots with old manure, old ashes, and two parts of earth, and cover the whole with earth. Gather these grapes separately; if you wish to keep the wine for some time as a laxative, do not mix it with the other wine. Take a cyathus of this wine, dilute it with water, and drink it before dinner; it will move the bowels with no bad results.

[115] In vinum mustum veratri atrii manipulum coicito in amphoram. Ubi satis efferverit, de vino manipulum eicito. Id vinum servato ad alvum movendam. Vinum ad alvum movendam concinnare. Vites cum ablaqueabuntur, signato rubrica, ne admisceas cum cetero vino. Tris fasciculos veratri atrii circumponito circum radices et terram insuper inicito. Per vindemiam de iis vitibus quod delegeris, seorsum servato, cyathum in ceteram potionem indito. Alvum movebit et postridie pepurgabit sine periculo.

[115] ¹ Throw in a handful of black hellebore to the amphora of must, and when the fermentation is complete, remove the hellebore from the wine; save this wine for a laxative.

To prepare a laxative wine: When the vines are trenched, mark with red chalk so that you will not mix with the rest of the wine; place three bundles of black

hellebore around the roots and cover with earth. Keep the yield from these vines separate during the vintage. Put a cyathus into another drink; it will move the bowels and the next day give a thorough purging without danger.

[116] Lentim quo modo servare oporteat. Laserpicium aceto diluito, permisceto lentim aceto laserpicato et ponito in sole. Postea lentim oleo perfricato, sinito arescat. Ita integra servabitur recte.

[116] 1 To preserve lentils: Infuse asafetida in vinegar, soak the lentils in the infusion of vinegar and asafetida, and expose to the sun; then rub the lentils with oil, allow them to dry, and they will keep quite sound.

[117] Oleae albae quo modo condiantur. Antequam nigrae fiant, contundantur et in aquam deiciantur. Crebro aquam mutet. Deinde, ubi satis maceratae erunt, exprimat et in acetum coiciat et oleum addat, salis selibram in modium olearum. Feniculum et lentiscum seorsum condat in acetum. Si una admiscere voles, cito utito. In orculam calcato. Manibus siccis, cum uti voles, sumito.

[117] 1 To season green olives: Bruise the olives before they become black and throw them into water. Change the water often, and when they are well soaked press out and throw into vinegar; add oil, and a half pound of salt to the modius of olives. Make a dressing of fennel and mastic steeped in vinegar, using a separate vessel. If you wish to mix them together they must be served at once. Press them out into an earthenware vessel and take them out with dry hands when you wish to serve them.

[118] Oleam albam, quam secundum vindemiam uti voles, sic condito. Musti tantumdem addito, quantum aceti. Cetera item condito ita, uti supra scriptum est.

[118] 1 To season green olives which you wish to use after vintage, add as much must as vinegar; for the rest, season them as stated above.

[119] Epityrum album nigrum variumque sic facito. Ex oleis albis nigris variisque nucleos eicito. Sic condito. Concido ipsas, addito oleum, acetum coriandrum, cuminum feniculum rutam, mentam. In orcuam condito, oleum supra siet. Ita utito.

[119] 1 Recipe for a confection of green, ripe, and mottled olives. Remove the stones from green, ripe, and mottled olives, and season as follows: chop the flesh, and add oil, vinegar, coriander, cummin, fennel, rue, and mint. Cover with oil in an earthen dish, and serve.

SECTIONS 120-139

[120] Mustum si voles totum annum habere, in amphoram mustum indito et corticem oppicato, demittito in piscinam. Post dies XXX eximito. Totum annum mustum erit.

[120] ¹ If you wish to keep grape juice through the whole year, put the grape juice in an amphora, seal the stopper with pitch, and sink in the pond. Take it out after thirty days; it will remain sweet the whole year.

[121] Mustaceos sic facito. Farinae siligineae modium unum musto conspargito. Anesum, cuminum, adipis P. II, casei libram, et de virga lauri deradito, eodem addito, et ubi definxeris, lauri folia subtus addito, cum coques.

[121] ¹ Recipe for must cake: Moisten ¹ modius of wheat flour with must; add anise, cummin, ² pounds of lard, ¹ pound of cheese, and the bark of a laurel twig. When you have made them into cakes, put bay leaves under them, and bake.

[122] Vinum concinnare, si lotium difficilius transibit. Capreidam vel iunipirum contundito in pila, libram indito, in duobus congiis vini veteris in vase aheneo vel in plumbeo defervefacito. Ubi refrixerit, in lagonam indito. Id mane ieiunus sumito cyathum; proderit.

[122] ¹ To blend a wine as a remedy for retention of urine: Macerate capreida or Jupiter, add a pound of it, and boil in ² congi of old wine in a copper or lead vessel. After it cools, pour into a bottle. Take a cyathus in the morning before eating; it will prove beneficial.

[123] Vinum ad isc[h]iacos sic facito. De iunipiro materiem semipedem crassam concidito minutim. Eam infervefacito cum congio vini veteris. Ubi refrixerit, in lagonam confundito et postea id utito cyathum mane ieiunus; proderit.

[123] ¹ To blend a wine as a remedy for gout: Cut into small chips a piece of juniper wood a half-foot thick, boil with a congius of old wine, and after it cools pour into a bottle. Take a cyathus in the morning before eating; it will prove beneficial.

[124] Canes interdiu clausos esse oportet, ut noctu acriores et vigilantiores sint.

[124] ¹ Dogs should be chained up during the day, so that they may be keener and more watchful at night.

[125] Vinum murteum sic facito. Murtam nigram arfacito in umbra. Ubi iam passa erit, servato ad vindemiam, in urnam musti contundito murtae semodium, id oblinito. Id est ad alvum crudam et ad lateris dolorem et ad coeliacum.

[125] ¹ Recipe for myrtle wine: Dry out black myrtle in the shade, and when dried keep it until vintage. Macerate a half-modius of myrtle into an urna of must and seal it. When the must has ceased to ferment remove the myrtle. This is a remedy for indigestion, for pain in the side, and for colic.

[126] Ad tormina, et si alvus non consistet, et si taeniae et lumbrici molesti erunt. XXX mala Punica acerba sumito, contundito, indito in urceum et vini nigri austeri congios III. Vas oblinito. Post dies XXX aperito et utito; ieiunus heminam bibito.

[126] ¹ For gripes, for loose bowels, for tapeworms and stomach-worms, if troublesome: Take 30 acid pomegranates, crush, place in a jar with 3 congii of strong black wine, and seal the vessel. Thirty days later open and use. Drink a hemina before eating.

[127] Ad dyspepsiam et stranguriam mederi. Malum Punicum ubi florebit, conligito, tris minas in amphoram infundito, vini Q. I veteris addito et feniculi radicem puram contusam minam. Oblinito amphoram et post dies XXX aperito et utito. Ubi voles cibum concoquere et lotium facere, hinc bibito quantum voles sine periculo. Idem vinum taenias perpurgat et lumbricos, si sic concinnes. Incenatum iubeto esse. Postridie turis drachmam unam conterito et mel coctum drachmam unam et vini sextarium organiti. Dato ieiuno, et puero pro aetate triobolum et vini hemina. Supra pilam inscendat et saliat decies et deambulet.

[127] ¹ Remedy for dyspepsia and strangury: Gather pomegranate blossoms when they open, and place 3 minae of them in an amphora. Add one quadrantal of old wine and a mina of clean crushed root of fennel; seal the vessel and thirty days later open and use. You may drink this as freely as you wish without risk, when you wish to digest your food and to urinate. The same wine will clear out tapeworms and stomach-worms if it is blended in this way. Bid the patient refrain from eating in the evening, and the next morning macerate 1 drachm of pulverized incense, 1 drachm of boiled honey, and a sextarius of wine of wild marjoram. Administer to him before he eats, and, for a child, according to age, a

triobolus^o and a hemina. Have him climb a pillar and jump down ten times, and walk about.

[128] Habitationem delutare. Terram quam maxime cretosam vel rubricosam, eo amurcam infundito, paleas indito. Sinito quadriduum fracescat. Ubi bene fracuerit, rutro concidito. Ubi concideris, delutato. Ita neque aspergo nocebit, neque mures cava facient, neque herba nascetur, neque lutamenta scindent se.

[128] 1 To plaster a dwelling: Take very chalky or red earth, pour amurca over it, and add chopped straw; let it soften for four days, and when it has softened thoroughly, work up with a spade; and when you have worked it up, plaster. With this treatment, the moisture will not injure the walls, nor the mice burrow in them, nor weeds grow, nor the plaster crack.

[129] Aream, ubi frumentum teratur, sic facito. Confodiatur minute terra, amurca bene conspargatur et combibat quam plurimum. Conminuito terram et cylindro aut pavicula coaequato. Ubi coaequata erit, neque formicae molestae erunt, et cum pluerit, lutum non erit.

[129] 1 To make a floor for threshing grain: Break the ground fine, soak thoroughly with amurca and let it absorb as much as possible; then pulverize the dirt and level with a roller or rammer. When it is levelled the ants will not be troublesome, and there will be no mud when it rains.

[130] Codicillos oleagineos et cetera ligna amurca cruda perspargito et in sole ponito, perbibant bene. Ita neque fumosa erunt et ardebunt bene.

[130] 1 Wet olive logs and other firewood with crude amurca and expose them to the sun so that they will absorb it thoroughly; with this treatment, they will not be smoky, but will burn well.

[131] Piro florente dapem pro bubus facito. Postea verno arare incipito. Ea loca primum arato, quae rudecta harenosaeque erunt. Postea uti quaeque gravissima et aquosissima erunt, ita postremo arato.

[131] 1 Make the offering for the oxen when the pear trees bloom; then begin the spring ploughing. Plough first the spots which are dry and sandy. Then, the heavier and wetter the spots are, the later they should be ploughed.

[132] Dapem hoc modo fieri oportet. Iovi dapali culignam vini quantam vis polluceto. Eo die feriae bubus et bubulcis et qui dapem facient. Cum pollucere oportebit, sic facies: "Iuppiter dapalis, quod tibi fieri oportet in domo familia

mea culignam vini dapi, eius rei ergo macte hac illace dape polluenda esto.” Manus interluito postea vinum sumito: “Iuppiter dapalis, macte istace dape polluenda esto, macte vino inferio esto.” Vestae, si voles, dato. Daps Iovi assaria pecuina urna vini. Iovi caste profanato sua contagione. Postea dape facta serito milium, panicum, alium, lentim.

[132] ¹ The offering is to be made in this way: Offer to Jupiter Dapalis a cup of wine of any size you wish, observing the day as a holiday for the oxen, the teamsters, and those who make the offering. In making the offering use this formula: “Jupiter Dapalis, forasmuch as it is fitting that a cup of wine be offered thee, in my house and in the midst of my people, for they sacred feast; and to that end, be thou honoured by the offering of this food.” Wash the hands, then take the wine, and say: “Jupiter Dapalis, be thou honoured by the offering of thy feast, and be thou honoured by the wine placed before thee.” You may make an offering to Vesta if you wish. Present it to Jupiter religiously, in the fitting form. The feast to Jupiter consists of roasted meat and an urn of wine. After the offering is made plant millet, panic grass, garlic, and lentils.

[133] Propagatio pomorum ceterarumque arborum. Arboribus abs terra pulli qui nati erunt, eos in terram deprimito, extollito, uti radicem capere possint. Inde, ubi tempus erit, effodito seritoque recte. Ficum, oleam, malum Punicum, mala strutea, cotonea aliaque mala omnia, laurum Cypriam, Delphicam, prunum, murtum coniugulum et murtum album et nigrum, nuces Abellanas, Praenestinas, platanum haec omnia genera a capitibus propagari eximique ad hunc modum oportebit. Quae diligentius seri voles, in calicibus seri oportet. In arboribus radices uti capiant, calicem pertusum sumito tibi aut quasillum; per eum ramulum trasserito; eum quasillum terra inpleto caecatoque, in arbore relinquito. Ubi bimum erit, ramum tenerum infra praecidito, cum quasillo serito. Eo modo quod vis genus arborum facere poteris uti radices bene habeant. Item vitem in quasillum propagato terraque bene operito, anno post praecidito, cum qualo serito.

[133] ¹ To layer fruit and other trees: Press back into the ground the scions which spring up from the ground, but raise their tips out, so that they will take root; dig up at the proper time and transplant vertically. In this way you should propagate from the crown and transplant fig, olive, pomegranate, quince, wild quince, and all other fruits, Cyprian and Delphic laurel, plum, conjuglan myrtle, as well as white and black myrtle, Abellan and Praenestine nuts, and plane trees. Those which you wish to have planted more carefully should be planted in pots. To make them take root while on the tree, take a pot perforated at the bottom or a

basket, run the shoot through it, fill the basket with earth, pack it, and leave it on the tree. When it is two years old cut off the tender branch below and plant along with the basket. By this method you can make any variety of tree take root firmly. Vines may also be layered by thrusting them through a basket, packing firmly with earth, cutting a year later, and planting along with the basket.

[134] Priusquam messim facies, porcam praecidaneam hoc modo fieri oportet. Cereri porca praecidanea porco femina, priusquam hasce fruges condas, far, triticum, hordeum, fabam, semen rapicium. Ture vino Iano Iovi Iunoni praefato, priusquam porcum feminam immolabis. Iano struem [c]ommoveto sic: "Iane pater, te hac strue [c]ommoventa bonas preces precor, uti sies volens propitius mihi liberisque meis domo familiaeque meae". Fertum Iovi [c]ommoveto et mactato sic: "Iuppiter, te hoc fertu obmovendo bonas preces precor uti sies volens propitius mihi liberisque meis domo familiaeque meaemactus hoc fertu". Postea Iano vinum dato sic: "Iane pater, uti te strue [c]ommoventa bonas preces bene precatus sum, eiusdem rei ergo macte vino inferio esto." Postea porcam praecidaneam immolato. Ubi exta prosecta erunt, Iano struem ommoveto mactatoque item, uti prius obmoveris. Iovi fertum obmoveto mactatoque item, uti prius feceris. Item Iano vinum dato et Iovi vinum dato, item uti prius datum ob struem obmovendam et fertum libandum. Postea Cereri exta et vinum dato.

[134] 1 Before harvest the sacrifice of the porca praecidanea should be offered in this manner: Offer a sow as porca praecidanea to Ceres before harvesting spelt, wheat, barley, beans, and rape seed; and address a prayer, with incense and wine, to Janus, Jupiter, and Juno, before offering the sow. Make an offering of cakes to Janus, with these words: "Father Janus, in offering these cakes, I humbly beg that thou wilt be gracious and merciful to me and my children, my house and my household." Then make an offering of cake to Jupiter with these words: "In offering this cake, O Jupiter I humbly beg that thou, pleased by this offering, wilt be gracious and merciful to me and my children, my house and my household." Then present the wine to Janus, saying: "Father Janus, as I prayed humbly in offering the cakes, so wilt thou to the same end be honoured by this wine placed before thee." And then pray to Jupiter thus: "Jupiter, wilt thou deign to accept the cake; wilt thou deign to accept the wine placed before thee." Then offer up the porca praecidanea. When the entrails have been removed, make an offering of cakes to Janus, with a prayer as before; and an offering of a cake to Jupiter, with a prayer as before. After the same manner, also, offer wine to Janus and offer wine to Jupiter, as was directed before for the offering of the cakes, and the consecration of the cake. Afterwards offer entrails and wine to Ceres.

[135] Romae tunicas, togas, saga, centones, sculponeas; Calibus et Minturnis cuculliones, ferramenta, falces, palas, ligones, secures, ornamenta, murices, catellas; Venafri palas. Suessae et in Lucanis plostra, treblae Albae, Romae dolia, labra; tegulae ex Venafro. Aratra in terram validam Romanica bona erunt; in terram pullam Campanica; iuga Romanica optima erunt; vomeris indutilis optimus erit. Trapeti Pompeis, Nolae ad Rufri maceriam; claves, clostra Romae; hamae oleariae, urcei aquarii, urnae vinariae, alia vasa aenea Capuae, Nolae; fiscinae Campanicae Capuae utiles sunt. Funes subductarios, spartum omne Capuae; fiscinas Romanicas Suessae, Casino+ * * * optimae erunt Romae.

Funem torculum siquis faciet, Casini L. Tunnius, Venafri C. Mennius L. f. Eo indere oportet coria bona III nostratia, recentia quae depsta sient, quam minimum sallis habeant. Ea depsere et unguere unguine prius oportet, tum siccare. Funem exordiri oportet longum P. LXXII. Toros III habeat, lora in toros singulos VIII lata digitos II. Cum tortus erit, longus P. XLVIII. In conmissura abibit P. III, rel. erit P. XLVI. Ubi extentus erit, accedent P. V: longus erit P. LI. Funem torculum extentum longum esse oportet P. LV maximis vasis, minoribus P. LI. Funem loreum in plostrum iustum P. LX, semifunium P. XLV, lora retinacula in plostrum P. XXXVI, ad aratrum P. XXVI, lora praeductoria P. XXVII S, subiugia in plostrum lora P. XIX, funiculum P. XV, in aratrum subiugia lora P. XII, funiculum P. IIX.

Trapetos latos maximos P. IIII S, orbis altos P. III S, orbis medios, ex lapicaedinis cum eximet, crassos pedem et palmum, inter miliarium et labrum P. I digitos II, labra crassa digitos V. Secundarium trapetum latum P. IIII et palmum, inter miliarium et labrum pes unus digitus unus, labra crassa digitos V, orbis altos P. III et digitos V, crassos P. I et digitos III. Foramen in orbis semipedem quoquo versum facito. Tertium trapetum latum P. IIII, inter miliarium et labrum P. I, labrum digitos V, orbis altos P. III digitos III, crassos P. I et digitos II. Trapetum ubi arvectum erit, ubi statues, ibi accommodato concinnatoque.

[135] ¹ Tunics, togas, blankets, smocks, and shoes should be bought at Rome; caps, iron tools, scythes, spades, mattocks, axes, harness, ornaments, and small chains at Cales and Minturnae; spades at Venafrum; carts and sledges at Suessa and in Lucania; jars and pots at Alba and at Rome; and tiles at Venafrum. ² Roman ploughs will be good for heavy soil, Campanian for black loam. Roman yokes are the best made. You will find detachable ploughshares the best. The following cities are the best markets for the articles named: oil mills at Pompeii, and at Rufrius's yard at Nola; nails and bars at Rome; pails, oil-urns, water-pitchers,

wine-urns, other copper vessels at Capua and at Nola; Campanian baskets from Capua will be found useful; 3 pulley ropes and all sorts of cordage at Capua; Roman baskets at Suessa and Casinum; . . . at Rome will be found best.

Lucius Tunnius, of Casinum, and Gaius Mennius, son of Lucius Mennius, of Venafrum, make the best press-ropes. Eight good native hides, freshly tanned, should be used for these, and should have very little salt; they should be tanned, rubbed down with fat, and then dried. 4 The rope should be laid down 72 feet long, and should have 3 splices, with 9 leather thongs, 2 fingers wide, at each splice. When twisted it will be 49 feet long; 3 feet will be lost in the fastening, leaving 46 feet; when stretched, 5 feet will be added, and the length will be 51 feet. 5 The press-rope should be 55 feet long for the largest presses and 51 for the smaller when stretched. Proper length of thongs for the cart 60 feet, cords 45 feet, leather reins for the cart 36 feet and for the plough 26 feet; traces 27½ feet; yoke straps for the cart 19 feet, lines 15; for the plough, yoke straps 12 feet and line 8 feet.

6 The largest mills are 4½ feet in diameter; the stones 3½ feet, the centre (when quarried) a foot and a palm thick. Interval between the column and the basin 1 foot, 2 fingers; basin 5 fingers thick. Those of the second size are 4 feet and a palm in diameter, interval between column and basin 1 foot, 1 finger, basin 5 fingers thick; stones 3 feet, 5 fingers in diameter, 1 foot, 3 fingers thick. Cut a hole ½ foot square in the stones. Those of the third size are 4 feet in diameter, interval between column and basin 1 foot, thickness of basin 5 fingers; stones 3 feet, 3 fingers in diameter, 1 foot, 2 fingers thick. Assemble and adjust the press after it has been brought to the place where you wish to set it up.

[136] 1 Politionem quo pacto partiario dari oporteat. In agro Casinate et Venafro in loco bono parti octava corbi divicat, satis bono septima, tertio loco sexta; si granum modio dividet, parti quinta. In Venafro ager optimum nona parti corbi dividat. Si communiter pisunt, qua ex parte politori pars est, eam partem in pistrinum politor. Hordeum quinta modio, fabam quinta modio dividat.

[136] 1 Terms for letting the tending of the land to a share tenant: In the district of Casinum and Venafrum, on good land he should receive one-eighth of the unthreshed grain, on fairly good land one-seventh, on land of third quality one-sixth; if the threshed grain is shared, one-fifth. In the district of Venafrum the division is one-ninth of the unthreshed grain on the best land. If they mill in common, the caretaker shall pay for the milling in proportion to the share he receives. He should receive one-fifth of threshed barley and one-fifth of shelled beans.

[137] Vineam curandam partiario. Bene curet fundum, arbustum, agrum frumentarium. Partiario faenum et pabulum, quod bubus satis siet, qui illic sient. Cetera omnia pro indiviso.

[137] ¹ Terms for letting the care of the vineyard to a share tenant: he must take good care of the estate, the orchard, and the grain land. The share worker is to have enough hay and fodder for the cattle on the place; everything else is in common.

[138] Boves feriis coniungere licet. Haec licet facere: arvehant ligna, fabalia, frumentum, quod conditurus erit. Mulis, equis, asinis feriae nullae, nisi si in familia sunt.

[138] ¹ Oxen may be yoked on feast days for these purposes: to haul firewood, bean stalks, and grain for storing. There is no holiday for mules, horses, or donkeys, except the family festivals.

[139] Lucum conlucare Romano more sic oportet: porco piaculo facito, sic verba concipito: “Si deus, si dea es, quouiium illud sacrum est, uti tibi ius est porco piaculo facere illiusce sacri coercendi ergo harumque rerum ergo, sive ego sive quis iussu meo fecerit, uti id recte factum siet, eius rei ergo hoc porco piaculo immolando bonas preces precor, uti sies volens propitius mihi domo familiaeque meae liberisque meis: harumce rerum ergo macte hoc porco piaculo immolando esto”.

[139] ¹ The following is the Roman formula to be observed in thinning a grove: A pig is to be sacrificed, and the following prayer uttered: “Whether thou be god or goddess to whom this grove is dedicated, as it is thy right to receive a sacrifice of a pig for the thinning of this sacred grove, and to this intent, whether I or one at my bidding do it, may it be rightly done. To this end, in offering this pig to thee I humbly beg that thou wilt be gracious and merciful to me, to my house and household, and to my children. Wilt thou deign to receive this pig which I offer thee to this end.”

SECTIONS 140-162

[140] Si fodere voles, altero piaculo eodem modo facito, hoc amplius dicito: “Operis faciundi causa”. Dum opus, cotidie per partes facito. Si intermiseris aut feriae publicae aut familiares intercesserint, altero piaculo facito.

[140] 1 If you wish to till the ground, offer a second sacrifice in the same way, with the addition of the words: “for the sake of doing this work.” So long as the work continues, the ritual must be performed in some part of the land every day; and if you miss a day, or if public or domestic feast days intervene, a new offering must be made.

[141] Agrum lustrare sic oportet. Impera suovitaurlia circumagi: “Cum divis volentibus quodque bene eveniat, mando tibi, Mani, uti illace suovitaurlia fundum agrum terramque meam quota ex parte sive circumagi sive circumferenda censeas, uti cures lustrare.” Ianum Iovemque vino praefamino, sic dicito:

“Mars pater te precor quaesoque
uti sies volens propitius
mihi domo familiaeque nostrae;
quouis rei ergo
agrum terram fundumque meum
suovitaurlia circum agi iussi:
uti tu morbos visos invisosque
viduertatem vastitudinemque,
calamitates intemperiasque
prohibessis defendas averruncesque;
uti tu fruges frumenta vineta virgultaque
grandire dueneque evenire siris,
pastores pecuaque salva servassis;
duisque duonam salutem valetudinemque
mihi domo familiaeque nostrae:
harunce rerum ergo
fundi terrae agrique mei
lustrandi lustrique faciundi ergo,
sic ut dixi,
macte hisce suovitaurlibus
lactentibus immolandis esto.”

lactentibus immolandis esto.

Mars pater,
eiusdem rei ergo
macte hisce suovitautilibus
lactentibus immolandis esto.”

Item cultro facito struem et fertum uti adsiet, inde obmoveto. Ubi porcum immolabis, agnum vitulumque, sic oportet:

“eiusdem rei ergo
macte hisce suovitautilibus
immolandis esto.”

Nominare vetat Martem neque agnum vitulumque. Si minus in omnis litabit, sic verba concipito:

“Mars pater, quod tibi illoc porco neque satisfactum est, te hoc porco piaculo”.

[141] ¹ The following is the formula for purifying land: Bidding the suovetaurilia to be led around, use the words: “That with the good help of the gods success may crown our work, I bid thee, Manius, to take care to purify my farm, my land, my ground with this suovetaurilia, in whatever part thou thinkest best for them to be driven or carried around.” ² Make a prayer with wine to Janus and Jupiter, and say: “Father Mars, I pray and beseech thee that thou be gracious and merciful to me, my house, and my household; to which intent I have bidden this suovetaurilia to be led around my land, my ground, my farm; that thou keep away, ward off, and remove sickness, seen and unseen, barrenness and destruction, ruin and unseasonable influence; ³ and that thou permit my harvests, my grain, my vineyards, and my plantations to flourish and to come to good issue, preserve in health my shepherds and my flocks, and give good health and strength to me, my house, and my household. To this intent, to the intent of purifying my farm, my land, my ground, and of making an expiation, as I have said, deign to accept the offering of these suckling victims; Father Mars, to the same intent deign to accept the offering of these suckling offering.” ⁴ Also heap the cakes with the knife and see that the oblation cake be hard by, then present the victims. When you offer up the pig, the lamb, and the calf, use this formula: “To this intent deign to accept the offering of these victims.” . . . If favourable omens are not obtained in response to all, speak thus: “Father Mars, if aught hath not pleased thee in the offering of those sucklings, I make atonement with these victims.” If there is doubt about one or two, use these words: “Father Mars,

inasmuch as thou wast not pleased by the offering of that pig, I make atonement with this pig.”

[142] *Vilici officia quae sunt, quae dominus praecepit, ea omnia quae in fundo fieri oportet quaeque emi pararique oportet, quo modoque cibaria, vestimenta familiae dari oportet, eadem uti curet faciatque moneo dominoque dicto audiens sit. Hoc amplius, quo modo vilicam uti oportet et quo modo eae imperari oportet, uti adventu domini quae opus sunt parentur curenturque diligenter.*

[142] ¹ Those things which are the duty of the overseer, the instructions which the master has given, all those things which should be done on the farm and what should be bought or brought in, and how food and raiment should be issued to the servants — the same I warn that he do and perform, and that he hearken to the master’s instructions. Furthermore, he must know how to manage the housekeeper and how to give her directions, so that the master, at his coming, will find that all necessary preparations and arrangements have been made with care.

[143] *Vilicae quae sunt officia curato faciat; si eam tibi dederit dominus uxorem, esto contentus; ea te metuat facito; ne nimium luxuriosa siet; vicinas aliasque mulieres quam minimum utatur neve domum neve ad sese recipiat; ad coenam ne quo eat neve ambulatrix siet; rem divinam ni faciat neve mandet qui pro ea faciat iniussu domini aut dominae: scito dominum pro tota familia rem divinam facere. Munda siet: villam conversam mundeque habeat; focum purum circumversum cotidie, priusquam cubitum eat, habeat. Kal., Idibus, Nonis, festus dies cum erit, coronam in focum indat, per eosdemque dies lari familiari pro copia supplicet. Cibum tibi et familiae curet uti coctum habeat. Gallinas multas et ova uti habeat. Pira arida, sorba, ficos, uvas passas, sorba in sapa et piras et uvas in doliis et mala strutha, uvas in vinaciis et in urceis in terra obrutas et nuces Praenestinas recentes in urceo in terra obrutas habeat. Mala Scantiana in doliis et alia quae condi solent et silvatica, haec omnia quotannis diligenter uti condita habeat. Farinam bonam et far suptile sciat facere.*

[143] ¹ See that the housekeeper performs all her duties. If the master has given her to you as wife, keep yourself only to her. Make her stand in awe of you. Restrain her from extravagance. She must visit the neighbouring and other women very seldom, and not have them either in the house or in her part of it. She must not go out to meals, or be a gadabout. She must not engage in religious worship herself or get others to engage in it for her without the orders of the master or the mistress; let her remember that the master attends to the devotions for the whole

household. She must be neat herself, and keep the farmstead neat and clean. She must clean and tidy the hearth every night before she goes to bed. On the Kalends, Ides, and Nones, and whenever a holy day comes, she must hang a garland over the hearth, and on those days pray to the household gods as the opportunity offers. She must keep a supply of cooked food on hand for you and the servants. She must keep many hens and have plenty of eggs. She must have a large store of dried pears, sorbs, figs, raisins, sorbs in must, preserved pears and grapes and quinces. She must also keep preserved grapes in grape-pulp and in pots buried in the ground, as well as fresh Praenestine nuts kept in the same way, and Scantian quinces in jars, and other fruits that are usually preserved, as well as wild fruits. All these she must store away diligently every year. She must also know how to make good flour and to grind spelt fine.

[144] Oleam legendam hoc modo locare oportet. Oleam cogito recte omnem arbitrato domini, aut quem custodem fecerit, aut cui olea venierit. Oleam ne stringito neve verberato iniussu domini aut custodis. Si adversus ea quis fecerit, quod ipse eo die delegerit, pro eo nemo solvet neque debebitur. Qui oleam legerit, omnes iuranto ad dominum aut ad custodem sese oleam non subripuisse neque quemquam suo dolo malo ea oletate ex fundo L. Manli. Qui eorum non ita iuraverit, quod is legerit omne, pro eo argentum nemo dabit neque debebitur. Oleam cogi recte satis dato arbitrato L. Manli. Scalae ita uti datae erunt, ita reddito, nisi quae vetustate fractae erunt. Si non erunt redditae, aequom viri boni arbitrato deducetur. Siquid redemptoris opera domino damni datum erit, resolvito; id viri boni arbitrato deducetur. Legulos, quot opus erit, praebeto et strictores. Si non praebuerit, quanti conductum erit aut locatum erit, deducetur; tanto minus debebitur. De fundo ligna et oleam ne deportato. Qui oleam legerit, qui deportarit, in singulas deportationes SS. N. II deducuntur neque id debebitur. Omnem oleam puram metietur modio oleario. Adsiduos homines L praebeto, duas partes strictorum praebeto. Nequis concedat, quo olea legunda et faciunda carius locetur, extra quam siquem socium inpraesentiarum dixerit. Siquis adversus ea fecerit, si dominus aut custos volent, iurent omnes socii. Si non ita iuraverint, pro ea olea legunda et faciunda nemo dabit neque debebitur ei qui non iuraverit. Accessiones: in M xx CC accedit oleae salsae M V, olei puri P. VIII, in tota oletate aceti Q. V. Quod oleae salsae non acceperint, dum oleam legent, in modios singulos SS. V dabuntur.

[144] 1 Terms for letting the gathering of olives: The contractor will gather the whole harvest carefully, according to the directions of the owner or his representative or the purchaser of the crop. He will not pick or beat down olives

without the orders of the owner or his representative. If anyone violates this rule, no one will pay or be liable for what he has picked that day. All gatherers will take an oath before the owner or his representative that they have not stolen olives, nor has anyone with their connivance stolen olives from the estate of Lucius Manlius during that harvest; if any refuse to take the oath, no one will pay or be liable for what he has gathered. He must give security for the proper harvesting of the olives, satisfactory to Lucius Manlius. Ladders are to be returned in as good condition as when they were issued, except those which have been broken because of age; if they are not returned, a fair deduction will be made by arbitration of an honest man. Whatever damage is done the owner through the fault of the contractor the latter will make good, the amount to be deducted after arbitration by an honest person. The contractor will furnish as many gatherers and pickers as are needed; and if he fails to do so, a deduction will be made of the cost of hiring or contracting, and the total will be less by that amount. He is not to remove firewood or olives from the farm; and if any of his gatherers carry them off, a deduction will be made of 2 sesterces for each load, and that amount will not be due. All olives will be measured clean in an olive measure. He is to furnish fifty active workmen, two-thirds being pickers. No one shall form a combination for the purpose of raising the contract price for harvesting and milling olives, unless he names his associate at the time; in case of a violation of this rule, if the owner or his representative wish, all the associates shall take an oath, and if anyone refuses so to swear, no one will pay or be liable for pay for the gathering or milling of the olives to one who has not so sworn. Bonuses: The extra allowance for a harvest of 1200 modii will be 5 modii of salted olives, 9 pounds of pure oil, 5 quadrantals of vinegar for the whole harvest; for that part of the salted olives which they do not take during the harvesting, an allowance of 5 sesterces per modius of the aforesaid will be made.

[145] *Oleam faciendam hac lege oportet locare. Facito recte arbitrato domini aut custodis, qui id negotium curabit. Si sex iugis vasis opus erit, facito. Homines eos dato, qui placebunt aut custodi aut quis eam oleam emerit. Si opus erit trapetis facito. Si operarii conducti erunt aut facienda locata erit, pro eo resolvito, aut deducetur. Oleum ne tangito utendi causa neque furandi causa, nisi quod custos dederit aut dominus. Si sumpserit, in singulas sumptiones SS. N. XL deducuntur neque debentur. Factores, qui oleum fecerint, omnes iuranto aut ad dominum aut ad custodem sese de fundo L. Manli neque alium quemquam suo dolo malo oledum neque oleam subripuisse. Qui eorum ita non iuraverit, quae eius pars erit, omne deducetur neque debentur. Socium nequem habeto, nisi quem dominus iusserit aut custos. Siquid redemptoris opera domino damni*

datum erit, viri boni arbitrato deducetur. Si viride oleum opus siet, facito. Accedet oleum et sale suae usioni quod satis siet, vasarium vict. II.

[145] 1 Terms on which contracts are to be made for the milling of olives: Mill them honestly, to the satisfaction of the owner or his representative in charge of the work. If necessary, supply six complete equipments. Furnish workmen to the satisfaction of the representative of the owner or the one who has bought the olives. If a mill is necessary, set it up. If labourers are hired, or the work has to be sublet, settle for this, or let it be deducted. Do not touch any oil by way of use or pilfering beyond what the owner or his representative issues; if he takes it, 40 sesterces will be deducted for each offence, and that amount will not be due. All hands engaged in the manufacturing will take an oath before the owner or his representative that neither they nor anyone with their connivance has stolen oil or olives from the farm of Lucius Manlius. If any one of them will not take such an oath, his share of the pay will be deducted, and that amount will not be due. You will have no partner without the approval of the owner or his representative. Any damage done to the owner through the fault of the contractor will be deducted on the decision of an honest person. If green oil is required, make it. There will be an allowance of a sufficient quantity of oil and salt for his own use, and two victoriatum as toll.

[146] Oleam pendentem hac lege venire oportet. Olea pendens in fundo Venafro venibit. Qui oleam emerit, amplius quam quanti emerit omnis pecuniae centesima accedet, praeconium praesens SS. L, et oleum: Romanici P. xx D, viridis P. CC, oleae caducae M L, strictivae M X modio oleario mensum dato, unguinis P. X; ponderibus modiisque domini dato frugis primae cotulas duas. Dies argento ex K. Nov. mensum X oleae legendae faciendae quae locata est, et si emptor locarit, Idibus solvito. Recte haec dari fierique satisque dari domino, aut cui iusserit, promittito satisque dato arbitrato domini. Donicum solutum erit aut ita satis datum erit, quae in fundo inlata erunt, pigneri sunt; nequid eorum de fundo deportato; siquid deportaverit, domini esto. Vasa torcula, funes, scalas, trapetos, siquid et aliud datum erit, salva recte reddito, nisi quae vetustate fracta erunt. Si non reddet aequom solvito. Si emptor legulis et factoribus, qui illic opus fecerint, non solverit, cui dari oportebit, si dominus volet, solvat. Emptor domino debeto et id satis dato, proque ea re ita uti S. S. E item pignori sunt.

[146] 1 Terms for the sale of olives on the tree: Olives for sale on the tree on an estate near Venafrum. The purchaser of the olives will add one per cent. of all money more than the purchase price; the auctioneer's fee of 50 sesterces; and pay 1500 pounds of Roman oil, 200 pounds of green oil, 50 modii of windfall olives,

10 modii of picked olives, all measured by olive measure, and 10 pounds of lubricating oil; and pay 2 cotylae of the first pressing for the use of the weights and measures of the owner. Date of payment: within ten months from the first of November he will pay the contract price for gathering and working up the olives, even if the purchaser has made a contract, on the Ides. Sign a contract and give bond to the satisfaction of the owner or his representative that such payments will be made in good faith, and that all will be done to the satisfaction of the owner or his representative. Until payment is made, or such security has been given, all property of the purchaser on the place will be held in pledge, and none of it shall be removed from the place; whatever is so removed becomes the property of the owner. All presses, ropes, ladders, mills, and whatever else has been furnished by the owner, will be returned in the same good condition, except articles broken because of age; and a fair price will be paid for all not returned. If the purchaser does not pay the gatherers and the workmen who have milled the oil, the owner may, if he wishes, pay the wages due; and the purchaser will be liable to the owner for the amount, and give bond, and his property will be held in pledge as described above.

[147] *Hac lege vinum pendens venire oportet. Vinaceos inlutos et faecem relinquito. Locus vinis ad K. Octob. primas dabitur. Si non ante ea exportaverit, dominus vino quid volet faciet. Cetera lex, quae oleae pendenti.*

[147] ¹ Terms for the sale of grapes on the vine: The purchaser will leave unwashed lees and dregs. Storage will be allowed for the wine until the first of October next following; if it is not removed before that time, the owner will do what he will with the wine. All other terms as for the sale of olives on the tree.

[148] *Vinum in doliis hoc modo venire oportet. Vini in culleos singulos quadragenae et singulae urnae dabuntur. Quod neque aceat neque muceat, id dabitur. In triduo proxumo viri boni arbitrato degustato. Si non ita fecerit, vinum pro degustato erit. Quot dies per dominum mora fuerit, quo minus vinum degustet, totidem dies emptori procedent. Vinum accipito ante K. Ian. primas. Si non ante acceperit, dominus vinum admetietur. Quod admensus erit, pro eo resolvito. Si emptor postularit, dominus ius iurandum dabit verum fecisse. Locus vinis ad K. Octobres primas dabitur. Si ante non deportaverit, dominus vino quid volet faciet. Cetera lex, quae oleae pendenti.*

[148] ¹ Terms for the sale of wine in jars: Forty-one urns to the culleus will be delivered, and only wine which is neither sour nor musty will be sold. Within three days it shall be tasted subject to the decision of an honest man, and if the

purchaser fails to have this done, it will be considered tasted; but any delay in the tasting caused by the owner will add as many days to the time allowed the purchaser. The acceptance will take place before the first of January next following; and in default of the acceptance by the purchaser the owner will measure the wine, and settlement will be made on the basis of such measurement; if the purchaser wishes the owner will take an oath that he has measured it correctly. Storage will be allowed for the wine until the first of October next following; if it is not removed before that date, the owner will do what he wishes with the wine. Other terms as for olives on the tree.

[149] Qua lege pabulum hibernum venire oporteat. Qua vendas fini dicitō. Pabulum frui occipito ex Kal. Septembribus. Prato sicco decedat, ubi prius florere coeperit; prato inriguo, ubi super inferque vicinus permittet, tum decedito, vel diem certam utrique facito. Cetero pabulo Kal. Martiis decedito. Bubus domitis binis, cantherio uni, cum emptor pascet, domino pascere recipitur. Holeris, asparagis, lignis, aqua, itinere, actu domini usioni recipitur. Siquid emptor aut pastores aut pecus emptoris domino damni dederit, viri boni arbitrato resolvat. Siquid dominus aut familia aut pecus emptori damni dederit, viri boni arbitrato resolvetur. Donicum pecuniam solverit aut satisfecerit aut deligarit, pecus et familia, quae illic erit, pigneri sunt. Siquid de iis rebus controversiae erit, Romae iudicium fiat.

[149] ¹ Terms for the lease of winter pasturage: The contract should state the limits of pasturage. The use of the pasturage should begin on the first of September, and should end on dry meadows when the pear trees begin to bloom, and on water meadows when the neighbours above and below begin irrigating, or on a definite date fixed for each; on all other meadows on the first of March. The owner reserves the right to pasture two yoke of oxen and one gelding while the renter pastures; the use of vegetables, asparagus, firewood, water, roads, and right of way is reserved for the owner. All damage done to the owner by the renter or his herdsmen or cattle shall be settled for according to the decision of an honest man; and all damage done to the renter by the owner or his servants or cattle shall be settled for according to the decision of good man. Until such damage is settled for in cash or by security, or the debt is assigned, all herds and servants on the place shall be held in pledge; and if there arises any dispute over such matters, let the decision be made at Rome.

[150] Fructum ovium hac lege venire oportet. In singulas casei P. I S dimidium aridum, lacte feriis quod mulserit dimidium et praeterea lactis urnam unam; hisce legibus, agnus diem et noctem qui vixerit in fructum; et Kal. Iun. emptor

fructu decedat; si interkalatum erit, K. Mais. Agnos XXX ne amplius promittat. Oves quae non pepererint binae pro singulis in fructu cedent. Ex quo die lanam et agnos vendat menses X ab coactore releget. Porcos serarios in oves denas singulos pascat. Conductor duos menses pastorem praebat. Donec domino satisfecerit aut solverit, pignori esto.

[150] ¹ Terms for the sale of the increase of the flock: The lessee will pay per head 1½ pounds of cheese, one-half dry; one-half of the milking on holy days; and an urn of milk on other days. For the purpose of this rule a lamb which lives for a day and a night is counted as increase; the lessee will end the increase on the first of June, or, if an intercalation intervene, on the first of May. The lessor will not promise more than thirty lambs; ewes which have borne no lambs count in the increase two for one. Ten months after the date of the sale of wool and lambs he shall receive his money from the collector. He may feed one whey-fed hog for every ten sheep. The lessee will furnish a shepherd for two months; and he shall remain in pledge until the owner is satisfied either by security or by payment.

[151] Semen cupressi quo modo legi seri propagarique oporteat et quo pacto cupresseta seri oporteat, Minius Percennius Nolanus ad hunc modum monstravit. Semen cupressi Tarentinae per ver legi oportet; materiem, ubi hordeum flavescit. Id ubi legeris, in sole ponito, semen purgato. Id aridum condito, uti aridum expositum siet. Per ver serito in loco ubi terra tenerrima erit, quam pullam vocant, ubi aqua propter siet. Eum locum stercoreato primum bene stercore caprino aut ovillo, tum vortito bipalio, terram cum stercore bene permisceto, depurgato ab herba graminibusque, bene terram conminuito. Areas facito pedes latas quaternos; subcavas facito, uti aquam continere possint; inter eas sulcos facito, qua herbas de areis purgare possis. Ubi areae factae erunt, semen serito crebrum, ita uti linum seri solet. Eo cribro terram incernito, dimidiatum digitum terram altam succernito. Id bene tabula aut manibus aut pedibus conplanato. Siquando non pluet, uti terra sitiit, aquam inrigato leniter in areas. Si non habebis unde inrigues, gerito inditoque leniter. Quotiescumque opus erit, facito uti aquam addas. Si herbae natae erunt, facito uti ab herbis purges. Per aestatem ita uti dictum est fieri oportet, et ubi semen satum siet, stramentis operiri; ubi germinascere coeperit, tum demi.

[151] ¹ As to cypress seed, the best method for its gathering, planting, and propagation, and for the planting of the cypress bed has been given as follows by Minius Percennius of Nola: The seed of the Tarentine cypress should be gathered in the spring, and the wood when the barley turns yellow; when you

gather the seed, expose it to the sun, clean it, and store it dry so that it may be set out dry. Plant the seed in the spring, in soil which is very mellow, the so-called pulla, close to water. First cover the ground thick with goat or sheep dung, then turn it with the trenching spade and mix it well with the dung, cleaning out grass and weeds; break the ground fine. Form the seed-beds four feet wide, with the surface concave, so that they will hold water, leaving a footway between the beds so that you may clean out the weeds. After the beds are formed, sow the seed as thickly as flax is usually sowed, sift dirt over it with a sieve to the depth of a half-finger, and smooth carefully with a board, or the hands or feet. In case the weather is dry so that the ground becomes thirsty, irrigate by letting a stream gently into the beds; or, failing a stream, have the water brought and poured gently; see that you add water whenever it is needed. If weeds spring up, see that you free the beds of them. Clean them when the weeds are very young, and as often as necessary. This procedure should be continued as stated throughout the summer. The seed, after being planted, should be covered with straw, which should be removed when they begin to sprout.

[152] *De scopis virgeis, Q. A. M. Manlii monstraverunt. In diebus XXX, quibus vinum legeris, aliquotiens facito scopas virgeas ulmeas aridas, in asserculo alligato, eabus latera doliis intrinsecus usque bene perfricato, ne faex in lateribus adhaerescat.*

[152] ¹ Of brush-brooms, according to the directions of the Manlii: At several times during the thirty days of the vintage, make brooms of dry elm twigs bound around a stick. With these scrape continually the inner surfaces of the wine jars, to keep the wine dregs from sticking to the sides.

[153] *Vinum faecatatum sic facito. Fiscinas olearias Campanicas duas illae rei habeto. Eas faecis inpleto sub prelumque subdito exprimitoque.*

[153] ¹ To make lees-wine: Keep two Campanian olive baskets for the purpose; fill them with lees, place them under the press-beam, and force out the juice.

[154] *Vinum emptoribus sine molestia quo modo admetiaris. Labrum culleare illae rei facito. Id habeat ad summum ansas IIII, uti transferri possitur. Id imum pertundito; ea fistulam subdito, uti opturarier recte possit; et ad summum, qua fini culleum capiet, pertundito. Id in suggestu inter dolia positum habeto, uti in culleum de dolio vinum salire possit. Id inpleto, postea obturato.*

[154] ¹ A convenient method of measuring wine for buyers: Take for this purpose a cask of culleus size, with four handles at the top for easy handling; make a hole

at the bottom, fitting into it a pipe so that it can be stopped tight, and also pierce near the top at the point where it will hold exactly a culleus. Keep it on the elevation among the jars, so that the wine can run from the jar into the cask; and when the cask is filled close it up.

[155] Per hiemen aquam de agro depelli oportet. In monte fossas inciles puras habere oportet. Prima autumnitate cum pulvis est, tum maxime ab aqua periculum est. Cum pluere incipiet, familiam cum ferreis sarculisque exire oportet, incilia aperire, aquam diducere in vias et curare oportet uti fluat. In villa, cum pluet, circumire oportet, sicubi perpluat, et signare carbone, cum desierit pluere, uti tegula mutetur. Per segetem in frumentis aut in segete aut in fossis sicubi aqua sonstat aut aliquid aquae obstat, id emittere, patefieri removerique oportet.

[155] ¹ Land ought to be drained during the winter, and the drain-ditches on the hillsides kept clean. The greatest danger from water is in the early autumn, when there is dust. When the rains begin, the whole household must turn out with shovels and hoes, open the ditches, turn the water into the roads, and see that it flows off. You should look around the farmstead while it is raining, and mark all leaks with charcoal, so that the tile can be replaced after the rain stops. During the growing season, if water is standing anywhere, in the grain or the seed-bed or in ditches, or if there is any obstruction to the water, it should be cleared, opened and removed.

[156] De brassica quod concoquit. Brassica est quae omnibus holeribus antistat. Eam esto vel coctam vel crudam. Crudam si edes, in acetum intinguito. Mirifice concoquit, alvum bonam facit, lotiumque ad omnes res salubre est. Si voles in convivio multum bibere cenareque libenter, ante cenam esto crudam quantum voles ex aceto, et item, ubi cenaveris, comesto aliqua V folia; reddet te quasi nihil ederis, bibesque quantum voles.

Alvum si voles deicere superiorem, sumito brassicae quae levissima erit P. IIII inde facito manipulos aequales tres conligatoque. Postea ollam statuito cum aqua. Ubi occipiet fervere, paulisper demittito unum manipulum, fervere desistet. Postea ubi occipiet fervere, paulisper demittito ad modum dum quinque numeres, eximito. Item facito alterum manipulum, item tertium. Postea conicito, contundito, item eximito in linteum, exurgeto sucum quasi heminam in pocillum fictile. Eo indito salis micam quasi ervum et cumini fricti tantum quod oleat. Postea ponito pocillum in sereno noctu. Qui poturus erit, lavet calida, bibat aquam mulsam, cubet incenatus. Postea mane bibat sucum deambuletque horas

III, agat, negoti siquid habebit. Ubi libido veniet, nausia adprehendet, decumbat purgetque sese. Tantum bilis pituitaeque eiciet, uti ipse miretur, unde tantum siet. Postea ubi deorsum versus ibit, heminam aut paulo plus bibat. Si amplius ibit, sumito farinae minutae concas duas, infriet in aquam, paulum bibat, constituet. Verum quibus tormina molesta erunt, brassicam in aqua macerare oportet. Ubi macerata erit, coicito in aquam calidam, coquito usque donec conmadebit bene, aquam defundito. Postea salem addito et cumini paululum et pollinem polentae eodem addito et oleum. Postea fervefacito, infundito in catinum, uti frigescat. Eo interito quod volet cibi, postea edit. Sed si poterit solam brassicam esse, edit. Et si sine febre erit, dato vini atri duri aquatum bibat quam minimum; si febris erit, aquam. Id facito cotidie mane. Nolito multum dare, ne pertaedescat, uti possit porro libenter esse. Ad eundem modum viro et mulieri et puero dato. Nunc de illis, quibus aegre lotium it quibusque substillum est. Sumito brassicam, coicito in aquam ferventem, coquito paulisper, uti subcruda siet. Postea aquam defundito non omnem. Eo addito oleum bene et salem et cumini paululum, infervefacito paulisper. Postea inde iusculum frigidum sorbere et ipsam brassicam esse, uti quam primum excoquatur. Cotidie id facito.

[156] ¹ Of the medicinal value of the cabbage: It is the cabbage which surpasses all other vegetables. It may be eaten either cooked or raw; if you eat it raw, dip it into vinegar. It promotes digestion marvellously and is an excellent laxative, and the urine is wholesome for everything. If you wish to drink deep at a banquet and to enjoy your dinner, eat as much raw cabbage as you wish, seasoned with vinegar, before dinner, and likewise after dinner eat some half a dozen leaves; it will make you feel as if you had not dined, and you can drink as much as you please.

² If you wish to clean out the upper digestive tract, take four pounds of very smooth cabbage leaves, make them into three equal bunches and tie them together. Set a pot of water on the fire, and when it begins to boil sink one bunch for a short time, which will stop the boiling; when it begins again sink the bunch briefly while you count five, and remove. ³ Do the same with the second and third bunches, then throw the three together and macerate. After macerating, squeeze through a cloth about a hemina of the juice into an earthen cup; add a lump of salt the size of a pea, and enough crushed cummin to give it an odour, and let the cup stand in the air through a calm night. Before taking a dose of this, one should take a hot bath, drink honey-water, and go to bed fasting. ⁴ Early the next morning he should drink the juice and walk about for four hours, attending

to any business he has. When the desire comes on him and he is seized with nausea, he should lie down and purge himself; he will evacuate such a quantity of bile and mucus that he will wonder himself where it all came from. Afterwards, when he goes to stool, he should drink a hemina or a little more. If it acts too freely, if he will take two conchas of fine flour, sprinkle it into water, and drink a little, it will cease to act. ⁵ Those who are suffering from colic should macerate cabbage in water, then pour into hot water, and boil until it is quite soft. Pour off the water, add salt, a bit of cummin, barley flour dust, and oil, and boil again; ⁶ turn into a dish and allow it to cool. You may break any food you wish into it and eat it; but if you can eat the cabbage alone, do so. If the patient has no fever, administer a very little strong, dark wine, diluted; but if he has fever give only water. The dose should be repeated every morning, but in small quantities, so that it may not pall but continue to be eaten with relish. The treatment is the same for man, woman, and child. ⁷ Now for those who pass urine with difficulty and suffer from strangury: take cabbage, place it in hot water and boil until it is half-done; pour off most of the water, add a quantity of oil, salt, and a bit of cummin, and boil for a short time. After that drink the broth of this and eat the cabbage itself, that it may be absorbed quickly. Repeat the treatment daily.

[157] De brassica Pythagorea, quid in ea boni sit salubritatisque. Principium te cognoscere oportet, quae genera brassicae sint et cuius modi naturam habeant. Omnia ad salutem temperat conmutatque sese semper cum calore, arida simul et umida et dulcis et amara et acris. Sed quae vocantur septem bona in conmixtura, natura omnia haec habet brassica. Nunc uti cognoscas naturam earum, prima est levis quae nominatur; ea est grandis, latis foliis, caule magno, validam habet naturam et vim magnam habet. Altera est crispa, apiacon vocatur; haec est natura et aspectu bona, ad curationem validior est quam quae supra scripta est. Et item est tertia, quae lenis vocatur, minutis caulibus, tenera, et acerrima omnium est istarum, tenui suco vehementissima. Et primum scito, de omnibus brassicis nulla est illius modi medicamento. Ad omnia vulnera tumores eam contritam inponito. Haec omnia ulcera purgabit sanaque faciet sine dolore. Eadem tumida concoquit, eadem erumpit, eadem vulnera putida canceresque purgabit sanosque faciet, quod aliud medicamentum facere non potest. Verum prius quam id inponas, aqua calida multa lavato; postea bis in die contritam inponito; ea omnem putorem adimet. Cancer ater, is olet et saniem spurcam mittit; albus purulentus est, sed fistulosus et subtus suppurat sub carne. In ea vulnera huiusce modi teras brassicam, sanum faciet; optima est ad huiusce modi vulnus. Et luxatum siquid est, bis die aqua calida foveto, brassicam tritam inponito, cito sanum faciet; bis

die id opponito, dolores auferet. Et siquid contusum est, erumpet; brassicam tritam opponito, sanum faciet. Et siquid in mammis ulceris natum et carcinoma, brassicam tritam opponito, sanum faciet. Et si ulcus acrimoniam eius ferre non poterit, farinam hordeaceam misceto, ita opponito. Huiusce modi ulcera omnia haec sana faciet, quod aliud medicamentum facere non potest neque purgare. Et puero et puellae si ulcus erit huiusce modi, farinam hordeaceam addito. Et si voles eam consecram lautam siccam sale aceto sparsam esse, salubrius nihil est. Quo libentius edis, aceto mulso spargito; lautam siccam et rutam coriandrum sectam sale sparsam paulo libentius edes. Id bene faciet et mali nihil sinet in corpore consistere et alvum bonam faciet. Hanc mane esse oportet ieiunum. Et si bilis atra est et si lienes turgent et si cor dolet et si iecur aut pulmones aut praecordia, uno verbo omnia sana faciet intro quae dolitabunt. Eodem silpium inradito, bonum est. Nam venae omnes ubi sufflatae sunt ex cibo, non possunt perspirare in toto corpore; inde aliqui morbus nascitur. Ubi ex multo cibo alvus non it, pro portione brassica si uteris, id ut te moneo, nihil istorum usu veniet morbis. Verum morbum articularium nulla res tam purgat, quam brassica cruda, si edes concisam et rutam et coriandrum concisam siccam et sirpicium inrasum et brassicam ex aceto oxymeli et sale sparsam. Haec si uteris, omnis articulos poteris experiri. Nullus sumptus est, et si sumptus esset, tamen valetudinis causa experires. Hanc oportet mane ieiunum esse. Insomnis vel siquis est seniosus, hac eadem curatione sanum facies. Verum assam brassicam et unctam caldam, salis paulum dato homini ieiuno. Quam plurimum ederit, tam citissime sanus fiet ex eo morbo. Tormina quibus molesta erunt, sic facito. Brassicam macerato bene, postea in aulam coicito, defervefacito bene. Ubi cocta erit bene, aquam defundito. Eo addito oleum bene et salis paululum et cuminum et pollinem polentae. Postea ferve bene facito. Ubi ferverit, in catinum indito. Dato edit, si poterit, sine pane; si non, dato panem purum ibidem madefaciat. Et si febrim non habebit, dato vinum atrum bibat; cito sanus fiet. Et hoc siquando usus venerit, qui debilis erit, haec res sanum facere potest: brassicam edit ita uti S. S. E. Et hoc amplius lotium conservato eius qui brassicam essitarit, id calfacito, eo hominem demittito, cito sanum facies hac cura; expertum hoc est. Item pueros pusillos si laves eo lotio, numquam debiles fient. Et quibus oculi parum clari sunt, eo lotio inunguito, plus videbunt. Si caput aut cervices dolent, eo lotio caldo lavito, desinent dolere. Ei si mulier eo lotio locos fovebit, numquam miseri fient, et fovere sic oportet: ubi in scutra fervefeceris, sub sellam supponito pertusam. Eo mulier adsidat, operito, circum vestimenta eam dato.

Brassica erratica maximam vim habet. Eam arfacere et conterere oportet bene minutam. Siquem purgare voles, pridie ne cenet, mane ieiuno dato brassicam

tritam, aquae cyathos II. Nulla res tam bene purgabit, neque elleborum neque scamonium, et sine periculo, et scito salubrem esse corpori. Quos diffidas sanos facere, facies. Qui hac purgatione purgatus erit, sic eum curato. Sorbitione liquida hoc per dies septem dato. Ubi esse volet, carnem assam dato. Si esse non volet, dato brassicam coctam et panem, et bibat vinum lene dilutum, lavet raro, utatur unctio. Qui sic purgatus erit, diutina valetudine utetur, neque ullus morbus veniet nisi sua culpa. Et si quis ulcus taetrum vel recens habebit, hanc brassicam erraticam aqua spargito, opponito; sanum facies. Et si fistula erit, turundam intro trudit. Si turundam non recipiet, diluito, indito in vesicam, eo calamum alligato, ita premito, in fistulam introeat; ea res sanum faciet cito. Et ad omnia ulcera vetera et nova contritam cum melle opponito, sanum faciet. Et si polypus in naso intro erit, brassicam erraticam aridam tritam in manum conicito et ad nasum admoveto, ita subducito susum animam quam plurimum poteris; in triduo polypus excidet. Et ubi exciderit, tamen aliquot dies idem facito, ut radices polypi persanas facias. Auribus si parum audies, terito cum vino brassicam, sucum exprimito, in aurem intro tepidum instillato; cito te intelleges plus audire. Depetigini spurcae brassicam opponito, sanam faciet et ulcus non faciet.

[157] ¹ Of Pythagoras's cabbage, what virtue and health-giving qualities it has. The several varieties of cabbage and the quality of each should first be known; it has all the virtues necessary for health, and constantly changes its nature along with the heat, being moist and dry, sweet, bitter, and acid. The cabbage has naturally all the virtues of the so-called "Seven Blessings" mixture. To give, then, the several varieties: the first is the so-called smooth; it is large, with broad leaves and thick stem; it is hardy and has great potency. ² The second is the curly variety, called "parsley cabbage"; it has a good nature and appearance, and has stronger medicinal properties than the above-mentioned variety. So also has the third, the mild, with small stalk, tender, and the most pungent of all; and its juice, though scanty, has the most powerful effect. No other variety of cabbage approaches it in medicinal value. ³ It can be used as a poultice on all kinds of wounds and swellings; it will cleanse all sores and heal without pain; it will soften and open boils; it will cleanse suppurating wounds and tumours, and heal them, a thing which no other medicine can do. But before it is applied, the surface should be washed with plenty of warm water, and then the crushed cabbage should be applied as a poultice, and renewed twice a day; it will remove all putridity. The black ulcer has a foul odour and exudes putrid pus, the white is purulent but fistulous, and suppurates under the surface; ⁴ but if you macerate cabbage it will cure all such sores — it is the best remedy for sores of this kind.

Dislocations will be healed quickly if they are bathed twice a day in warm water and a cabbage poultice is applied; if applied twice a day, the treatment will relieve the pain. A contusion will burst, and when bruised cabbage is applied, it will heal. ⁵ An ulcer on the breast and a cancer can be healed by the application of macerated cabbage; and if the spot is too tender to endure the astringency, the cabbage should be mixed with barley-flour and so applied. All sores of this kind it will heal, a thing which no other medicine can do or cleanse. When applied to a sore of this kind on a boy or girl the barley-meal should be added. If you eat it chopped, washed, dried, and seasoned with salt and vinegar, nothing will be more wholesome. ⁶ That you may eat it with better appetite, sprinkle it with grape vinegar, and you will like a little better when washed, dried, and seasoned with rue, chopped coriander and salt. This will benefit you, allow no ill to remain in the body, and promote digestion; and will heal any ill that may be inside. Headache and eyeache it heals alike. It should be eaten in the morning, on an empty stomach. ⁷ Also if you are bilious, if the spleen is swollen, if the heart is painful, or the liver, or the lungs, or the diaphragm — in a word, it will cure all the internal organs which are suffering. (If you grate silphium into it, it will be good.) For when all the veins are gorged with food they cannot breathe in the whole body, and hence a disease is caused; and when from excess of food the bowels do not act, if you eat cabbage proportionately, prepared as I direct above, you will have no ill effects from these. But as to disease of the joints, nothing so purges it as raw cabbage, if you eat it chopped, and rue, chopped dry coriander, grated asafetida, and cabbage out of vinegar and honey, and sprinkled with salt. ⁸ After using this remedy you will have the use of all your joints. There is no expense involved; and even if there were, you should try it for your health's sake. It should be eaten in the morning, on an empty stomach. One who is sleepless or debilitated you can make well by this same treatment. But give the person, without food, simply warm cabbage, oiled, and a little salt. The more the patient eats the more quickly will he recover from the disease. ⁹ Those suffering from colic should be treated as follows: Macerate cabbage thoroughly, then put in a pot and boil well; when it is well done pour off the water, add plenty of oil, very little salt, cummin, and fine barley-flour, and let it boil very thoroughly again. After boiling turn it into a dish. The patient should eat it without bread, if possible; if not, plain bread may be soaked in it and if he has no fever he may have some dark wine. The cure will be prompt. ¹⁰ And further, whenever such occasion arises, if a person who is debilitated will eat cabbage prepared as I have described above, he will be cured. And still further, if you save the urine of a person who eats cabbage habitually, heat it, and bathe the patient in it, he will be healed quickly; this remedy has been tested. Also, if babies are bathed in this

urine they will never be weakly; those whose eyes are not very clear will see better if they are bathed in this urine; and pain in the head or neck will be relieved if the heated urine is applied. ¹¹ If a woman will warm the privates with this urine, they will never become diseased. The method is as follows: when you have heated it in a pan, place under a chair whose seat has been pierced. Let the woman sit on it, cover her, and throw garments around her.

¹² Wild cabbage has the greatest strength; it should be dried and macerated very fine. When it is used as a purge, let the patient refrain from food the previous night, and in the morning, still fasting, take macerated cabbage with four cyathi of water. Nothing will purge so well, neither hellebore, nor scammony; it is harmless, and highly beneficial; it will heal persons whom you despair of healing. ¹³ The following is the method of purging by this treatment: Administer it in a liquid form for seven days; if the patient has an appetite, feed him on roast meat, or, if he has not, on boiled cabbage and bread. He should drink diluted mild wine, bathe rarely, and rub with oil. One so purged will enjoy good health for a long time, and no sickness will attack him except by his own fault. If one has an ulcer, whether suppurated or new, sprinkle this wild cabbage with water and apply it; you will cure him. ¹⁴ If there is a fistula, insert a pellet; or if it will not admit a pellet, make a solution, pour into a bladder attached to a reed, and inject into the fistula by squeezing the bladder. It will heal quickly. An application of wild cabbage macerated with honey to any ulcer, old or new, will heal it. ¹⁵ If a nasal polypus appears, pour macerated dry wild cabbage into the palm of the hand; apply to the nostril and sniff with the breath as vigorously as possible. Within three days the polypus will fall out, but continue the same treatment for several days after it has fallen out, so that the roots of the polypus may be thoroughly cleaned. ¹⁶ In case of deafness, macerate cabbage with wine, press out the juice, and instil warm water into the ear, and you will soon know that your hearing is improved. An application of cabbage to a malignant scab will cause it to heal without ulcerating.

[158] *Alvum deicere hoc modo oportet, si vis bene tibi deicere. Sume tibi ollam, addito eo aquae sextarios sex et eo addito ungulam de perna. Si ungulam non habebis, addito de perna frustum P. S quam minime pingue. Ubi iam coctum incipit esse, eo addito brassicae coliculos duos, betae coliculos duos cum radice sua, feliculae pullum, herbae Mercurialis non multum, mitulorum L. II, piscem capitonem et scorpionem I, cochleas sex et lentis pugillum. Haec omnia decoquito usque ad sextarios III iuris. Oleum ne addideris. Indidem sume tibi sextarium unum tepidum, adde vini Coi cyathum unum, bibe, interquiesce,*

deinde iterum eodem modo, deinde tertium: purgabis te bene. Et si voles insuper vinum Coum mixtum bibere, licebit bibas. Ex iis tot rebus quod scriptum est unum, quod eorum vis, alvum deicere potest. Verum ea re tot res sunt, uti bene deicias, et suave est.

[158] ¹ Recipe for a purgative, if you wish to purge thoroughly: Take a pot and pour into it six sextarii of water and add the hock of a ham, or, if you have no hock, a half-pound of ham-scraps with as little fat as possible. Just as it comes to a boil, add two cabbage leaves, two beet plants with the roots, a shoot of fern, a bit of the mercury-plant, two pounds of mussels, a capito fish and one scorpion, six snails, and a handful of lentils. ² Boil all together down to three sextarii of liquid, without adding oil. Take one sextarius of this while warm, add one cyathus of Coan wine, drink, and rest. Take a second and a third dose in the same way, and you will be well purged. You may drink diluted Coan wine in addition, if you wish. Any one of the many ingredients mentioned above is sufficient to move the bowels; but there are so many ingredients in this concoction that it is an excellent purgative, and, besides, it is agreeable.

[159] Intertigini remedium. In viam cum ibis, apsinthi Pontici surculum sub anulo habeto.

[159] ¹ To prevent chafing: When you set out on a journey, keep a small branch of Pontic wormwood under the anus.

[160] Luxum siquod est, hac cantione sanum fiet. Harundinem prende tibi viridem P. IIII aut quinque longam, mediam diffinde, et duo homines teneant ad coxendices. Incipe cantare: “Motas uaeta daries dardares astaries dissunapiter” usque dum coeant. Ferrum insuper iactato. Ubi coierint et altera alteram tetigerint, id manu prehende et dextera sinistra praecide, ad luxum aut ad fracturam alliga, sanum fiet. Et tamen cotidie cantato et luxato vel hoc modo: “huat haut haut istasis tarsis ardannabou dannaustra”.

[160] ¹ Any kind of dislocation may be cured by the following charm: Take a green reed four or five feet long and split it down the middle, and let two men hold it to your hips. Begin to chant: “motas uaeta daries dardares astaries dissunapiter” and continue until they meet. Brandish a knife over them, and when the reeds meet so that one touches the other, grasp with the hand and cut right and left. If the pieces are applied to the dislocation or the fracture, it will heal. And none the less chant every day, and, in the case of a dislocation, in this manner, if you wish: “huat haut haut istasis tarsis ardannabou dannaustra.”

[161] Asparagus quo modo seratur. Locum subigere oportet bene qui habeat humorem aut loco crasso; ubi erit subactus, areas facito, uti possis dextra sinistraque sarire, runcare, ne calcetur; cum areas deformabis, intervallum facito inter areas semipedem latum in omnes partes; deinde serito ad lineam palo, grana bina aut terna demitto et eodem palo cavum terrae operito; deinde supra areas stercus spargito bene; serito secundum aequinoctium vernalis. Ubi erit natum, herbas crebro purgato cavetoque ne asparagus una cum herba vellatur; quo anno severis, sum stramentis per hiemem operito, ne praeuratur; deinde primo vere aperito, sarito runcatoque. Post annum tertium quam severis, incendito vere primo; deinde ne ante sarueris quam asparagus natus erit, ne in sariendo radices laedas. Tertio aut quarto anno asparagum vellito ab radice. Nam si defringes, stirpes fient et intermorientur. Usque licebit vellas, donecum in semen videbis ire. Semen maturum fit ad autumnum. Ita, cum sumpseris semen, incendito, et cum coeperit asparagus nasci, sarito et stercolato. Post annos VIII aut novem, cum iam est vetus, digerito et in quo loco posturus eris terram bene subigito et stercolato. Deinde fossulas facito, quo radices asparagi demittas. Intervallum sit ne minus pedes singulos inter radices asparagi. Evellito, sed circumfodito, ut facile vellere possis; caveto ne frangatur. Stercus ovillum quam plurimum fac ingeras; id est optimum ad eam rem; aliud stercus herbas creat.[

[161] 1 Method of planting asparagus: Break up thoroughly ground that is moist, or is heavy soil. When it has been broken, lay off beds, so that you may hoe and weed them in both directions without trampling the beds. In laying off the beds, leave a path a half-foot wide between the beds on each side. Plant along a line, dropping two or three seeds together in a hole made with a stick, and cover with the same stick. After planting, cover the beds thickly with manure; plant after the vernal equinox. When the shoots push up, weed often, being careful not to uproot the asparagus with the weed. The year it is planted, cover the bed with straw through the winter, so that it will not be frostbitten. Then in the early spring uncover, hoe, and weed. The third year after planting burn it over in the early spring; after this do not work it before the shoots appear, so as not to injure the roots by hoeing. In the third or fourth year you may pull asparagus from the roots; for if you break it off, sprouts will start and die off. You may continue pulling until you see it going to seed. The seed ripens in autumn; when you have gathered it, burn over the bed, and when the asparagus begins to grow, hoe and manure. After eight or nine years, when it is now old, dig it up, after having thoroughly worked and manured the ground to which you are to transplant it, and made small ditches to receive the roots. The interval between the roots of the asparagus should be not less than a foot. In digging, loosen the earth around the

roots so that you can dig them easily, and be careful not to break them. Cover them very deep with sheep dung; this is the best for this purpose, as other manure produces weeds.

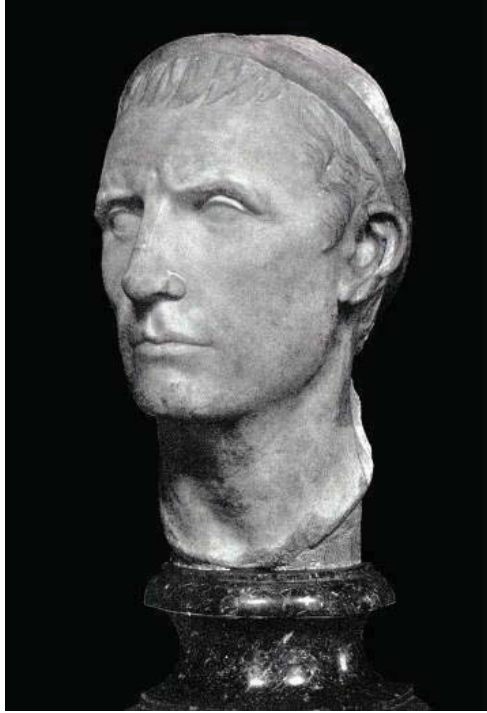
[162] Salsura pernarum ofellae Puteolanae. Pernas sallire sic oportet in dolio aut in seria. Cum pernas emeris, ungulas earum praecidito. Salis Romaniensis moliti in singulas semodios. In fundo dolii aut seriae sale sternito, deinde pernam ponito, cutis deorsum spectet, sale obruito totam. Deinde alteram insuper ponito, eodem modo obruito. Caveto ne caro carnem tangat. Ita omnes obruito. Ubi iam omnes composueris, sale insuper obrue, ne caro appareat; aequale facito. Ubi iam omnes quinque in sale fuerint, eximito omnis cum suo sale. Quae tum summae fuerint, imas facito eodemque modo obruito et conponito. Post dies omnino XII pernas eximito et salem omnem detergeto et suspendito in vento biduum. Die tertio extergeto spongea bene, perunguito oleo, suspendito in fumo biduum. Tertio die demito, perunguito oleo et aceto connixto, suspendito in carnario. Nec tinia nec vermes tangent.

[162] 1 Method of curing hams and Puteolan ofella. You should salt hams in the following manner, in a jar or large pot: When you have bought the hams cut off the hocks. Allow a half-modius of ground Roman salt to each ham. Spread salt on the bottom of the jar or pot; then lay a ham, with the skin facing downwards, and cover the whole with salt. Place another ham over it and cover in the same way, taking care that meat does not touch meat. Continue in the same way until all are covered. When you have arranged them all, spread salt above so that the meat shall not show, and level the whole. When they have remained five days in the salt remove them all with their own salt. Place at the bottom those which had been on top before, covering and arranging them as before. Twelve days later take them out finally, brush off all the salt, and hang them for two days in a draught. On the third day clean them thoroughly with a sponge and rub with oil. Hang them in smoke for two days, and the third day take them down, rub with a mixture of oil and vinegar, and hang in the meat-house. No moths or worms will touch them.

The Biographies



View of the Thermopylae Pass from the area of the Phocian Wall — in 191 BC, Cato was appointed military tribune under the Consul Manius Acilius Glabrio and dispatched to Greece to oppose the invasion of Antiochus III the Great, King of the Seleucid Empire. In the decisive Battle of Thermopylae (191 BC), which led to the downfall of Antiochus, Cato demonstrated his usual valour, enjoying good fortune.



Antiochus III (c. 241–187 BC), from a bust in the Louvre. The Great King ruled 222–187 BC and was the sixth ruler of the Seleucid Empire. He ruled over the region of Syria and large parts of the rest of western Asia towards the end of the third century BC.

CATO THE ELDER by Plutarch



Translated by Bernadotte Perrin

¹ The family of Marcus Cato, it is said, was of Tusculan origin, though he lived, previous to his career as soldier and statesman, on an inherited estate in the country of the Sabines. His ancestors commonly passed for men of no note whatever, but Cato himself extols his father, Marcus, as a brave man and good soldier. He also says that his grandfather, Cato, often won prizes for soldierly valour, and received from the state treasury, because of his bravery, the price of five horses which had been killed under him in battle. ² The Romans used to call men who had no family distinction, but were coming into public notice through their own achievements, “new men,” and such they called Cato. But he himself used to say that as far as office and distinction went, he was indeed new, but having regard to ancestral deeds of valour, he was oldest of the old. His third name was not Cato at first, but Priscus. Afterwards he got the surname of Cato for his great abilities. The Romans call a man who is wise and prudent, *catus*.

³ As for his outward appearance, he had reddish hair, and keen grey eyes, as the author of the well-known epigram ill-naturedly gives us to understand: —

Red-haired, snapper and biter, his grey eyes flashing defiance,
Porcius, come to the shades, back will be thrust by their Queen.

His bodily habit, since he was addicted from the very first to labour with his own hands, a temperate mode of life, and military duties, was very serviceable, and disposed alike to vigour and health. ⁴ His discourse, — a second body, as it were, and, for the use of a man who would live neither obscurely nor idly, an instrument with which to perform not only necessary, but also high and noble services, — this he developed and perfected in the villages and towns about Rome, where he served as advocate for all who needed him, and got the reputation of being, first a zealous pleader, and then a capable orator. Thenceforth the weight and dignity of his character revealed themselves more and more to those who had dealings with him; they saw that he was bound to be a man of great affairs, and have a leading place in the state. ⁵ For he not only gave his services in legal contests without fee of any sort, as it would seem, but

did not appear to cherish even the repute won in such contests as his chief ambition. Nay, he was far more desirous of high repute in battles and campaigns against the enemy, and while he was yet a mere stripling, had his breast covered with honourable wounds. ⁶ He says himself that he made his first campaign when he was seventeen years old, at the time when Hannibal was consuming Italy with the flames of his successes.

In battle, he showed himself effective of hand, sure and steadfast of foot, and of a fierce countenance. With threatening speech and harsh cries he would advance upon the foe, for he rightly thought, and tried to show others, that oftentimes such action terrifies the enemy more than the sword. ⁷ On the march, he carried his own armour on foot, while a single attendant followed in charge of his camp utensils. With this man, it is said, he was never wroth, and never scolded him when he served up a meal, nay, he actually took hold himself and assisted in most of such preparations, provided he was free from his military duties. Water was what he drank on his campaigns, except that once in a while, in a raging thirst, he would call for vinegar, or, when his strength was failing, would add a little wine.

²¹ Near his fields was the cottage which had once belonged to Manius Curius, a hero of three triumphs. To this he would often go, and the sight of the small farm and the mean dwelling led him to think of their former owner, who, though he had become the greatest of the Romans, had subdued the most warlike nations, and driven Pyrrhus out of Italy, nevertheless tilled this little patch of ground with his own hands and occupied this cottage, after three triumphs. ² Here it was that the ambassadors of the Samnites once found him seated at his hearth cooking turnips, and offered him much gold; but he dismissed them, saying that a man whom such a meal satisfied had no need of gold, and for his part he thought that a more honourable thing than the possession of gold was the conquest of its possessors. Cato would go away with his mind full of these things, and on viewing again his own house and lands and servants and mode of life, would increase the labours of his hands and lop off his extravagancies.

³ When Fabius Maximus took the city of Tarentum, it chanced that Cato, who was then a mere stripling, served under him, and being lodged with a certain Nearchus, of the sect of the Pythagoreans, he was eager to know of his doctrines. When he heard this man holding forth as follows, in language which Plato also uses, condemning pleasure as “the greatest incentive to evil,” and the body as “the chief detriment to the soul, from which she can release and purify herself only by such reasonings as most do wean and divorce her from bodily sensations,” he fell still more in love with simplicity and restraint. ⁴ Further than this, it is said, he did not learn Greek till late in life, and was quite well on in

years when he took to reading Greek books; then he profited in oratory somewhat from Thucydides, but most from Demosthenes. However, his writings are moderately embellished with Greek sentiments and stories, and many literal translations from the Greek have found a place among his maxims and proverbs.

³ ¹ There was at Rome a certain man of the highest birth and greatest influence, who had the power to discern excellence in the bud, and the grace to cultivate it and bring it into general esteem. This man was Valerius Flaccus. He had a farm next to that of Cato, and learned from Cato's servants of their master's laborious and frugal way of living. He was amazed to hear them tell how Cato, early in the morning, went on foot to the market-place and pleaded the cases of all who wished his aid; ² then came back to his farm, where, clad in a working blouse if it was winter, and stripped to the waist if it was summer, he wrought with his servants, then sat down with them to eat of the same bread and drink of the same wine. They told Valerius many other instances of Cato's fairness and moderation, quoting also sundry pithy sayings of his, until at last Valerius gave command that Cato be invited to dine with him.^a ³ After this, discovering by converse with him that his nature was gentle and polite, and needed, like a growing tree, only cultivation and room to expand, Valerius urged and at last persuaded him to engage in public life at Rome. Accordingly, taking up his abode in the city, his own efforts as an advocate at once won him admiring friends, and the favour of Valerius brought him great honour and influence, so that he was made military tribune first, and then quaestor. ⁴ After this, being now launched on an eminent and brilliant career, he shared the highest honours with Valerius, becoming consul with him, and afterwards censor.

Of the elder statesmen, he attached himself most closely to Fabius Maximus, who was of the highest reputation and had the greatest influence, but this was more by way of setting before himself the character and life of the man as the fairest examples he could follow. ⁵ In the same spirit he did not hesitate to oppose the great Scipio, a youthful rival of Fabius, and thought to be envious of him. When he was sent out with Scipio as quaestor for the war in Africa, he saw that the man indulged in his wonted extravagance, and lavished money without stint on his soldiery. ⁶ He therefore made bold to tell him that the matter of expense was not the greatest evil to be complained of, but the fact that he was corrupting the native simplicity of his soldiers, who resorted to wanton pleasures when their pay exceeded their actual needs. Scipio replied that he had no use for a parsimonious quaestor when the winds were bearing him under full sail to the war; he owed the city an account of his achievements, not of its moneys. ⁷ Cato therefore left Sicily, and joined Fabius in denouncing before the Senate Scipio's

waste of enormous moneys, and his boyish addiction to palaestras and theatres, as though he were not commander of an army, but master of a festival. As a result of these attacks, tribunes were sent to bring Scipio back to Rome, if the charges against him should turn out to be true. ⁸ Well then, Scipio convinced the tribunes that victory in war depended on the preparations made for it; showed that he could be agreeable in his intercourse with his friends when he had leisure for it, but was never led by his sociability to neglect matters of large and serious import; and sailed off for his war in Africa.

⁴ ¹ The influence which Cato's oratory won for him waxed great, and men called him a Roman Demosthenes; but his manner of life was even more talked about and noised abroad. For his oratorical ability only set before young men a goal which many already were striving eagerly to attain; but a man who wrought with his own hands, as his fathers did, and was contented with a cold breakfast, a frugal dinner, simple raiment, and a humble dwelling, — one who thought more of not wanting the superfluities of life than of possessing them, — such a man was rare. ² The commonwealth had now grown too large to keep its primitive integrity; the sway over many realms and peoples had brought a large admixture of customs, and the adoption of examples set in modes of life of every sort. It was natural, therefore, that men should admire Cato, when they saw that, whereas other men were broken down by toils and enervated by pleasures, ³ he was victor over both, and this too, not only while he was still young and ambitious, but even in his hoary age, after consulship and triumph. Then, like some victorious athlete, he persisted in the regimen of his training, and kept his mind unaltered to the last.

He tells us that he never wore clothing worth more than a hundred drachmas; that he drank, even when he was praetor or consul, the same wine as his slaves; that as for fish and meats, he would buy thirty asses' worth for his dinner from the public stalls, and even this for the city's sake, that he might not live on bread alone, but strengthen his body for military service; ⁴ that he once fell heir to an embroidered Babylonian robe, but sold it at once; that not a single one of his cottages had plastered walls; ^b that he never paid more than fifteen hundred drachmas for a slave, since he did not want them to be delicately beautiful, but sturdy workers, such as grooms and herdsmen, and these he thought it his duty to sell when they got oldish, instead of feeding them when they were useless; and that in general, he thought nothing cheap that one could do without, but that what one did not need, even if it cost but a penny, was dear; also that he bought lands where crops were raised and cattle herded, not those where lawns were sprinkled and paths swept.

⁵ ¹ These things were ascribed by some to the man's parsimony; but others condoned them in the belief that he lived in this contracted way only to correct and moderate the extravagance of others. However, for my part, I regard his treatment of his slaves like beasts of burden, using them to the uttermost, and then, when they were old, driving them off and selling them, as the mark of a very mean nature, which recognizes no tie between man and man but that of necessity. ² And yet we know that kindness has a wider scope than justice. Law and justice we naturally apply to men alone; but when it comes to beneficence and charity, these often flow in streams from the gentle heart, like water from a copious spring, even down to dumb beasts. A kindly man will take good care of his horses even when they are worn out with age, and of his dogs, too, not only in their puppyhood, but when their old age needs nursing.

³ While the Athenians were building the Parthenon, they turned loose for free and unrestricted pasturage such mules as were seen to be most persistently laborious. One of these, they say, came back to the works of its own accord, trotted along by the side of its fellows under the yoke, which were dragging the waggons up to the Acropolis, and even led the way for them, as though exhorting and inciting them on. The Athenians passed a decree that the animal be maintained at the public cost as long as it lived. ⁴ Then there were the mares of Cimon, with which he won three victories at Olympia; their graves are near the tombs of his family. Dogs also that have been close and constant companions of men, have often been buried with honour. Xanthippus, of olden time, gave the dog which swam along by the side of his trireme to Salamis, when the people were abandoning their city, honourable burial on the promontory which is called to this day Cynossema, or Dog's Mound.

⁵ We should not treat living creatures like shoes or pots and pans, casting them aside when they are bruised and worn out with service, but, if for no other reason, for the sake of practice in kindness to our fellow men, we should accustom ourselves to mildness and gentleness in our dealings with other creatures. I certainly would not sell even an ox that had worked for me, just because he was old, much less an elderly man, removing him for his habitual place and customary life, as it were from his native land, for a paltry price, useless as he is to those who sell him and as he will be to those who buy him.^c ⁶ But Cato, exulting as it were in such things, says that he left in Spain even the horse which had carried him through his consular campaign, that he might not tax the city with the cost of its transportation. Whether, now, these things should be set down to greatness of spirit or littleness of mind, is an open question.

⁶ ¹ But in other matters, his self-restraint was beyond measure admirable. For instance, when he was in command of an army, he took for himself and his

retinue not more than three Attic bushels of wheat a month, and for his beasts of burden, less than a bushel and a half of barley a day. ² He received Sardinia as his province, and whereas his predecessors were wont to charge the public treasury with their pavilions, couches, and apparel, while they oppressed the province with the cost of their large retinues of servants and friends, and of their lavish and elaborate banquets, his simple economy stood out in an incredible contrast. He made no demands whatever upon the public treasury, and made his circuit of the cities on foot, followed by a single public officer, who carried his robe and chalice for sacrifices. ³ And yet, though in such matters he showed himself mild and sparing to those under his authority, in other ways he displayed a dignity and severity which fully corresponded, for in the administration of justice he was inexorable, and in carrying out the edicts of the government was direct and masterful, so that the Roman power never inspired its subjects with greater fear or affection.

⁷ ¹ Much the same traits are revealed in the man's oratory. It was at once graceful and powerful, pleasant and compelling, facetious and severe, sententious and belligerent. So Plato says of Socrates that from the outside he impressed his associates as rude, uncouth, and wanton; but within he was full of earnestness, and of matters that moved his hearers to tears and wrung their hearts. ² Wherefore I know not what they can mean who say that Cato's oratory most resembled that of Lysias. However, such questions must be decided by those who are more capable than I am of discerning the traits of Roman oratory, and I shall now record a few of his famous sayings, believing that men's characters are revealed much more by their speech than, as some think, by their looks.

⁸ ¹ He once wished to dissuade the Roman people from insisting unseasonably upon a distribution of corn, and began his speech with these words: "It is a hard matter, my fellow citizens, to argue with the belly, since it has no ears." Again, inveighing against the prevalent extravagance, he said: "It is a hard matter to save a city in which a fish sells for more than an ox." ² Again, he said the Romans were like sheep; for as these are not to be persuaded one by one, but all in a body blindly follow their leaders, "so ye," he said, "though as individuals ye would not deign to follow the counsels of certain men, when ye are got together ye suffer yourself to be led by them." Discoursing on the power of women, he said: "All other men rule their wives; we rule all other men, and our wives rule us." ³ This, however, is a translation from the sayings of Themistocles. He, finding himself much under his son's orders through the lad's mother, said: "Wife, the Athenians rule the Hellenes, I rule the Athenians, thou rulest me, and

thy son thee. Therefore let him make sparing use of that authority which makes him, child though he is, the most powerful of the Hellenes.”

⁴ The Roman people, Cato said, fixed the market value not only of dyes, but also of behaviour. “For,” said he, “as dyers most affect that dye which they see pleases you, so your young men learn and practice that which wins your praise.”

⁵ And he exhorted them, in case it was through virtue and temperance that they had become great, to make no change for the worse; but if it was through intemperance and vice, to change for the better; these had already made them great enough. Of those who were eager to hold high office frequently, he said that like men who did not know the road, they sought to be ever attended on their way by lictors, lest they go astray. ⁶ He censured his fellow citizens for choosing the same men over and over again to high office. “You will be thought,” said he, “not to deem your offices worth much, or else not to deem many men worthy of your offices.” Of one of his enemies who had the name of leading a disgraceful and disreputable life, he said: “This man’s mother holds the wish that he may survive her to be no pious prayer, but a malignant curse.” ⁷ Pointing to a man who had sold his ancestral fields lying near the sea, he pretended to admire him, as stronger than the sea. “This man,” said he, “has drunk down with ease what the sea found it hard to wash away.”

When King Eumenes paid a visit to Rome, the Senate received him with extravagant honours, and the chief men of the city strove who should be most about him. But Cato clearly looked upon him with suspicion and alarm. ⁸ “Surely,” some one said to him, “he is an excellent man, and a friend of Rome.” “Granted,” said Cato, “but the animal known as king is by nature carnivorous.” He said further that not one of the kings whom men so lauded was worthy of comparison with Epaminondas, or Pericles, or Themistocles, or Manius Curius, or with Hamilcar, surnamed Barcas. ⁹ His enemies hated him, he used to say, because he rose every day before it was light and, neglecting his own private matters, devoted his time to the public interests. He also used to say that he preferred to do right and get no thanks, rather than to do ill and get no punishment; and that he had pardon for everybody’s mistakes except his own.

⁹¹ The Romans once chose three ambassadors to Bithynia, of whom one was gouty, another had had his head trepanned, and the third was deemed a fool. Cato made merry over this, and said that the Romans were sending out an embassy which had neither feet, nor head, nor heart. ² His aid was once solicited by Scipio, at the instance of Polybius, in behalf of the exiles from Achaia, and after a long debate upon the question in the Senate, where some favoured and some opposed their return home, Cato rose and said: “Here we sit all day, as if we had naught else to do, debating whether some poor old Greeks shall be

buried here or in Achaia.”³ The Senate voted that the men be allowed to return, and a few days afterwards Polybius tried to get admission to that body again, with a proposal that the exiles be restored to their former honours in Achaia, and asked Cato’s opinion on the matter. Cato smiled and said that Polybius, as if he were another Odysseus, wanted to go back into the cave of the Cyclops for a cap and belt which he had left there.

⁴ Wise men, he said, profited more from fools than fools from wise men; for the wise shun the mistakes of fools, but fools do not imitate the successes of the wise. He said he liked to see blushes on a young man’s face rather than pallor, and that he had no use for a soldier who plied his hands on the march, and his feet in battle, and whose snore was louder than his war-cry. ⁵ Railing at the fat knight, he said, “Where can such a body be of service to the state, when everything between its gullet and its groins is devoted to belly?” A certain epicure wished to enjoy his society, but he excused himself, saying that he could not live with a man whose palate was more sensitive than his heart. As for the lover, he said his soul dwelt in the body of another. ⁶ And as for repentance, he said he had indulged in it himself but thrice in his whole life: once when he entrusted a secret to his wife; once when he paid ship’s fare to a place instead of walking thither; and once when he remained intestate a whole day. To an old man who was steeped in iniquity he said: “Man, old age has disgraces enough of its own; do not add to them the shame of vice.” ⁷ To a tribune of the people who had been accused of using poison, and who was trying to force the passage of a useless bill, he said: “Young man, I know not which is worse, to drink your mixtures, or to enact your bills.” And when he was reviled by a man who led a life of shameless debauchery, he said: “I fight an unequal battle with you: you listen to abuse calmly, and utter it glibly; while for me it is unpleasant to utter it, and unusual to hear it.”

Such, then, is the nature of his famous sayings.

^{10 1} Having been elected consul with Valerius Flaccus, his intimate friend, the province which the Romans call Hither Spain was allotted to his charge. Here, while he was subduing some of the tribes, and winning over others by diplomacy, a great host of Barbarians fell upon him, and threatened to drive him disgracefully out of the province. He therefore begged the neighbouring Celtiberians to become his allies. ² On their demanding two hundred talents pay for such assistance, all his officers thought it intolerable that Romans should agree to pay Barbarians for assistance. But Cato said there was nothing terrible in it; should they be victorious, they could pay the price with the spoils taken from the enemy, not out of their own purse, whereas, should they be vanquished, there would be nobody left either to pay or to ask the price. In this battle he was

completely victorious, and the rest of his campaign was a brilliant success. ³ Polybius indeed says that in a single day the walls of all the cities on this side the river Baetis — and they were very many, and full of warlike men — were torn down at his command. And Cato himself says that he took more cities than he spent days in Spain, nor is this a mere boast, since, in fact, there were four hundred of them.

⁴ His soldiers got large booty in this campaign, and he gave each one of them a pound of silver besides, saying that it was better to have many Romans go home with silver in their pockets than a few with gold. But in his own case, he says that no part of the booty fell to him, except what he ate and drank. “Not that I find fault,” he says, “with those who seek to profit by such a case, but I prefer to strive in bravery with the bravest, rather than in wealth with the richest, and in greed for money with the greediest.” And he strove to keep not only himself, but also his associates, free from all taint of gain. He had five attendants with him in the field. One of these, whose name was Paccus, bought three boys for his own account from among the public prisoners, but finding that Cato was aware of the transaction, or ever he had come into his presence, went and hanged himself. Cato sold the boys, and restored the money to the public treasury.

¹¹ While Cato still tarried in Spain, Scipio the Great, who was his enemy, and wished to obstruct the current of his successes and take away from him the administration of affairs in Spain, got himself appointed his successor in command of that province. Then he set out with all the speed possible, and brought Cato’s command to an end. But Cato took five cohorts of men-at arms and five hundred horsemen as escort on his way home, and on the march subdued the tribe of the Lacetanians, and put to death six hundred deserters whom they delivered up to him. ² Scipio was enraged at this proceeding, but Cato, treating him with mock humility, said that only then would Rome be at her greatest, when her men of high birth refused to yield the palm of virtue to men of lower rank, and when plebeians like himself contended in virtue with their superiors in birth and reputation. However, in spite of Scipio’s displeasure, the Senate voted that no change whatever be made in what Cato had ordered and arranged, and so the administration of Scipio was marked by inactivity and idleness, and detracted from his own, rather than from Cato’s reputation. ³ Cato, on the other hand, celebrated a triumph. Most men who strive more for reputation than for virtue, when once they have attained the highest honours of consulship and triumphs, straightway adjust their future lives to the enjoyment of a pleasurable ease, and give up their public careers. But Cato did not thus remit and dismiss his virtue, nay, rather, like men first taking up the public service and

all athirst for honour and reputation, he girt his loins anew, and held himself ever ready to serve his friends and fellow-citizens, either in the forum or in the field.

¹² ¹ And so it was that he assisted Tiberius Sempronius the consul in subduing the regions in Thrace and on the Danube, acting as his ambassador; and as legionary tribune under Manius Acilius, he marched into Greece against Antiochus the Great, who gave the Romans more to fear than any man after Hannibal. For he won back almost all of Seleucus Nicator's former dominions in Asia, reduced to subjection many warlike nations of Barbarians, and was eager to engage the Romans, whom he deemed the only worthy foemen left for him. ² So he crossed into Greece with an army, making the freeing of the Greeks a specious ground for war. This they did not need at all, since they had recently been made free and independent of Philip and the Macedonians by grace of the Romans. Greece was at once a stormy sea of hopes and fears, being corrupted by her demagogues with expectations of royal bounty. ³ Accordingly, Manius sent envoys to the several cities. Most of those which were unsettled in their allegiance Titus Flaminius restrained without ado, and quieted down, as I have written in his *Life*, but Corinth, Patrae, and Aegium were brought over to Rome by Cato.

⁴ He also spent much time at Athens. And we are told that a certain speech of his is extant, which he addressed to the Athenian people in Greek, declaring that he admired the virtues of the ancient Athenians, and was glad to behold a city so beautiful and grand as theirs. But this is not true. On the contrary, he dealt with Athenians through an interpreter. He could have spoken to them directly, but he always clung to his native ways, and mocked at those who were lost in admiration of anything that was Greek. ⁵ For instance, he poked fun at Postumius Albinus, who wrote a history in Greek, and asked the indulgence of his readers. Cato said they might have shown him indulgence had he undertaken his task in consequence of a compulsory vote of the Amphiclyonic Assembly. Moreover, he says the Athenians were astonished at the speed and pungency of his discourse. For what he himself set forth with brevity, the interpreter would repeat to them at great length and with many words; and on the whole he thought the words of the Greeks were born on their lips, but those of the Romans in their hearts.

¹³ ¹ Now Antiochus had blocked up the narrow pass of Thermopylae with his army, adding trenches and walls to the natural defences of the place, and sat there, thinking he had locked the war out of Greece. And the Romans did indeed despair utterly of forcing a direct passage. But Cato, calling to mind the famous compass and circuit of the pass which the Persians had once made, took a considerable force and set out under cover of darkness. ² They climbed the heights, but their guide, who was a prisoner of war, lost the way, and wandered

about in impracticable and precipitous places until he had filled the soldiers with dreadful dejection and fear. Cato, seeing their peril, bade the rest remain quietly where they were, ³ while he himself, with a certain Lucius Manlius, an expert mountain-climber, made his way along, with great toil and hazard, in the dense darkness of a moonless night, his vision much impeded and obscured by wild olive trees and rocky peaks, until at last they came upon a path. This, they thought, led down to the enemy's camp. So they put marks and signs on some conspicuous cliffs which towered over Mount Callidromus, ⁴ and then made their way back again to the main body. This too they conducted to the marks and signs, struck into the path indicated by these, and started forward. But when they had gone on a little way, the path failed them, and a ravine yawned to receive them. Once more dejection and fear were rife. They did not know and could not see that they were right upon the enemy whom they sought. But presently gleams of daylight came, here and there a man thought he heard voices, and soon they actually saw a Greek outpost entrenched at the foot of the cliffs. ⁵ So then Cato halted his forces there, and summoned the men of Firmume to a private conference. These soldiers he had always found trusty and zealous in his service. When they had run up and stood grouped about him, he said: "I must take one of the enemy's men alive, and learn from him who they are that form this advance guard, what their number is, and with what disposition and array their main body awaits us. ⁶ But the task demands the swift and bold leap of lions fearlessly rushing all unarmed upon the timorous beasts on which they prey." So spake Cato, and the Firmians instantly started, just as they were, rushed down the mountain-side, and ran upon the enemy's sentinels. Falling upon them unexpectedly, they threw them all into confusion and scattered them in flight; one of them they seized, arms and all, and delivered him over to Cato. ⁷ From the captive Cato learned that the main force of the enemy was encamped in the pass with the king himself, and that the detachment guarding the pass over the mountains was composed of six hundred picked Aetolians. Despising their small numbers and their carelessness, he led his troops against them at once, with bray of trumpet and battle-cry, being himself first to draw his sword. But when the enemy saw his men pouring down upon them from the cliffs, they fled to the main army, and filled them all with confusion.

¹⁴ ¹ Meanwhile Manius also, down below, threw his whole force forward into the pass and stormed the enemy's fortifications. Antiochus, being hit in the mouth with a stone which knocked his teeth out, wheeled his horse about for very anguish. Then his army gave way everywhere before the Roman onset. ² Although flight for them meant impracticable roads and helpless wanderings, while deep marshes and steep cliffs threatened those who slipped and fell, still,

they poured along through the pass into these, crowding one another on in their fear of the enemy's deadly weapons, and so destroyed themselves.

Cato, who was ever rather generous, it would seem, in his own praises, and did not hesitate to follow up his great achievements with boastings equally great, is very pompous in his account of this exploit. ³ He says that those who saw him at that time pursuing the enemy and hewing them down, felt convinced that Cato owed less to Rome than Rome to Cato; also that the consul Manius himself, flushed with victory, threw his arms about him, still flushed with his own victory, and embraced him for a long time, crying out for joy that neither he himself nor the whole Roman people could fittingly requite Cato for his benefactions. ⁴ Immediately after the battle he was sent to Rome as the messenger of his own triumphs. He had a fair passage to Brundisium, crossed the peninsula from there to Tarentum in a single day, travelled thence four days more, and on the fifth day after landing reached Rome, where he was the first to announce the victory. He filled the city full of joy and sacrifices, and the people with the proud feeling that it was able to master every land and sea.

¹⁵ ¹ These are perhaps the most remarkable features of Cato's military career. In political life, he seems to have regarded the impeachment and conviction of malefactors as a department worthy of his most zealous efforts. For he brought many prosecutions himself, assisted others in bringing theirs, and even instigated some to begin prosecutions, as for instance Petillius against Scipio. ² That great man, however, trampled the accusations against him under foot, as the splendour of his house and his own inherent loftiness of spirit prompted him to do, and Cato, unable to secure his capital conviction, dropped the case. But he so co-operated with the accusers of Lucius, Scipio's brother, as to have him condemned to pay a large fine to the state. This debt Lucius was unable to meet, and was therefore liable to imprisonment. Indeed, it was only at the intercession of the tribunes that he was at last set free.

³ We are also told that a certain young man, who had got a verdict of civil outlawry against an enemy of his dead father, was passing through the forum on the conclusion of the case, and met Cato, who greeted him and said: "These are the sacrifices we must bring to the spirits of our parents; not lambs and kids, but the condemnations and tears of their enemies." However, he himself did not go unscathed, but wherever in his political career he gave his enemies the slightest handle, he was all the while suffering prosecutions and running risk of condemnation. ⁴ It is said that he was defendant in nearly fifty cases, and in the last one when he was eighty-six years of age. It was in the course of this that he uttered the memorable saying: "It is hard for one who has lived among men of one generation, to make his defence before those of another." And even with this

case he did not put an end to his forensic contests, but four years later, at the age of ninety, he impeached Servius Galba. ⁵ Indeed, he may be said, like Nestor, to have been vigorous and active among three generations. For after many political struggles with Scipio the Great, as told above, he lived to be contemporary with Scipio the Younger, who was the Elder's grandson by adoption, and the son of that Paulus Aemilius who subdued Perseus and the Macedonians.

¹⁶ ¹ Ten years after his consulship, Cato stood for the censorship. This office towered, as it were, above every other civic honour, and was, in a way, the culmination of a political career. The variety of its powers was great, including that of examining into the lives and manners of the citizens. Its creators thought that no one should be left to his own devices and desires, without inspection and review, either in his marriage, or in the begetting of his children, or in the ordering of his daily life, or in the entertainment of his friends. ² Nay, rather, thinking that these things revealed a man's real character more than did his public and political career, they set men in office to watch, admonish, and chastise, that no one should turn aside to wantonness and forsake his native and customary mode of life. They chose to this office one of the so called patricians, and one of the plebeians. These officers were called censors, and they had authority to degrade a knight, or to expel a senator who led an unbridled and disorderly life. ³ They also revised the assessments of property, and arranged the citizens in lists according to their social and political classes. There were other great powers also connected with the office.

Therefore, when Cato stood for it, nearly all the best known and most influential men of the senatorial party united to oppose him. The men of noble parentage among them were moved by jealousy, thinking that nobility of birth would be trampled in the mire if men of ignoble origin forced their way up to the summits of honour and power; ⁴ while those who were conscious of base practices and of a departure from ancestral customs, feared the severity of the man, which was sure to be harsh and inexorable in the exercise of power. Therefore, after due consultation and preparation, they put up in opposition to Cato seven candidates for the office, who sought the favour of the multitude with promises of mild conduct in office, supposing, forsooth, that it wanted to be ruled with a lax and indulgent hand. ⁵ Cato, on the contrary, showed no complaisance whatever, but plainly threatened wrong-doers in his speeches, and loudly cried that the city had need of a great purification. He adjured the people, if they were wise, not to choose the most agreeable physician, but the one who was most in earnest. He himself, he said, was such a physician, and so was Valerius Flaccus, of the patricians. With him as colleague, and him alone, he thought he could cut and sear to some purpose the hydra-like luxury and

effeminacy of the time. As for the rest of the candidates, he saw that they were all trying to force their way into the office in order to administer it badly, since they feared those who would administer it well. ⁶ And so truly great was the Roman people, and so worthy of great leaders, that they did not fear Cato's rigour and haughty independence, but rejected rather those agreeable candidates who, it was believed, would do every thing to please them, and elected Flaccus to the office along with Cato. To Cato they gave ear, not as to one soliciting office, but as to one already in office and issuing his decrees.

¹⁷ ¹ As censor, then, Cato made Lucius Valerius Flaccus, his colleague and friend, chief senator. He also expelled many members of the Senate, including Lucius Quintius. This man had been consul seven years before, and, a thing which gave him more reputation than the consulship even, was brother of the Titus Flamininus who conquered King Philip. ² The reason for his expulsion was the following. There was a youth who, ever since his boyhood, had been the favourite of Lucius. This youth Lucius kept ever about him, and took with him on his campaigns in greater honour and power than any one of his nearest friends and kinsmen had. He was once administering the affairs of his consular province, and at a certain banquet this youth, as was his wont, reclined at his side, and began to pay his flatteries to a man who, in his cups, was too easily led about. "I love you so much," he said, "that once, when there was a gladiatorial show at home, a thing which I had never seen, I rushed away from it to join you, although my heart was set on seeing a man slaughtered." ³ "Well, for that matter," said Lucius, "don't lie there with any grudge against me, for I will cure it." Thereupon he commanded that one of the men who were lying under sentence of death be brought to the banquet, and that a lictor with an axe stand by his side. Then he asked his beloved if he wished to see the man smitten. The youth said he did, and Lucius ordered the man's head to be cut off.

⁴ This is the version which most writers give of the affair, and so Cicero has represented Cato himself as telling the story in his dialogue "On Old Age." But Livy says the victim was a Gallic deserter, and that Lucius did not have the man slain by a lictor, but smote him with his own hand, and that this is the version of the story in a speech of Cato's.

⁵ On the expulsion of Lucius from the Senate by Cato, his brother was greatly indignant, and appealed to the people, urging that Cato state his reasons for the expulsion. Cato did so, narrating the incident of the banquet. Lucius attempted to make denial, but when Cato challenged him to a formal trial of the case with a wager of money upon it, he declined. ⁶ Then the justice of his punishment was recognized. But once when a spectacle was given in the theatre, he passed along by the senatorial seats, and took his place as far away from them as he could.

Then the people took pity upon him and shouted till they had forced him to change his seat, thus rectifying, as far as was possible, and alleviating the situation.

⁷ Cato expelled another senator who was thought to have good prospects for the consulship, namely, Manilius, because he embraced his wife in open day before the eyes of his daughter. For his own part, he said, he never embraced his wife unless it thundered loudly; and it was a pleasantry of his to remark that he was a happy man when it thundered.

^{18 1} Cato was rather bitterly censured for his treatment of Lucius, the brother of Scipio, whom, though he had achieved the honour of a triumph, he expelled from the equestrian order. He was thought to have done this as an insult to the memory of Scipio Africanus. But he was most obnoxious to the majority of his enemies because he lopped off extravagance in living. This could not be done away with outright, since most of the people were already infected and corrupted by it, and so he took a roundabout way. ² He had all apparel, equipages, jewellery, furniture and plate, the value of which in any case exceeded fifteen hundred drachmas, assessed at ten times its worth, wishing by means of larger assessments to make the owners' taxes also larger. Then he laid a tax of three on every thousand asses thus assessed, in order that such property holders, burdened by their charges, and seeing that people of equal wealth who led modest and simple lives paid less into the public treasury, might desist from their extravagance. ³ As a result, both classes were incensed against them, but those who endured the taxes for the sake of their luxury, and those no less who put away their luxury because of the taxes. For most men think themselves robbed of their wealth if they are prevented from displaying it, and that display of it is made in the superfluities, not in the necessities of life. This, we are told, is what most astonished Ariston the philosopher, namely, that those possessed of the superfluities of life should be counted happy, rather than those well provided with life's necessary and useful things. ⁴ Scopas the Thessalian, when one of his friends asked for something of his which was of no great service to him, with the remark that he asked for nothing that was necessary and useful, replied: "And yet my wealth and happiness are based on just such useless and superfluous things." Thus the desire for wealth is no natural adjunct of the soul, but is imposed upon it by the false opinions of the outside world.

^{19 1} However, Cato paid not the slightest heed to his accusers, but grew still more strict. He cut off the pipes by which people conveyed part of the public water into their private houses and gardens; he upset and demolished all buildings that encroached on public land; he reduced the cost of public works to the lowest, and forced the rent of public lands to the highest possible figure. ² All

these things brought much odium upon him. Titus Flamininus headed a party against him which induced the Senate to annul as useless the outlays and payments which he had authorised for temples and public works, and incited the boldest of the tribunes to call him to account before the people and fine him two talents. The Senate also strongly opposed the erection of the basilica which he built at the public cost below the council-house in the Forum, and which was called the Basilica Porcia.

³ Still, it appears that the people approved of his censorship to an amazing extent. At any rate, after erecting a statue to his honour in the temple of Health, they commemorated in the inscription upon it, not the military commands nor the triumph of Cato, but, as the inscription may be translated, the fact “that when the Roman state was tottering to its fall, he was made censor, and by helpful guidance, wise restraints, and sound teachings, restored it again.” ⁴ And yet, before this time he used to laugh at those who delighted in such honours, saying that, although they knew it not, their pride was based simply on the work of statuaries and painters, whereas his own images, of the most exquisite workmanship, were borne about in the hearts of his fellow citizens. And to those who expressed their amazement that many men of no fame had statues, while he had none, he used to say: “I would much rather have men ask why I have no statue, than why I have one.” ⁵ In short, he thought a good citizen should not even allow himself to be praised, unless such praise was beneficial to the commonwealth.

And yet of all men he has heaped most praises upon himself. He tells us that men of self-indulgent lives, when rebuked for it, used to say; “We ought not to be blamed; we are no Catos.” Also that those who imitated some of his practices and did it clumsily, were called “left-handed Catos.” ⁶ Also that the Senate looked to him in the most dangerous crises as seafarers to their helmsman, and often, if he was not present, postponed its most serious business. These boasts of his are confirmed, it is true, by other witnesses, for he had great authority in the city, alike for his life, his eloquence, and his age.

²⁰ ¹ He was also a good father, a considerate husband, and a household manager of no mean talent, nor did he give only a fitful attention to this, as a matter of little or no importance. Therefore I think I ought to give suitable instances of his conduct in these relations. He married a wife who was of gentler birth than she was rich, thinking that, although the rich and high-born may be alike given to pride, still, women of high birth have such a horror of what is disgraceful that they are more obedient to their husbands in all that is honourable. ² He used to say that the man who struck his wife or child, laid violent hands on the holiest of holy things. Also that he thought it more

praiseworthy to be a good husband than a good senator, nay, there was nothing else to admire in Socrates of old except that he was always kind and gentle in his intercourse with a shrewish wife and stupid sons. After the birth of his son, no business could be so urgent, unless it had a public character, as to prevent him from being present when his wife bathed and swaddled the babe. ³ For the mother nursed it herself, and often gave suck also to the infants of her slaves, that so they might come to cherish a brotherly affection for her son. As soon as the boy showed signs of understanding, his father took him under his own charge and taught him to read, although he had an accomplished slave, Chilo by name, who was a school-teacher, and taught many boys. ⁴ Still, Cato thought it not right, as he tells us himself, that his son should be scolded by a slave, or have his ears tweaked when he was slow to learn, still less that he should be indebted to his slave for such a priceless thing as education. He was therefore himself not only the boys' reading-teacher, but his tutor in law, and his athletic trainer, and he taught his son not merely to hurl the javelin and fight in armour and ride the horse, but also to box, to endure heat and cold, and to swim lustily through the eddies and billows of the Tiber. ⁵ His History of Rome, as he tells us himself, he wrote out with his own hand and in large characters, that his son might have in his own home an aid to acquaintance with his country's ancient traditions. He declares that his son's presence put him on his guard against indecencies of speech as much as that of the so called vestal Virgins, and that he never bathed with him. This, indeed, would seem to have been a general custom with the Romans, for even fathers-in law avoided bathing with their sons-in law, because they were ashamed to uncover their nakedness. ⁶ Afterwards, however, when they had learned from the Greeks their freedom in going naked, they in their turn infected the Greeks with the practice even when women were present.

So Cato wrought at the fair task of moulding and fashioning his son to virtue, finding his zeal blameless, and his spirit answering to his good natural parts. But since his body was rather too delicate to endure much hardship, he relaxed somewhat in his favour the excessive rigidity and austerity of his own mode of life. ⁷ But his son, although thus delicate, made a sturdy soldier, and fought brilliantly under Paulus Aemilius in the battle against Perseus. On that occasion his sword either was smitten from his hand or slipped from his moist grasp. Distressed at this mishap, he turned to some of his companions for aid, and supported by them rushed again into the thick of the enemy. After a long and furious struggle, he succeeded in clearing the place, and found the sword at last among the many heaps of arms and dead bodies where friends and foes alike lay piled upon one another. ⁸ Paulus, his commander, admired the young man's exploit, and there is still extant a letter written by Cato himself to his son, in

which he heaps extravagant praise upon him for this honourable zeal in recovering his sword. The young man afterwards married Tertia, a daughter of Paulus and a sister of the younger Scipio, and his admission into such a family was due no less to himself than to his father. Thus Cato's careful attention to the education of his son bore worthy fruit.

²¹ ¹ He owned many domestics, and usually bought those prisoners of war who were young and still capable of being reared and trained like whelps or colts. Not one of his slaves ever entered another man's house unless sent thither by Cato or his wife, and when such an one was asked what Cato was doing, he always answered that he did not know. ² A slave of his was expected either to be busy about the house, or to be asleep, and he was very partial to the sleepy ones. He thought these gentler than the wakeful ones, and that those who had enjoyed the gift of sleep were better for any kind of service than those who lacked it. In the belief that his slaves were led into most mischief by their sexual passions, he stipulated that the males should consort with the females at a fixed price, but should never approach any other woman.

³ At the outset, when he was still poor and in military service, he found no fault at all with what was served up to him, declaring that it was shameful for a man to quarrel with a domestic over food and drink. But afterwards, when his circumstances were improved and he used to entertain his friends and colleagues at table, no sooner was the dinner over than he would flog those slaves who had been remiss at all in preparing or serving it. ⁴ He was always contriving that his slaves should have feuds and dissensions among themselves; harmony among them made him suspicious and fearful of them. He had those who were suspected of some capital offence brought to trial before all their fellow servants, and, if convicted, put to death.

⁵ However, as he applied himself more strenuously to money-getting, he came to regard agriculture as more entertaining than profitable, and invested his capital in business that was safe and sure. He bought ponds, hot springs, districts given over to fullers, all of which brought him in large profits, and "could not," to use his own phrase, "be ruined by Jupiter." ⁶ He used to loan money also in the most disreputable of all ways, namely, on ships, and his method was as follows. He required his borrowers to form a large company, and when there were fifty partners and as many ships for his security, he took one share in the company himself, and was represented by Quintio, a freedman of his, who accompanied his clients in all their ventures. In this way his entire security was not imperilled, but only a small part of it, and his profits were large. He used to lend money also to those of his slaves who wished it, and they would buy boys with it, and after training and teaching them for a year, at Cato's expense, would sell them

again. Many of these boys Cato would retain for himself, reckoning to the credit of the slave the highest price bid for his boy. ⁸ He tried to incite his son also to such economies, by saying that it was not the part of a man, but of a widow woman, to lessen his substance. But that surely was too vehement a speech of Cato's, when he went so far as to say that a man was to be admired and glorified like a god if the final inventory of his property showed that he had added to it more than he had inherited.

²² ¹ When he was now well on in years, there came as ambassadors from Athens to Rome, Carneades the Academic, and Diogenes the Stoic philosopher, to beg the reversal of a certain decision against the Athenian people, which imposed upon them a fine of five hundred talents. The people of Oropus had brought the suit, the Athenians had let the case go by default, and the Sicyonians had pronounced judgment against them. ² Upon the arrival of these philosophers, the most studious of the city's youth hastened to wait upon them, and became their devoted and admiring listeners. The charm of Carneades especially, which had boundless power, and a fame not inferior to its power, won large and sympathetic audiences, and filled the city, like a rushing mighty wind, with the noise of his praises. ³ Report spread far and wide that a Greek of amazing talent, who disarmed all opposition by the magic of his eloquence, had infused a tremendous passion into the youth of the city, in consequence of which they forsook their other pleasures and pursuits and were "possessed" about philosophy. The other Romans were pleased at this, and glad to see their young men lay hold of Greek culture and consort with such admirable men. ⁴ But Cato, at the very outset, when this zeal for discussion came pouring into the city, was distressed, fearing lest the young men, by giving this direction to their ambition, should come to love a reputation based on mere words more than one achieved by martial deeds. And when the fame of the visiting philosophers rose yet higher in the city, and their first speeches before the Senate were interpreted, at his own instance and request, by so conspicuous a man as Gaius Acilius, Cato determined, on some decent pretext or other, to rid and purge the city of them all. ⁵ So he rose in the Senate and censured the magistrates for keeping in such long suspense an embassy composed of men who could easily secure anything they wished, so persuasive were they. "We ought," he said, "to make up our minds one way or another, and vote on what the embassy proposes, in order that these men may return to their schools and lecture to the sons of Greece, while the youth of Rome give ear to their laws and magistrates, as heretofore."

²³ ¹ This he did, not, as some think, out of personal hostility to Carneades, but because he was wholly averse to philosophy, and made mock of all Greek culture and training, out of patriotic zeal. He says, for instance, that Socrates was

a mighty prattler, who attempted, as best he could, to be his country's tyrant, by abolishing its customs, and by enticing his fellow citizens into opinions contrary to the laws. ² He made fun of the school of Isocrates, declaring that his pupils kept on studying with him till they were old men, as if they were to practise their arts and plead their cases before Minos in Hades. And seeking to prejudice his son against Greek culture, he indulges in an utterance all too rash for his years, declaring, in the tone of a prophet or a seer, that Rome would lose her empire when she had become infected with Greek letters.^g ³ But time has certainly shown the emptiness of this ill-boding speech of his, for while the city was at the zenith of its empire, she made every form of Greek learning and culture her own.

It was not only Greek philosophers that he hated, but he was also suspicious of Greeks who practised medicine at Rome. He had heard, it would seem, of Hippocrates' reply when the Great King of Persia consulted him, with the promise of a fee of many talents, namely, that he would never put his skill at the service of Barbarians who were enemies of Greece. He said all Greek physicians had taken a similar oath, ⁴ and urged his son to beware of them all. He himself, he said, had written a book of recipes, which he followed in the treatment and regimen of any who were sick in his family. He never required his patients to fast, but fed them on greens, on bits of duck, pigeon, or hare. Such a diet, he said, was light and good for sick people, except that it often causes dreams. By following such treatment and regimen he said he had good health himself, and kept his family in good health.

²⁴ ¹ Such presumption on his part seems not to have gone unpunished, for he lost his wife and his son. He himself was well confirmed in bodily health and vigour, and long withstood the assaults of age. Even when an old man he was prone to indulge his sexual appetite, and at last married a wife when he was long past the marrying age. This was the way it came about. After the death of his wife, he married his son to the daughter of Aemilius Paulus, the sister of Scipio, but he himself, in his widowhood, took solace with a slave girl who secretly visited his bed. ² Of course, in a small house with a married woman in it, the matter was discovered, and once, when the girl seemed to flaunt her way rather too boldly to the chamber, the old man could not help noticing that his son, although he said nothing, looked very sour, and turned away. Perceiving that the thing displeased his children, Cato did not upbraid or blame them at all, but as he was going down in his usual way to the forum with his clients, called out with a loud voice to a certain Salonius, who had been one of his under-secretaries, and was now in his train, asking him if he had found a good husband for his young daughter. ³ The man said he had not, and would not do so without first consulting his patron. "Well then," said Cato, "I have found a suitable son-in law for you,

unless indeed his age should be displeasing; in other ways no fault can be found with him, but he is a very old man.” Salonius at once bade him take the matter in charge and give the maid to the man of his choice, since she was a dependant of his and in need of his kind services. Then Cato, without any more ado, said that he asked the damsel to wife for himself. ⁴ At first, as was natural, the proposal amazed the man, who counted Cato far past marriage, and himself far beneath alliance with a house of consular dignity and triumphal honours; but when he saw that Cato was in earnest, he gladly accepted his proposal, and as soon as they reached the forum the banns were published.

While the marriage was in hand, Cato’s son, accompanied by his friends, asked his father if it was because he had any complaint to make against him that he was now foisting a step-mother upon him. ⁵ “Heaven forbid! my son,” cried Cato, “all your conduct towards me has been admirable, and I have no fault to find with you; but I desire to bless myself and my country with more such sons.” However, they say that this sentiment was uttered long before by Peisistratus, the tyrant of Athens, who gave his grown up sons a step-mother in the person of Timonassa of Argolis, by whom he is said to have had Iophon and Thessalus. ⁶ Of this second marriage a son was born to Cato, who was named Salonius, after his mother’s father. But his elder son died in the praetorship. Cato often speaks of him in his books as a brave and worthy man, and is said to have borne his loss with all the equanimity of a philosopher, remitting not a whit because of it his ardour in the public service. ⁷ For he was not, like Lucius Lucullus and Metellus Pius in after times, too enfeebled by old age to serve the people, regarding the service of the state as a burdensome duty; nor did he, like Scipio Africanus before him, because of envious attacks upon his reputation, turn his back upon the people and make leisure his end and aim for the rest of his life; ⁸ but rather, as someone persuaded Dionysius to regard his sovereignty as his fairest winding-sheet, so he held public service to be the fairest privilege of old age. For recreation and amusement, when he had leisure therefor, he resorted to the writing of books and to farming.

²⁵ ¹ He composed speeches, then, on all sorts of subjects, and histories, and as for farming, he followed it in earnest when he was young and poor, — indeed, he says he then had only two ways of getting money, farming and frugality, — but in later life he was only a theoretical and fancy farmer. He also composed a book on farming, in which he actually gave recipes for making cakes and preserving fruit, so ambitious was he to be superior and peculiar in everything. ² The dinners, too, which he gave in the country, were quite plentiful. He always asked in congenial country neighbours, and made merry with them, and not only did those of his own age find in him an agreeable and much desired companion,

but also the young. For he was a man of large experience, who had read and heard much that was well worth repeating. ³ He held the table to be the very best promoter of friendship, and at his own, the conversation turned much to the praise of honourable and worthy citizens, greatly to the neglect of those who were worthless and base. About such Cato suffered no table-talk, either by way of praise or blame.

²⁶ ¹ The last of his public services is supposed to have been the destruction of Carthage. It was Scipio the Younger who actually brought the task to completion, but it was largely in consequence of the advice and counsel of Cato that the Romans undertook the war. It was on this wise. Cato was sent on an embassy to the Carthaginians and Masinissa the Numidian, who were at war with one another, to inquire into the grounds of their quarrel. Masinissa had been a friend of the Roman people from the first, and the Carthaginians had entered into treaty relations with Rome after the defeat which the elder Scipio had given them. The treaty deprived them of their empire, and imposed a grievous money tribute upon them. ² Cato, however, found the city by no means in a poor and lowly state, as the Romans supposed, but rather teeming with vigorous fighting men, overflowing with enormous wealth, filled with arms of every sort and with military supplies, and not a little puffed up by all this. He therefore thought it no time for the Romans to be ordering and arranging the affairs of Masinissa and the Numidians, but that unless they should repress a city which had always been their malignant foe, now that its power was so incredibly grown, they would be involved again in dangers as great as before. ³ Accordingly, he returned with speed to Rome, and advised the Senate that the former calamitous defeats of the Carthaginians had diminished not so much their power as their foolhardiness, and were likely to render them in the end not weaker, but more expert in war; their present contest with Numidia was but a prelude to a contest with Rome, while peace and treaty were mere names wherewith to cover their postponement of war till a fit occasion offered.

²⁷ ¹ In addition to this, it is said that Cato contrived to drop a Libyan fig in the Senate, as he shook out the folds of his toga, and then, as the senators admired its size and beauty, said that the country where it grew was only three days' sail from Rome. And in one thing he was even more savage, namely, in adding to his vote on any question whatsoever these words: "In my opinion, Carthage must be destroyed." ^h Publius Scipio Nasica, on the contrary, when called upon for his vote, always ended his speech with this declaration: "In my opinion, Carthage must be spared." ² He saw, probably, that the Roman people, in its wantonness, was already guilty of many excesses, in the pride of its prosperity, spurned the control of the Senate, and forcibly dragged the whole state with it, whithersoever

its mad desires inclined it. He wished, therefore, that the fear of Carthage should abide, to curb the boldness of the multitude like a bridle, believing her not strong enough to conquer Rome, nor yet weak enough to be despised. ³ But this was precisely what Cato dreaded, when the Roman people was inebriated and staggering with its power, to have a city which had always been great, and was now but sobered and chastened by its calamities, for ever threatening them. Such external threats to their sovereignty ought to be done away with altogether, he thought, that they might be free to devise a cure for their domestic failings.

⁴ In this way Cato is said to have brought to pass the third and last war against Carthage, but it had no sooner begun than he died, having first prophesied of the man who was destined to end it. This man was then young, but as tribune in the army, he was giving proofs of judgment and daring in his engagements with the enemy. Tidings of this came to Rome, and Cato is said to have cried on hearing them: —

“Only he has wits, but the rest are fluttering shadows.”

⁵ This utterance of Cato’s, Scipio speedily confirmed by his deeds. Cato left one son by his second wife, whose surname, as we have already remarked, was Salonius; and one grandson by the son who died before him. Salonius died in the praetorship, but the son whom he left, Marcus, came to be consul. This Marcus was the grandfather of Cato the philosopher, who was the best and most illustrious man of his time.

MARCUS PORCIUS CATO by Cornelius Nepos



Translated by John Selby Watson

Cato's birth, youth, and the offices that he held — His consulship in Hither Spain; his severity as censor — His eulogy; his studies and writings.

I. CATO, born in the municipal town of Tusculum, resided, when a very young man, and before he turned his attention to the attainment of office, in the territory of the Sabines, because he had an estate there which had been left him by his father. It was at the persuasion of Lucius Valerius Flaccus, whom he had for a colleague in his consulate and censorship, that he removed, as Marcus Perperna Censorius was accustomed to relate, to Rome, and proceeded to employ himself in the forum. He served his first campaign at the age of seventeen, in the consulship of Quintus Fabius Maximus and Marcus Claudius Marcellus. He was military tribune in Sicily. When he returned from thence, he attached himself to the staff of Caius Claudius Nero, and his service was thought of great value in the battle near Sena, in which Hasdrubal, the brother of Hannibal, fell. As quaestor, he happened to be under the consul, Publius Cornelius Scipio Africanus, with whom he did not live according to the intimate connexion of his office; for he was at variance with him during his whole life. He was made aedile of the commons with Caius Helvius. As praetor he had the province of Sardinia, from which, when he was returning from Africa some time before in the character of quaestor, he had brought Quintus Ennius, the poet, an act which we value not less than the noblest triumph that Sardinia could have afforded.

II. He held the consulship with Lucius Valerius Flaccus, and had by lot Hither Spain for his province, from which he gained a triumph. As he stayed there a long time, Publius Scipio Africanus, when consul for the second time, wanted to remove him from his province, and to succeed him himself, but was unable, through the senate, to effect that object, even though he then possessed the greatest authority in the state; for the government was then conducted, not with regard for personal influence, but according to justice. Being displeased with the senate on this account, Scipio, after his consulship was ended, remained in the city as a private person.

Cato, being made censor with the Flaccus above mentioned, exercised that office with severity; for he inflicted penalties on many noblemen, and introduced many new regulations into his edict, by means of which luxury, which was even then beginning to germinate, might be repressed. For about eighty years, from his youth to the end of his life, he never ceased to incur enmity in behalf of the commonwealth. Though attacked by many, he not only suffered no loss of character, but increased in reputation for virtue as long as he lived.

III. In all his pursuits he gave proofs of singular intelligence and industry; for he was a skilful agriculturist, well-informed in political affairs, experienced in the law, an eminent, commander, a respectable orator. He was also much devoted to literature, and though he had entered on the study of it at an advanced age, yet he made such progress in it, that you could not easily discover anything, either in Grecian or Italian history, that was unknown to him. From his youth he composed speeches. In his old age he began to write his Histories, of which there are ten books. The first contains the acts of the kings of Rome; the second and third show from whence each Italian state had its rise, for which reason he seems to have called the whole body of them *Origines*; in the fourth is related the first Carthaginian war; in the fifth the second; and all these subjects are treated in a summary way. Other wars he has narrated in a similar manner, down to the praetorship of Lucius Galba, who spoiled the Lusitanians. The leaders in these wars, however, he has not named, but has stated the facts without the names. In the same books he has given an account of whatever seemed remarkable in Italy and Spain; and there are shown in them much labour and industry, and much learning.

Of his life and manners we have spoken more at large in the book which we wrote expressly concerning him at the request of Titus Pomponius Atticus; and we therefore refer those who would know Cato to that volume.

CATO MAIOR DE SENECTUTE (On Old Age) by Cicero



Translated by E. S. Shuckburgh

Written in 44 BC, when Cicero was sixty-two years old, this famous essay explores the subject of aging and death. It has retained its popularity due to its profound subject matter as well as its concise and elegant use of language. The essay is written as though Cato the Elder, famous for his conservatism and opposition to the Hellenisation of Rome, was lecturing to Scipio Africanus and Gaius Laelius Sapiens.

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(i.) ORIGIN AND SCOPE.

1. *Date and Circumstances of Composition.*

The date at which the *Cato Maior* was written can be determined with almost perfect exactness. A mention in Cicero's work entitled *De Divinatione* shows that the *Cato Maior* preceded that work by a short time. The *De Divinatione* was written after the assassination of Caesar, that is, after the 15th of March in the year 44. Again, the *Cato Maior* is mentioned as a recent work in three letters addressed by Cicero to Atticus. The earliest of these letters was written on or about the 12th of May, 44. We shall hardly err, therefore, if we assume that Cicero composed the *Cato Maior* in April of the year 44. This agrees also with slight indications in the work itself. In the dedicatory introduction Cicero speaks of troubles weighing heavily on himself and Atticus. Any one who reads the letters to Atticus despatched in April, 44, will have little doubt that the troubles hinted at are the apprehensions as to the course of Antonius, from whom Cicero had personally something to fear. Atticus was using all the influence he could bring to bear on Antonius in order to secure Cicero's safety; hence Cicero's care to avoid in the dedication all but the vaguest possible allusions to politics. Had that introduction been written before Caesar's death, we should have had plain allusions (as in the prooemia of the *Academica*, the *De Finibus*, the *Tusculan Disputations*, and the *De Natura Deorum*) to Caesar's dictatorship.

The time was one of desperate gloom for Cicero. The downfall of the old constitution had overwhelmed him with sorrow, and his brief outburst of joy over Caesar's death had been quickly succeeded by disgust and alarm at the proceedings of Antonius. The deep wound caused by his daughter's death was still unhealed. It is easy to catch in the *Cato Maior* some echoes of his grief for her. When it is said that of all Cato's titles to admiration none is higher than the fortitude he showed in bearing the death of his son, the writer is thinking of the struggle he himself had been waging against a like sorrow for more than a year past; and when Cato expresses his firm conviction that he will meet his child beyond the grave, we can see Cicero's own yearning for reunion with his deeply loved *Tullia*.

2. *Greek Sources.*

All Cicero's philosophical and rhetorical writings were confessedly founded more or less on Greek originals. The stores from which he principally drew in writing the *Cato Maior* are clearly indicated in several parts of the work. Passages from Xenophon's *Oeconomicus* are translated in Chapters 17 and 22. In Chapters 2 and 3 there is a close imitation of the conversation between Socrates and Cephalus at the beginning of Plato's *Republic*, while in Chapter 21 is reproduced one of the most striking portions of the *Phaedo*, 72 E-73 B, 78-80. The view of the divine origin and destiny of the human soul contained in the passage from the *Phaedo* is rendered by Cicero in many of his works, and was held by him with quite a religious fervor and sincerity.

Besides these instances of special indebtedness Cicero, in composing the *Cato Maior*, was no doubt under obligations of a more general kind to the Greeks. The form of the dialogue is Greek, and Aristotelian rather than Platonic. But further, it is highly probable that Cicero owed to some particular Greek dialogue on Old Age the general outline of the arguments he there brings forward. Many of the Greek illustrative allusions may have had the same origin, though in many cases Roman illustrations must have been substituted for Greek. Whether the dialogue by Aristo Cius, cursorily mentioned in the *Cato Maior*, was at all used by Cicero or not it is impossible to determine.

3. Purpose.

The *Cato Maior* is a popular essay in Ethics, applying the principles of philosophy to the alleviation of one of life's chief burdens, old age. In ancient times, when philosophy formed the real and only religion of the educated class, themes like this were deemed to afford a worthy employment for the pens even of the greatest philosophers. Such essays formed the only substitute the ancients had for our Sermons. There can be no doubt of Cicero's sincerity when he says that the arguments he sets forth in the treatise had given him real comfort, and the opening words of the dedication show that he meant and hoped to administer the same comfort to his friend Atticus, who indeed acknowledged the benefit he derived from the work. When Cicero wrote the treatise he was himself sixty-two years of age, while his friend was three years older. He speaks, therefore, rather euphemistically when he says that his purpose is to lighten the trouble of an old age which is already close at hand, or at all events approaching.

But in addition to the main ethical purpose, there was, as in many of Cicero's works, a distinct political purpose. He desired to stimulate in his readers an admiration for what he regarded as the golden age of Roman politics, the era of the Punic wars, and to do this by making the contrast between that age and his

own appear as striking as possible. A like double purpose is apparent throughout the *De Re Publica*, where Africanus the younger is the chief personage, and in the treatise on Friendship, where Laelius is the central figure. For the dialogue on Old Age M. Porcius Cato the Censor is selected as the principal speaker for two reasons: first, because he was renowned for the vigor of mind and body he displayed in advanced life; and secondly, because in him were conspicuously exhibited the serious simplicity, the unswerving adherence to principle, and the self-sacrificing patriotism which were the ideal Roman virtues, and which Cicero could not find among the politicians of his time.

4. *Form and Language.*

The Cato Maior, like most of Cicero's philosophical writings, is cast in the form of a dialogue. Among the ancients the dialogue was a common rhetorical device, especially in the presentation of abstruse subjects. The introduction of characters to conduct the discussion gave vividness and clearness to the unfolding of the argument, as well as a kind of dramatic interest to the production. In the Cato Maior and the Laelius, as generally, Cicero followed the plan of Aristotle's dialogues (now lost) rather than that of the dialogues of Plato. In the former there was more of exposition and less of discussion than in the latter; one person stated his views on some question, and the company in attendance only made occasional remarks without attempting to debate the question. In the latter, although one person, Socrates, is everywhere prominent, others are continually drawn into the discussions, and there is a quick interchange of question and answer. The Aristotelian form was better adapted to Cicero's purposes than the Platonic; the progress of the argument was less interrupted, and thus better opportunity for a symmetrical development of the theme was afforded. Then, too, the former was more popular. The style of Aristotle had been imitated by Theophrastus and many other writers down to Cicero's time, while that of Plato had found hardly any imitators.

The editors of the Cato Maior have generally assumed that Cicero attempted to give an antique coloring to the diction of the dialogue in order to remind readers of Cato's own style. It is only necessary to read a page or two of Cato's *De Re Rustica* to have this illusion dispelled. The only things actually alleged to be archaisms are (1) the use of deponent participles as passives in §§ 4, 59, 74, a thing common enough in Cicero; (2) the occurrence of *quasi = quem ad modum* in § 71; (3) of *audaciter = audacter* in § 72; (4) of *tuerentur* for *intuerentur* in § 77; (5) of *neutiquam* in § 42; (6) of the nominative of the gerundive governing an accusative case in § 6. In every instance the notes will supply a refutation of

the allegation. That Cicero should attempt to write in any style but his own is exceedingly improbable.

5. Personages.

The conversation is supposed to take place between Cato, Scipio Africanus the younger, and Laelius, in the year before Cato's death, *i.e.* 150 B.C., when he was in his eighty-fourth year, Scipio being about 35 and Laelius a few years older.

(1.) *Cato.* M. Porcius Cato was born in 234 B.C. at the ancient Latin town of Tusculum. Little is known of his family except that it was plebeian, and possessed a small patrimony in the territory of the Sabines, close to the farm of M'. Curius Dentatus, one of Cato's great heroes and models. The heads of the family, so far as memory extended, had distinguished themselves as tough warriors and hardy farmers. Among the Sabines, who even down to the times of the Empire were famed for simplicity of manners and the practice of all the sterner virtues, Cato passed those portions of his life which were not occupied with business of state. From his earliest days he toiled in his own fields, and contented himself with the hardest rustic life. Yet even in his boyhood Cato must have passed intervals at Rome, and seen something of the great statesmen and generals of the time. He seems to have received when young as thorough an education as was possible without learning Greek, such an education as was to be obtained only in the capital. He grew up to manhood in the comparatively quiet period between the first and the second Punic wars; the most exciting event of his younger years must have been the destruction at Clastidium of the vast hordes of Celts who had swept over the northern half of Italy, almost within reach of Rome.

Cato was of the age for military service about the time of the battle of Lake Trasimenus, and entered the army then as a common soldier. The first expedition in which he is definitely said to have taken part is that of Q. Fabius Maximus Cunctator against Hannibal in Campania, in 214. This Roman commander was a man entirely after Cato's heart, and became one of his models in public life.

Before and during the early years of his soldier's life, Cato succeeded in winning some reputation as an orator, having practised first in the provincial courts near his home, and afterwards at Rome. This reputation as well as his great force of character procured for him a powerful life-long friend and patron, M. Valerius Flaccus, a statesman of the old Roman conservative-democratic school of politics, the leader of which was Fabius Cunctator. Through the influence of Flaccus, possibly with the aid of Fabius, Cato became military tribune, and served with that rank under Marcellus in Sicily, under Fabius again

at the capture of Tarentum in 209, and under C. Claudius Nero at the battle of the Metaurus, where he contributed materially to that great victory.

In 204 Cato began his political career with the quaestorship. As he was a *novus homo* and a man of small private means, it was no small distinction that he had forced his way to office in his thirtieth year. The lot assigned him as quaestor to Scipio, then in Sicily and about to cross over into Africa. The chance was most unfortunate, if for no other reason, because Cato was intimately connected with the party in the senate opposed to Scipio, which had been attempting to bring him to trial for the atrocities committed by the Roman army in southern Italy. But in addition the two men were so utterly different that there was no possibility of the quaestor standing in that filial relation to his consul, which old Roman custom required. As financial officer, Cato complained of the luxury and extravagance which Scipio allowed not only to himself but to his army. Yet the complaint was made not so much on economic as on moral grounds; it seemed to Cato that the old Roman discipline and power to endure hardships were being swept away. The dispute was ended by Scipio allowing Cato to return to Rome, some authorities say from Sicily, others from Africa. According to one writer, he came home by way of Sardinia and brought thence with him Ennius the poet.

In 199 Cato was plebeian aedile, and exercised with severity the police jurisdiction pertaining to that office, yet so as to win popular approval, since he was chosen praetor for 198 without the usual interval. The province of Sardinia was entrusted to him, and he strained every nerve to make his government present as strong a contrast as possible with the lax and corrupt administration of the nobles who took Scipio for their pattern. The troops were sternly disciplined, and law-breakers of every kind severely dealt with; in money matters the strictest economy prevailed; all gifts from provincials to Roman officers were forbidden. The praetor, the great representative of Roman power, passed from town to town attended by a single servant.

In 196 Cato was occupied with his canvass for the consulship of the year 195, to which he was elected in company with his friend Flaccus. Cato was the first *novus homo* elected since C. Flaminius, the consul of 217. It is probable, though not certain, that he paved the way to his election by carrying the first of the *leges Porciae*, restricting the right of punishing Roman citizens. During the whole of his career Cato showed a high sense of the importance of the individual *civis Romanus*.

One of the first official acts of the new consul was to deliver a set speech to the people against a proposal to repeal the Oppian law, passed twenty years

before, the object of which was to prevent lavish expenditure on dress and adornments, particularly by women. We have a lively report of Cato's speech from Livy's pen, partly founded on the speech as published by Cato himself. The earnest pleading in favor of simple manners and economy failed, after having almost caused an open insurrection on the part of the women.

The two new provinces in Spain, Hispania Citerior and Ulterior, were still in a very unsettled state. The nearer province was made a consular province and assigned to Cato; the praetor who governed the farther province was also placed under Cato's jurisdiction. Before leaving Rome Cato carried a law for protecting the provincials from extortion. During the whole of his year of office he practised with the utmost exactness his principles of purity, simplicity, and economy in public affairs. He is said to have started from his house on the journey to Spain with only three servants, but when he got as far as the forum, it struck him that such an attendance was scarcely worthy of a Roman consul; so he purchased two more slaves on the spot! In the same spirit, before returning he sold his horse that the state might not be at the expense of transporting it to Italy. Cato was no less careful of the revenue than of the expenditure. He largely increased the productiveness of the mines and other property belonging to the state, and all goods captured from the enemy were sold for the benefit of the exchequer. On leaving the province Cato made an unusually large gift to each soldier, saying that it was better for all to bring home silver than for a few to bring home gold. The provincials were thoroughly content with their ruler and ever after looked on him as their best friend. The army was kept in the strictest discipline. Some disorderly conduct of the *equites* was rebuked by Cato in a bitter harangue which he afterwards published. Partly by craft, partly by good leadership in the field, Cato broke the strength of the turbulent natives and returned to enjoy a well-earned triumph. In the same year (194) a brilliant triumph was celebrated by Flamininus.

Scipio, probably uneasy at the great reputations quickly won by Flamininus and Cato, secured his second consulship for the year 194, but failed to achieve anything remarkable. Cato probably spent the three years after his return for the most part at his Sabine farm. When the war against Antiochus broke out, he took service along with his friend Flaccus on the staff of the consul Glabrio, and by a difficult march over the mountains broke in on the king's rear, and so was chiefly instrumental in winning the great battle of Thermopylae, by which Antiochus was driven out of Greece. Immediately after the battle Cato returned home with despatches. We have dim and uncertain information that he took the field once or twice again, but his career as a soldier was practically ended.

From this time to his death, forty years later, Cato was the leading figure on the stage of Roman politics. In season and out of season he attacked abuses or innovations in speeches addressed to the senate, the people, or the courts. Soon after his return from Thessaly he struck a heavy blow at the unrepugnant honor-hunting among the magistrates, of which the example had been set by P. Scipio Africanus. Most provincial governors drove their subjects into war, sent lying despatches home about their victories, and claimed a triumph. In 190 Cato attacked with success the proposal to grant a triumph to Q. Minucius Thermus, who had already triumphed over the Spaniards as praetor, and after his consulship in 193 had fought against the Ligurians. Cato's next victim was his former commander M'. Acilius Glabrio, who came forward at the same time with Cato, Marcellus (a son of the captor of Syracuse), L. Cornelius Scipio Nasica, T. Quinctius Flaminius (the conqueror of Macedonia) and Cato's friend L. Valerius Flaccus, as candidate for the censorship of 189. Cato by his violent speeches procured the trial of Glabrio for appropriating the plunder captured in Thessaly, and himself gave evidence concerning some property which had disappeared. Glabrio denounced Cato as a perjurer, but yet retired from his candidature. On this occasion Cato and Flaccus failed, Marcellus being elected as plebeian and Flaminius as patrician censor.

In the next year (188) Cato acted in the senate with the party which tried unsuccessfully to refuse the triumph to the two consuls of 189, M. Fulvius Nobilior and Cn. Manlius Vulso, the former of whom had gained none but trifling advantages over the Aetolians, while the latter had disgraced the Roman name by making war without authorization upon the Gauls of Asia Minor, and had also suffered a humiliating defeat from some Thracian robber bands on his homeward march. Not disheartened by ill success, Cato and his friends determined to strike at higher game. L. Scipio Asiaticus (or Asiagenus), the brother of Africanus, was asserted in the senate to have appropriated 3000 talents of public money when in command against Antiochus. Legal proceedings were taken not only against Asiaticus, but against Africanus, who behaved with great violence and arrogance. In the end Africanus withdrew to his country estate, while his brother was condemned to pay a heavy fine. A death-stroke had been given to the almost kingly authority of Africanus, who never again showed his face in Rome. The proceedings against the Scipios seem to have begun in 187 and not to have been completed before 185.

Nearly twenty years had passed since the conflict between Cato and Scipio began, and now it had ended in a complete triumph for Cato. But the new modes of which Scipio was the chief patron were too strong to be conquered, and Cato spent the rest of his life in fighting a hopeless battle against them, though he

fought for a time with the strongest weapons that the constitution supplied. In 184 he was censor along with Flaccus, who seems to have allowed his colleague full liberty of action. Every portion of the censor's duty was carried out on the most severe and 'old Roman' principles. Seven senators were degraded, among them L. Flamininus, an ex-consul and brother of the 'liberator of the Hellenes,' for serious misconduct, also Manilius, an ex-praetor, for no worse offence than that of having kissed his wife in presence of his daughter. M. Furius Purpurio, who had actually competed with Cato for the censorship, was punished for diverting a public aqueduct for his private advantage. Flaccus was named leader of the senate in the place of Scipio Africanus, now dead.

On reviewing the *equites*, Cato removed from that body L. Scipio and many others on various charges: this one had allowed himself to grow too fat for horsemanship; that had failed to groom his horse properly; another had neglected his farm; another again had made an untimely jest on the occasion of the review itself. With the ordinary citizens Cato dealt just as harshly. In his censorian edict he sharply reproved the extravagance prevalent at private feasts. All articles of luxury, such as slaves purchased at fancy prices, luxurious clothing, carriages, statues, and pictures were rendered liable to heavy taxation. In this way Cato revenged himself for the repeal of the Oppian law.

In looking after the property and income of the state Cato followed the same principles he had acted on in Spain. He reduced the expenditure on public works as far as possible, and took care to sell at the full price the right to collect the revenue. Encroachments on the property of the nation were severely punished.

Not by acts only, but by constant speeches, full at once of grimness and humor, did Cato struggle against the degeneracy of his time. He concluded his period of office with a self-laudatory harangue, and assumed the title *Censorius*, while his statue was placed in the temple of the goddess Salus with an inscription affirming that he had reformed the Roman nation.

But in a very brief time all trace of Cato's activity as censor was swept away, except that afforded by the numerous life-long quarrels in which he had involved himself. In less than two years one of his victims, Purpurio, was employed by the senate on a high political mission, while another, L. Flamininus, sat among the senators at the games in defiance of Cato's sentence. Yet Cato remained by far the most powerful member of the senate. Titus Flamininus, his only important rival, quickly passed out of notice. So far as there was any democratic opposition to the senatorial oligarchy, Cato was the leader of that opposition for the remainder of his life. But at that period no great political movements agitated the state within; nearly the whole interest of the time was centred in the foreign

relations of Rome. On matters of foreign policy Cato offered but little opposition to the prevailing tendencies of the age, though on particular occasions he exercised great influence. But his voice was at all times loudly heard on all questions of morality and public order. He supported the *lex Furia* and the *lex Voconia*, the object of which was to prevent the dissipation of family property, and the *lex Orchia*, directed against extravagant expenditure on feasts, also the *lex Baebia de ambitu*, the first serious attempt to check bribery. We hear also that Cato bitterly attacked Lepidus, censor in 180, for erecting a permanent theatre in place of the movable booths before used. The building was actually pulled down. We are told that from time to time he denounced the misdoings of provincial governors. In 171 he was one of a commission of five for bringing to justice three ex-praetors who had practised all manner of corruption in Spain. Almost the last act of his life was to prosecute Galba for cruel misgovernment of the Lusitanians. The titles of Cato's speeches show that he played a great part in the deliberations of the senate concerning foreign affairs, but as his fighting days were over and he was unfitted for diplomacy, we have little explicit evidence of his activity in this direction. At the end of the third Macedonian war he successfully opposed the annexation of Macedonia. He also saved from destruction the Rhodians, who during the war had plainly desired the victory of Perseus, and in the early days, when the Roman commanders had ill success, had deeply wounded the whole Roman nation by an offer to mediate between them and the king of Macedon.

Cato had all his life retained his feeling of enmity to the Carthaginians, whom Scipio, he thought, had treated too tenderly. In 150 he was one of an embassy sent to Carthage, and came back filled with alarm at the prosperity of the city. It is said that whatever was the subject on which he was asked for his opinion in the senate, he always ended his speech with '*ceterum censeo delendam esse Carthaginem*' P. Scipio Nasica, the son-in-law of Africanus, and the representative of his policy, always shouted out the opposite opinion, thinking that the fear of Carthage had a salutary effect on the Roman populace at large. But the ideas of Cato prevailed, and a cruel policy, carried out with needless brutality, led to the extinction of Rome's greatest rival. Cato did not live to see the conclusion of the war; he died in 149, at the age of 84 or 85 years, having retained his mental and physical vigor to the last. He had two sons, one by his first wife, and one by his second wife, born when Cato was 80 years of age. The elder son, to whom many of Cato's works were addressed, died as praetor-elect, before his father. The other was grandfather of Cato Uticensis.

The literary activity of the old censor was great, though his leisure was small. In Cicero's time a collection of 150 speeches was still extant. The titles of about 90 are still known to us, and of some we possess a few fragments. Cato's greatest work, however, was his *Origines*, the first real historical work written in Latin. His predecessors had been merely compilers of chronicles. The work was founded on laborious investigations, and comprised the history of Rome from the earliest times perhaps down to 150 B.C., as well as notices of the history of other important Italian states. Further, Cato wrote of Agriculture, to which he was enthusiastically devoted. We still have his *De Re Rustica*, a collection of maxims loosely strung together. He also composed works on law; a sort of educational encyclopaedia for his son; and a collection of witty sayings, *Ἀποφθεγγματα*, drawn from Greek as well as from Roman sources.

Plutarch seems to have known a collected edition of the pungent and proverbial utterances for which the censor was famous, and for which (not for any knowledge of philosophy) he received the title of *sapiens* ('shrewd') which he bore at the end of his life. This edition, however, was not compiled by Cato himself.

In view of Cicero's treatise, the *Cato Maior*, it is necessary to say something of Cato's relations with the Greeks and Greek literature. The ancients give us merely vague statements that he only began to learn Greek 'in his old age.' The expression must be liberally interpreted if, as seems clear, the whole of his writings showed the influence of Greek literature. It is certain, however, that he thoroughly detested the Greek nation. This hatred was shown in acts more than once. No doubt Cato was at least a consenting party to the expulsion from Rome of Greek teachers in 161 B.C. When in 155 the famous embassy came from Athens consisting of Carneades the Academic, Critolaus the Peripatetic and Diogenes the Stoic, Cato was a prime mover of the decree by which they were removed from the city. Socrates was one of Cato's favorite marks for jests. And this is the man into whose mouth Cicero puts the utterances, but slightly veiled, of Greek wisdom!

(2.) *Scipio*. P. Cornelius Scipio Africanus, the younger, was no blood relation of the conqueror of Hannibal, but the adopted son of his son. It must be remembered, however, that adoption was much more formal and binding, and produced much closer ties in ancient than in modern times. The elder Africanus was unfortunate in his sons. The younger of these attained to the praetorship in 174, but was immediately driven from the senate by the censors of that year on account of his disreputable life. The elder was an invalid, who never held any office except that of augur, and died at an early age. He adopted the son of L.

Aemilius Paulus, the victor of Pydna; the adopted son bore the name Aemilianus in memory of his origin. Cato's son married a daughter of Paulus, so that the censor was brought into relationship with the Cornelii, whose most illustrious representative he had hated and attacked.

The young Scipio was born about 185, and when scarce 17 years old fought with daring bravery at Pydna. While still very young he showed a great devotion to study, which he retained through life. He was a thorough partisan of the new Greek learning, and grouped around him in friendship all the leaders of the Hellenistic movement. Among his dearest friends were Polybius, the Greek statesman and historian, and later Panaetius, the Stoic. In 151 B.C. when the consuls found it difficult to enlist officers and men for service in Spain, where great defeats had been suffered, Scipio volunteered, and served with great distinction as military tribune. When the war with Carthage broke out he held the same rank, and shone by comparison with his blundering superior officers. Coming to Rome in 148 he stood for the aedileship, but was elected consul for the year 147, and again for 146, when he finished the war. He is said to have grieved over the fate of Carthage, and to have dreaded any further increase of the Roman territory. In 142 Scipio was censor, and acted with almost Catonian severity. In 134, though not a candidate, he was elected to the consulship and put in command of the Roman army then besieging the city of Numantia in Spain. The war, of which this siege formed a part, had been going on for some years most disastrously for the Romans, but Scipio speedily brought it to a conclusion in 133. While before Numantia he received news of the murder of Ti. Gracchus, whose sister he had married and whose cousin he had become by adoption, but whose policy he had on the whole opposed, though he had occasionally coquetted with the democrats. This course cost him the favor of the people, and when in 131 he desired to conduct the war against Aristonicus, only two of the thirty-five tribes voted for his appointment. In 129, after a violent scene in the senate, where he had opposed the carrying out of Ti. Gracchus' agrarian law, he was triumphantly escorted home by a crowd, composed chiefly of Italians whose interests had been threatened by the law. Next morning he was found dead in his bed. Opinion as to the cause of his death was divided at the time and so remained. In the *Laelius* the death is assumed to have been from natural causes. Elsewhere, however, Cicero adopts the view of many of Scipio's friends that he was murdered by Carbo. Carbo afterwards lent color to the suspicions by putting himself to death, in order, as was supposed, to avoid a direct prosecution. In ancient times even C. Gracchus was suspected of having thus avenged his brother's death, but no modern scholar of any rank has countenanced the suspicion.

Whether the degree of intimacy between Cato and Scipio, which Cicero assumes, ever existed or not, cannot be determined. There was much in Scipio that would attract Cato. Unlike the elder Africanus, he was severe and simple in his outward life, and though a lover of Greek and Greeks, yet attached to all that was best in the old Roman character and polity. Though an opponent of revolution, he was far from being a partisan of the oligarchy. Altogether, of all Romans, he most nearly deserved the description, ‘*ἄνηρ τετραγώνος ἀνευ ψογού,*’ ‘a man four-square without reproach.’ In his *De Re Publica*, Cicero points to Scipio as the ideal statesman, and often elsewhere eulogizes him as an almost perfect Roman.

(3.) *Laelius*. Gaius Laelius, born about 186, was Scipio’s most distinguished officer before Carthage, and his most intimate friend throughout life. The friendship of the two was one of the most famous in antiquity, and is celebrated in the *Laelius*. Laelius was an able speaker, writer and soldier, and devoted to Greek learning, particularly to the Stoic philosophy. He is with Cicero the type of a man of culture. He, too, is one of the interlocutors in the *De Re Publica*.

(ii.) SUBJECT-MATTER.

1. *General View*.

The *Cato Maior* falls naturally into three parts: —

Preliminary, dedication to Atticus, §§ 1-3;

Introductory Conversation, 4-9;

Cato’s Defence of Old Age, 10-85.

After § 9 Cato continues to express his views on old age without interruption to the end, and the dialogue thus becomes really a monologue.

2. *Analysis*.

Preliminary ... 1-3.

Cicero, addressing Atticus, states his purpose in writing the book and the effect of the work on himself (1, 2), the reasons for putting the sentiments on old age into the mouth of Cato, and the circumstances of the supposed conversation (3).

Introductory Conversation ... 4-9.

Scipio declares his admiration of Cato’s vigorous and happy old age. Cato replies that the secret lies in following the guidance of Nature (4, 5). Laelius then asks Cato to point out the road to such an old age as his own (6). This the old man promises to do, but first remarks that the faults charged against old age are generally due to defects of character (7). Laelius suggests that prosperity makes

Cato's declining years pleasant. Cato admits that there may be some truth in this, but maintains that right character alone can make old age tolerable (8, 9).

Cato's Defence of Old Age ... 10-85.

A. Introductory argument from fact. Account of celebrated old men whose lives till death were useful and happy ... 10-14

- (a). Fabius Maximus ... 10-12
- (b). Plato; (c). Isocrates; (d). Gorgias ... 13
- (e). Ennius ... 14

B. Refutation of charges made against old age ... 15-85

Statement of the four charges commonly made against old age: it withdraws men from active life, it weakens the physical powers, it takes away capacity for enjoyment, and it involves the anticipation of death ... 15

A. Refutation of the first charge, that old age withdraws from active life.

(a). There are employments suited to old age which are as necessary to the well-being of society as those which require greater physical powers ... 15-20

(b). The special objection that old men have weak memories is answered by showing that this is due either to an original defect or to insufficient exercise ... 21-22

(c). Argument from fact: instances of old men in public and in private life who till death were actively at work ... 23-26

B. Rebuttal of the second charge, that old age weakens the physical powers.

(a). Old age does not desire nor require the strength of youth, because it may exert influence through other means. Instances cited to show this ... 27-32

(b). Temperate habits will retain a good measure of strength till old age (33, 34); many instances of weakness in old age may be attributed to ill-health, which is common to all periods of life (35); proper care will greatly retard decay ... 33-38

C. Refutation of the third charge, that old age takes away the capacity for enjoyment

(a). The pleasures in which youth finds its keenest enjoyment are in themselves bad, and old age is beneficent in freeing from their allurements ... 39-44

(b). Old age has pleasures far more refined and satisfying than those of sense ... 45-64

Such as, those of conversation and literature (45-50); especially those of

agriculture (51-51); and lastly, the exercise of influence, which old age will always possess if a rightly spent youth has preceded ... (62-64).

(c). The special objection that old men's tempers spoil their enjoyments is met by the statement that this is the fault of character, not of age ... 65

D. Refutation of the fourth charge, that old age is unhappy because it involves the anticipation of death.

(a). Since the right aim of life is to live not long but well, death ought not to be dreaded at any age ... 66-69

(b). Old men, especially those of learning and culture, ought not to fear death ... 70-76

Because, that which is according to nature is good, and it is natural for old men to die (70-73); the process of dying is brief and almost painless (74); even young men and those without learning often set the example of despising death (75); and old age, just as the other periods of life, has finally its season of ripeness and satiety (76).

(c). Death is probably the gateway to a happy immortality ... 77-85

Tending towards proof of this are the arguments stated in Plato; viz. the rapidity of the mind's action, its powers of memory and invention, its self-activity, indivisible nature and pre-existence (78); also the arguments, attributed to Cyrus, based upon the soul's immateriality, the posthumous fame of great men and the likeness of death to sleep (79-81); the instinctive belief in immortality, so strong as even to form an incentive for action (82); and, finally, the speaker's own longing after immortality and hope of union with those whom he once knew and loved (83-85).

ON OLD AGE

And should my service, Titus, ease the weight
Of care that wrings your heart, and draw the sting
Which rankles there, what guerdon shall there be?

1. FOR I may address you, Atticus, in the lines in which Flamininus was addressed by the man,

who, poor in wealth, was rich in honour's gold,
though I am well assured that you are not, as Flamininus was,
kept on the rack of care by night and day.

For I know how well ordered and equable your mind is, and am fully aware that it was not a surname alone which you brought home with you from Athens, but its culture and good sense. And yet I have an idea that you are at times stirred to the heart by the same circumstances as myself. To console you for these is a more serious matter, and must be put off to another time. For the present I have resolved to dedicate to you an essay on Old Age. For from the burden of impending or at least advancing age, common to us both, I would do something to relieve us both though as to yourself I am fully aware that you support and will support it, as you do everything else, with calmness and philosophy. But directly I resolved to write on old age, you at once occurred to me as deserving a gift of which both of us might take advantage. To myself, indeed, the composition of this book has been so delightful, that it has not only wiped away all the disagreeables of old age, but has even made it luxurious and delightful too. Never, therefore, can philosophy be praised as highly as it deserves considering that its faithful disciple is able to spend every period of his life with unruffled feelings. However, on other subjects I have spoken at large, and shall often speak again: this hook which I herewith send you is on Old Age. I have put the whole discourse not, as Alisto of Cos did, in the mouth of Tithonus — for a mere fable would have lacked conviction — but in that of Marcus Cato when he was an old man, to give my essay greater weight. I represent Laelius and Scipio at his house expressing surprise at his carrying his years so lightly, and Cato answering them. If he shall seem to shew somewhat more learning in this discourse than he generally did in his own books, put it down to the Greek literature of which it is known that he became an eager

student in his old age. But what need of more? Cato's own words will at once explain all I feel about old age.

M. Cato. Publius Cornelius Scipio Africanus (the younger). Gaius Laelius.

2. *Scipio*. Many a time have I in conversation with my friend Gaius Laelius here expressed my admiration, Marcus Cato, of the eminent, nay perfect, wisdom displayed by you indeed at all points, but above everything because I have noticed that old age never seemed a burden to you, while to most old men it is so hateful that they declare themselves under a weight heavier than Aetna.

Cato. Your admiration is easily excited, it seems, my dear Scipio and Laelius. Men, of course, who have no resources in themselves for securing a good and happy life find every age burdensome. But those who look for all happiness from within can never think anything had which nature makes inevitable. In that category before anything else comes old age, to which all wish to attain, and at which all grumble when attained. Such is Folly's inconsistency and unreasonableness! They say that it is stealing upon them faster than they expected. In the first place, who compelled them to hug an illusion? For in what respect did old age steal upon manhood faster than manhood upon childhood? In the next place, in what way would old age have been less disagreeable to them if they were in their eight-hundredth year than in their eightieth? For their past, however long, when once it was past, would have no consolation for a stupid old age. Wherefore, if it is your wont to admire my wisdom — and I would that it were worthy of your good opinion and of my own surname of Sapiens — it really consists in the fact that I follow Nature, the best of guides, as I would a god, and am loyal to her commands. It is not likely, if she has written the rest of the play well, that she has been careless about the last act like some idle poet. But after all some "last" was inevitable, just as to the berries of a tree and the fruits of the earth there comes in the fulness of time a period of decay and fall. A wise man will not make a grievance of this. To rebel against nature — is not that to fight like the giants with the gods?

Laelius. And yet, Cato, you will do us a very great favour (I venture to speak for Scipio as for myself) if — since we all hope, or at least wish, to become old men — you would allow us to learn from you in good time before it arrives, by what methods we may most easily acquire the strength to support the burden of advancing age.

Cato. I will do so without doubt, Laelius, especially if, as you say, it will be agreeable to you both.

Laelius. We do wish very much, Cato, if it is no trouble to you, to be allowed to see the nature of the bourne which you have reached after completing a long

journey, as it were, upon which we too are bound to embark.

3. *Cato*. I will do the best I can, *Laelius*. It has often been my fortune to bear the complaints of my contemporaries — like will to like, you know, according to the old proverb — complaints to which men like *C. Salinator* and *Sp. Albinus*, who were of consular rank and about my time, used to give vent. They were, first, that they had lost the pleasures of the senses, without which they did not regard life as life at all; and, secondly, that they were neglected by those from whom they had been used to receive attentions. Such men appear to me to lay the blame on the wrong thing. For if it had been the fault of old age, then these same misfortunes would have befallen me and all other men of advanced years. But I have known many of them who never said a word of complaint against old age; for they were only too glad to be freed from the bondage of passion, and were not at all looked down upon by their friends. The fact is that the blame for all complaints of that kind is to be charged to character, not to a particular time of life. For old men who are reasonable and neither cross-grained nor churlish find old age tolerable enough: whereas unreason and churlishness cause uneasiness at every time of life.

Laelius It is as you say, *Cato*. But perhaps some one may suggest that it is your large means, wealth, and high position that make you think old age tolerable: whereas such good fortune only falls to few.

Cato. There is something in that, *Laelius*, but by no means all. For instance, the story is told of the answer of *Themistocles* in a wrangle with a certain *Seriphian*, who asserted that he owed his brilliant position to the reputation of his country, not to his own. “If I had been a *Seriphian*,” said he, “even I should never have been famous, nor would you if you had been an *Athenian*.” Something like this may be said of old age. For the philosopher himself could not find old age easy to bear in the depths of poverty, nor the fool feel it anything but a burden though he were a millionaire. You may be sure, my dear *Scipio* and *Laelius*, that the arms best adapted to old age are culture and the active exercise of the virtues. For if they have been maintained at every period — if one has lived much as well as long — the harvest they produce is wonderful, not only because they never fail us even in our last days (though that in itself is supremely important), but also because the consciousness of a well-spent life and the recollection of many virtuous actions are exceedingly delightful.

4. Take the case of *Q. Fabius Maximus*, the man, I mean, who recovered *Tarentum*. When I was a young man and he an old one, I was as much attached to him as if he had been my contemporary. For that great man's serious dignity was tempered by courteous manners, nor had old age made any change in his

character. True, he was not exactly an old man when my devotion to him began, yet he was nevertheless well on in life; for his first consulship fell in the year after my birth. When quite a stripling I went with him in his fourth consulship as a soldier in the ranks, on the expedition against Capua, and in the fifth year after that against Tarentum. Four years after that I was elected Quaestor, holding office in the consulship of Tuditanus and Cethegus, in which year, indeed, he as a very old man spoke in favour of the Cincian law "on gifts and fees."

Now this man conducted wars with all the spirit of youth when he was far advanced in life, and by his persistence gradually wearied out Hannibal, when rioting in all the confidence of youth. How brilliant are those lines of my friend Ennius on him!

For us, down beaten by the storms of fate,
One man by wise delays restored the State.
Praise or dispraise moved not his constant mood,
True to his purpose, to his country's good!
Down ever-lengthening avenues of fame
Thus shines and shall shine still his glorious name.

Again what vigilance, what profound skill did he show in the capture of Tarentum! It was indeed in my hearing that he made the famous retort to Salinator, who had retreated into the citadel after losing the town: "It was owing to me, Quintus Fabius, that you retook Tarentum." "Quite so," he replied with a laugh; "for had you not lost it, I should never have recovered it." Nor was he less eminent in civil life than in war. In his second consulship, though his colleague would not move in the matter, he resisted as long as he could the proposal of the tribune C. Flaminius to divide the territory of the Picenians and Gauls in free allotments in defiance of a resolution of the Senate. Again, though he was an augur, he ventured to say that whatever was done in the interests of the State was done with the best possible auspices, that any laws proposed against its interest were proposed against the auspices. I was cognisant of much that was admirable in that great man, but nothing struck me with greater astonishment than the way in which he bore the death of his son — a man of brilliant character and who had been consul. His funeral speech over him is in wide circulation, and when we read it, is there any philosopher of whom we do not think meanly? Nor in truth was he only great in the light of day and in the sight of his fellow-citizens; he was still more eminent in private and at home. What a wealth of conversation! What weighty maxims! What a wide acquaintance with ancient history! What an accurate knowledge of the science of augury! For a Roman, too, he had a great

tincture of letters. He had a tenacious memory for military history of every sort, whether of Roman or foreign wars. And I used at that time to enjoy his conversation with a passionate eagerness, as though I already divined, what actually turned out to be the case, that when he died there would be no one to teach me anything.

5. What then is the purpose of such a long disquisition on Maximus? It is because you now see that an old age like his cannot conscientiously be called unhappy. Yet it is after all true that everybody cannot be a Scipio or a Maximus, with stormings of cities, with battles by land and sea, with wars in which they themselves commanded, and with triumphs to recall. Besides this there is a quiet, pure, and cultivated life which produces a calm and gentle old age, such as we have been told Plato's was, who died at his writing-desk in his eighty-first year; or like that of Isocrates, who says that he wrote the book called *The Panegyric* in his ninety-fourth year, and who lived for five years afterwards; while his master Gorgias of Leontini completed a hundred and seven years without ever relaxing his diligence or giving up work. When some one asked him why he consented to remain so long alive—"I have no fault," said he, "to find with old age." That was a noble answer, and worthy of a scholar. For fools impute their own frailties and guilt to old age, contrary to the practice of Ennui, whom I mentioned just now. In the lines —

Like some brave steed that oft before
The Olympic wreath of victory bore,
Now by the weight of years oppressed,
Forgets the race, and takes his rest —

he compares his own old age to that of a high-spirited and successful race-horse. And him indeed you may very well remember. For the present consuls Titus Flamininus and Manius Acilius were elected in the nineteenth year after his death; and his death occurred in the consulship of Caepio and Philippus, the latter consul for the second time: in which year I, then sixty-six years old, spoke in favour of the Voconian law in a voice that was still strong and with lungs still sound; while he, though seventy years old, supported two burdens considered the heaviest of all — poverty and old age — in such a way as to be all but fond of them.

The fact is that when I come to think it over, I find that there are four reasons for old age being thought unhappy: First, that it withdraws us from active employments; second, that it enfeebles the body; third, that it deprives us of nearly all physical pleasures; fourth, that it is the next step to death. Of each of

these reasons, if you will allow me, let us examine the force and justice separately.

6. OLD AGE WITHDRAWS US FROM ACTIVE EMPLOYMENTS. From which of them? Do you mean from those carried on by youth and bodily strength? Are there then no old men's employments to be after all conducted by the intellect, even when bodies are weak? So then Q. Maximus did nothing; nor L. Aemilius — our father, Scipio, and my excellent son's father-in-law! So with other old men — the Fabricii, the Guru and Coruncanii — when they were supporting the State by their advice and influence, they were doing nothing! To old age Appius Claudius had the additional disadvantage of being blind; yet it was he who, when the Senate was inclining towards a peace with Pyrrhus and was for making a treaty, did not hesitate to say what Ennius has embalmed in the verses:

Whither have swerved the souls so firm of yore?
Is sense grown senseless? Can feet stand no more?

And so on in a tone of the most passionate vehemence. You know the poem, and the speech of Appius himself is extant. Now, he delivered it seventeen years after his second consulship, there having been an interval of ten years between the two consulships, and he having been censor before his previous consulship. This will show you that at the time of the war with Pyrrhus he was a very old man. Yet this is the story handed down to us.

There is therefore nothing in the arguments of those who say that old age takes no part in public business. They are like men who would say that a steersman does nothing in sailing a ship, because, while some of the crew are climbing the masts, others hurrying up and down the gangways, others pumping out the bilge water, he sits quietly in the stern holding the tiller. He does not do what young men do; nevertheless he does what is much more important and better. The great affairs of life are not performed by physical strength, or activity, or nimbleness of body, but by deliberation, character, expression of opinion. Of these old age is not only not deprived, but, as a rule, has them in a greater degree. Unless by any chance I, who as a soldier in the ranks, as military tribune, as legate, and as consul have been employed in various kinds of war, now appear to you to be idle because not actively engaged in war. But I enjoy upon the Senate what is to be done, and how. Carthage has long been harbouring evil designs, and I accordingly proclaim war against her in good time. I shall never cease to entertain fears about her till I bear of her having been levelled with the ground. The glory of doing that I pray that the immortal gods may

reserve for you, Scipio, so that you may complete the task begun by your grandfather, now dead more than thirty-two years ago; though all years to come will keep that great man's memory green. He died in the year before my censorship, nine years after my consulship, having been returned consul for the second time in my own consulship. If then he had lived to his hundredth year, would he have regretted having lived to be old? For he would of course not have been practising rapid marches, nor dashing on a foe, nor hurling spears from a distance, nor using swords at close quarters — but only counsel, reason, and senatorial eloquence. And if those qualities had not resided in us *seniors*, our ancestors would never have called their supreme council a Senate. At Sparta, indeed, those who hold the highest magistracies are in accordance with the fact actually called “elders.” But if you will take the trouble to read or listen to foreign history, you will find that the mightiest States have been brought into peril by young men, have been supported and restored by old. The question occurs in the poet Naevius's *Sport*:

Pray, who are those who brought your State
With such despatch to meet its fate?

There is a long answer, but this is the chief point:

A crop of brand-new orators we grew,
And foolish, paltry lads who thought they knew.

For of course rashness is the note of youth, prudence of old age.

7. But, it is said, memory dwindles. No doubt, unless you keep it in practice, or if you happen to be somewhat dull by nature. Themistocles had the names of all his fellow-citizens by heart. Do you imagine that in his old age he used to address Aristides as Lysimachus? For my part, I know not only the present generation, but their fathers also, and their grandfathers. Nor have I any fear of losing my memory by reading tombstones, according to the vulgar superstition. On the contrary, by reading them I renew my memory of those who are dead and gone. Nor, in point of fact, have I ever heard of any old man forgetting where he had hidden his money. They remember everything that interests them: when to answer to their bail, business appointments, who owes them money, and to whom they owe it. What about lawyers, pontiffs, augurs, philosophers, when old? What a multitude of things they remember! Old men retain their intellects well enough, if only they keep their minds active and fully employed. Nor is that the case only with men of high position and great office: it applies equally to

private life and peaceful pursuits. Sophocles composed tragedies to extreme old age; and being believed to neglect the care of his property owing to his devotion to his art, his sons brought him into court to get a judicial decision depriving him of the management of his property on the ground of weak intellect — just as in our law it is customary to deprive a paterfamilias of the management of his property if he is squandering it. There — upon the old poet is said to have read to the judges the play he had on hand and had just composed — the *Oedipus Coloneus* — and to have asked them whether they thought that the work of a man of weak intellect. After the reading he was acquitted by the jury. Did old age then compel this man to become silent in his particular art, or Homer, Hesiod, Simonides, or Isocrates and Gorgias whom I mentioned before, or the founders of schools of philosophy, Pythagoras, Democritus, Plato, Xenocrates, or later Zeno and Cleanthus, or Diogenes the Stoic, whom you too saw at Rome? Is it not rather the case with all these that the active pursuit of study only ended with life?

But, to pass over these sublime studies, I can name some rustic Romans from the Sabine district, neighbours and friends of my own, without whose presence farm work of importance is scarcely ever performed — whether sowing, or harvesting or storing crops. And yet in other things this is less surprising; for no one is so old as to think that he may not live a year. But they bestow their labour on what they know does not affect them in any case:

He plants his trees to serve a race to come,

as our poet Statius says in his *Comrades*. Nor indeed would a farmer, however old, hesitate to answer any one who asked him for whom he was planting: “For the immortal gods, whose will it was that I should not merely receive these things from my ancestors, but should also hand them on to the next generation.”

8. That remark about the old man is better than the following:

If age brought nothing worse than this,
It were enough to mar our bliss,
That he who bides for many years
Sees much to shun and much for tears.

Yes, and perhaps much that gives him pleasure too. Besides, as to subjects for tears, he often comes upon them in youth as well.

A still more questionable sentiment in the same *Caecilius* is:

No greater misery can of age be told

Than this: be sure, the young dislike the old.

Delight in them is nearer the mark than dislike. For just as old men, if they are wise, take pleasure in the society of young men of good parts, and as old age is rendered less dreary for those who are courted and liked by the youth, so also do young men find pleasure in the maxims of the old, by which they are drawn to the pursuit of excellence. Nor do I perceive that you find my society less pleasant than I do yours. But this is enough to show you how, so far from being listless and sluggish, old age is even a busy time, always doing and attempting something, of course of the same nature as each man's taste had been in the previous part of his life. Nay, do not some even add to their stock of learning? We see Solon, for instance, boasting in his poems that he grows old "daily learning something new." Or again in my own case, it was only when an old man that I became acquainted with Greek literature, which in fact I absorbed with such avidity — in my yearning to quench, as it were, a long-continued thirst — that I became acquainted with the very facts which you see me now using as precedents. When I heard what Socrates had done about the lyre I should have liked for my part to have done that too, for the ancients used to learn the lyre but, at any rate, I worked hard at literature.

9. Nor, again, do I now MISS THE BODILY STRENGTH OF A YOUNG MAN (for that was the second point as to the disadvantages of old age) any more than as a young man I missed the strength of a bull or an elephant. You should use what you have, and whatever you may chance to be doing, do it with all your might. What could be weaker than Milo of Croton's exclamation? When in his old age he was watching some athletes practising in the course, he is said to have looked at his arms and to have exclaimed with tears in his eyes: "Ah well! these are now as good as dead." Not a bit more so than yourself, you trifler! For at no time were you made famous by your real self, but by chest and biceps. Sext. Aelius never gave vent to such a remark, nor, many years before him, Titus Coruncanius, nor, more recently, P. Crassus — all of them learned juris-consults in active practice, whose knowledge of their profession was maintained to their last breath. I am afraid an orator does lose vigour by old age, for his art is not a matter of the intellect alone, but of lungs and bodily strength. Though as a rule that musical ring in the voice even gains in brilliance in a certain way as one grows old — certainly I have not yet lost it, and you see my years. Yet after all the style of speech suitable to an old man is the quiet and unemotional, and it often happens that the chastened and calm delivery of an old man eloquent secures a hearing. If you cannot attain to that yourself, you might still instruct a Scipio and a Laelius. For what is more charming than old age surrounded by the

enthusiasm of youth? Shall we not allow old age even the strength to teach the young, to train and equip them for all the duties of life? And what can be a nobler employment? For my part, I used to think Publius and Gnaeus Scipio and your two grandfathers, L. Aemilius and P. Africanus, fortunate men when I saw them with a company of young nobles about them. Nor should we think any teachers of the fine arts otherwise than happy, however much their bodily forces may have decayed and failed. And yet that same failure of the bodily forces is more often brought about by the vices of youth than of old age; for a dissolute and intemperate youth hands down the body to old age in a worn-out state. Xenophon's Cyrus, for instance, in his discourse delivered on his death-bed and at a very advanced age, says that he never perceived his old age to have become weaker than his youth had been. I remember as a boy Lucius Metellus, who having been created Pontifex Maximus four years after his second consulship, held that office twenty-two years, enjoying such excellent strength of body in the very last hours of his life as not to miss his youth. I need not speak of myself; though that indeed is an old man's way and is generally allowed to my time of life. Don't you see in Homer how frequently Nestor talks of his own good qualities? For he was living through a third generation; nor had he any reason to fear that upon saying what was true about himself he should appear either over vain or talkative. For, as Homer says, "from his lips flowed discourse sweeter than honey," for which sweet breath he wanted no bodily strength. And yet, after all, the famous leader of the Greeks nowhere wishes to have ten men like Ajax, but like Nestor: if he could get them, he feels no doubt of Troy shortly falling.

10. But to return to my own case: I am in my eighty-fourth year. I could wish that I had been able to make the same boast as Cyrus; but, after all, I can say this: I am not indeed as vigorous as I was as a private soldier in the Punic war, or as quaestor in the same war, or as consul in Spain, and four years later when as a military tribune I took part in the engagement at Thermopylae under the consul Manius Acilius Glabrio; but yet, as you see, old age has not entirely destroyed my muscles, has not quite brought me to the ground. The Senate-house does not find all my vigour gone, nor the rostra, nor my friends, nor my clients, nor my foreign guests. For I have never given in to that ancient and much-praised proverb:

Old when young
Is old for long.

For myself, I had rather be an old man a somewhat shorter time than an old man *before* my time. Accordingly, no one up to the present has wished to see

me, to whom I have been denied as engaged. But, it may be said, I have less strength than either of you. Neither have you the strength of the centurion T. Pontius: is he the more eminent man on that account? Let there be only a proper husbanding of strength, and let each man proportion his efforts to his powers. Such an one will assuredly not be possessed with any great regret for his loss of strength. At Olympia Milo is said to have stepped into the course carrying a live ox on his shoulders. Which then of the two would you prefer to have given to you — bodily strength like that, or intellectual strength like that of Pythagoras? In fine, enjoy that blessing when you have it; when it is gone, don't wish it back — unless we are to think that young men should wish their childhood back, and those somewhat older their youth! The course of life is fixed, and nature admits of its being run but in one way, and only once; and to each part of our life there is something specially seasonable; so that the feebleness of children, as well as the high spirit of youth, the soberness of maturer years, and the ripe wisdom of old age — all have a certain natural advantage which should be secured in its proper season. I think you are informed, Scipio, what your grandfather's foreign friend Masinissa does to this day, though ninety years old. When he has once begun a journey on foot he does not mount his horse at all; when on horseback he never gets off his horse. By no rain or cold can he be induced to cover his head. His body is absolutely free from unhealthy humours, and so he still performs all the duties and functions of a king. Active exercise, therefore, and temperance can preserve some part of one's former strength even in old age.

11. Bodily strength is wanting to old age; but neither is bodily strength demanded from old men. Therefore, both by law and custom, men of my time of life are exempt from those duties which cannot be supported without bodily strength. Accordingly not only are we not forced to do what we cannot do; we are not even obliged to do as much as we can. But, it will be said, many old men are so feeble that they cannot perform any duty in life of any sort or kind. That is not a weakness to be set down as peculiar to old age: it is one shared by ill health. How feeble was the son of P. Africanus, who adopted you! What weak health he had, or rather no health at all! If that had not been the case, we should have had in him a second brilliant light in the political horizon; for he had added a wider cultivation to his father's greatness of spirit. What wonder, then, that old men are eventually feeble, when even young men cannot escape it? My dear Laelius and Scipio, we must stand up against old age and make up for its drawbacks by taking pains. We must fight it as we should an illness. We must look after our health, use moderate exercise, take just enough food and drink to recruit, but not to overload, our strength. Nor is it the body alone that must be supported, but the intellect and soul much more. For they are like lamps: unless

you feed them with oil, they too go out from old age. Again, the body is apt to get gross from exercise; but the intellect becomes nimbler by exercising itself. For what Caecilius means by “old dotards of the comic stage” are the credulous, the forgetful, and the slipshod. These are faults that do not attach to old age as such, but to a sluggish, spiritless, and sleepy old age. Young men are more frequently wanton and dissolute than old men; but yet, as it is not all young men that are so, but the bad set among them, even so senile folly — usually called imbecility — applies to old men of unsound character, not to all. Appius governed four sturdy sons, five daughters, that great establishment, and all those clients, though he was both old and blind. For he kept his mind at full stretch like a how, and never gave in to old age by growing slack. He maintained not merely an influence, but an absolute command over his family: his slaves feared him, his sons were in awe of him, all loved him. In that family, indeed, ancestral custom and discipline were in full vigour. The fact is that old age is respectable just as long as it asserts itself, maintains its proper rights, and is not enslaved to any one. For as I admire a young man who has something of the old man in him, so do I an old one who has something of a young man. The man who aims at this may possibly become old in body — in mind he never will. I am now engaged in composing the seventh book of my *Origins*. I collect all the records of antiquity. The speeches delivered in all the celebrated cases which I have defended I am at this particular time getting into shape for publication. I am writing treatises on augural, pontifical, and civil law. I am, besides, studying hard at Greek, and after the manner of the Pythagoreans — to keep my memory in working order — I repeat in the evening whatever I have said, heard, or done in the course of each day. These are the exercises of the intellect, these the training grounds of the mind: while I sweat and labour on these I don't much feel the loss of bodily strength. I appear in court for my friends; I frequently attend the Senate and bring motions before it on my own responsibility, prepared after deep and long reflection. And these I support by my intellectual, not my bodily forces. And if I were not strong enough to do these things, yet I should enjoy my sofa — imagining the very operations which I was now unable to perform. But what makes me capable of doing this is my past life. For a man who is always living in the midst of these studies and labours does not perceive when old age creeps upon him. Thus, by slow and imperceptible degrees life draws to its end. There is no sudden breakage; it just slowly goes out.

12. The third charge against old age is that it LACKS SENSUAL PLEASURES. What a splendid service does old age render, if it takes from us the greatest blot of youth! Listen, my dear young friends, to a speech of Archytas of Tarentum, among the greatest and most illustrious of men, which was put into

my hands when as a young man I was at Tarentum with Q. Maximus. "No more deadly curse than sensual pleasure has been inflicted on mankind by nature, to gratify which our wanton appetites are roused beyond all prudence or restraint. It is a fruitful source of treasons, revolutions, secret communications with the enemy. In fact, there is no crime, no evil deed, to which the appetite for sensual pleasures does not impel us. Fornications and adulteries, and every abomination of that kind, are brought about by the enticements of pleasure and by them alone. Intellect is the best gift of nature or God: to this divine gift and endowment there is nothing so inimical as pleasure. For when appetite is our master, there is no place for self-control; nor where pleasure reigns supreme can virtue hold its ground. To see this more vividly, imagine a man excited to the highest conceivable pitch of sensual pleasure. It can be doubtful to no one that such a person, so long as he is under the influence of such excitation of the senses, will be unable to use to any purpose either intellect, reason, or thought. Therefore nothing can be so execrable and so fatal as pleasure; since, when more than ordinarily violent and lasting, it darkens all the light of the soul."

These were the words addressed by Archytas to the Samnite Caius Pontius, father of the man by whom the consuls Spurius Postumius and Titus Veturius were beaten in the battle of Caudium. My friend Nearchus of Tarentum, who had remained loyal to Rome, told me that he had heard them repeated by some old men; and that Plato the Athenian was present, who visited Tarentum, I find, in the consulship of L. Camillus and Appius Claudius.

What is the point of all this? It is to show you that, if we were unable to scorn pleasure by the aid of reason and philosophy, we ought to have been very grateful to old age for depriving us of all inclination for that which it was wrong to do. For pleasure hinders thought, is a foe to reason, and, so to speak, blinds the eyes of the mind. It is, moreover, entirely alien to virtue. I was sorry to have to expel Lucius, brother of the gallant Titus Flamininus, from the Senate seven years after his consulship; but I thought it imperative to affix a stigma on an act of gross sensuality. For when he was in Gaul as consul, he had yielded to the entreaties of his paramour at a dinner-party to behead a man who happened to be in prison condemned on a capital charge. When his brother Titus was Censor, who preceded me, he escaped; but I and Flaccus could not countenance an act of such criminal and abandoned lust, especially as, besides the personal dishonour, it brought disgrace on the Government.

13. I have often been told by men older than myself, who said that they had heard it as boys from old men, that Gaius Fabricius was in the habit of expressing astonishment at having heard, when envoy at the headquarters of king Pyrrhus, from the Thessalian Cineas, that there was a man of Athens who

professed to be a “philosopher,” and affirmed that everything we did was to be referred to pleasure. When he told this to Manius Curius and Publius Decius, they used to remark that they wished that the Samnites and Pyrrhus himself would hold the same opinion. It would be much easier to conquer them, if they had once given themselves over to sensual indulgences. Manius Curius had been intimate with P. Decius, who four years before the former’s consulship had devoted himself to death for the Republic. Both Fabricius and Coruncanius knew him also, and from the experience of their own lives, as well as from the action of P. Decius, they were of opinion that there did exist something intrinsically noble and great, which was sought for its own sake, and at which all the best men aimed, to the contempt and neglect of pleasure. Why then do I spend so many words on the subject of pleasure? Why, because, far from being a charge against old age, that it does not much feel the want of any pleasures, it is its highest praise.

But, you will say, it is deprived of the pleasures of the table, the heaped up board, the rapid passing of the wine-cup. Well, then, it is also free from headache, disordered digestion, broken sleep. But if we must grant pleasure something, since we do not find it easy to resist its charms, — for Plato, with happy inspiration, calls pleasure “vice’s bait,” because of course men are caught by it as fish by a hook, — yet, although old age has to abstain from extravagant banquets, it is still capable of enjoying modest festivities. As a boy I often used to see Gaius Duilius the son of Marcus, then an old man, returning from a dinner-party. He thoroughly enjoyed the frequent use of torch and flute-player, distinctions which he had assumed though unprecedented in the case of a private person. It was the privilege of his glory. But why mention others? I will come back to my own case. To begin with, I have always remained a member of a “club” — clubs, you know, were established in my quaestorship on the reception of the Magna Mater from Ida. So I used to dine at their feast with the members of my club — on the whole with moderation, though there was a certain warmth of temperament natural to my time of life; but as that advances there is a daily decrease of all excitement. Nor was I, in fact, ever wont to measure my enjoyment even of these banquets by the physical pleasures they gave more than by the gathering and conversation of friends. For it was a good idea of our ancestors to style the presence of guests at a dinner-table — seeing that it implied a community of enjoyment — a *convivium*, “a living together.” It is a better term than the Greek words which mean “a drinking together,” or, “an eating together.” For they would seem to give the preference to what is really the least important part of it.

14. For myself, owing to the pleasure I take in conversation, I enjoy even banquets that begin early in the afternoon, and not only in company with my contemporaries — of whom very few survive — but also with men of your age and with yourselves. I am thankful to old age, which has increased my avidity for conversation, while it has removed that for eating and drinking. But if anyone does enjoy these — not to seem to have proclaimed war against all pleasure without exception, which is perhaps a feeling inspired by nature — I fail to perceive even in these very pleasures that old age is entirely without the power of appreciation. For myself, I take delight even in the old-fashioned appointment of master of the feast; and in the arrangement of the conversation, which according to ancestral custom is begun from the last place on the left-hand couch when the wine is brought in; as also in the cups which, as in Xenophon's banquet, are small and filled by driblets; and in the contrivance for cooling in summer, and for warming by the winter sun or winter fire. These things I keep up even among my Sabine countrymen, and every day have a full dinner-party of neighbours, which we prolong as far into the night as we can with varied conversation.

But you may urge — there is not the same tingling sensation of pleasure in old men. No doubt; but neither do they miss it so much. For nothing gives you uneasiness which you do not miss. That was a fine answer of Sophocles to a man who asked him, when in extreme old age, whether he was still a lover. "Heaven forbid!" he replied; "I was only too glad to escape from that, as though from a boorish and insane master." To men indeed who are keen after such things it may possibly appear disagreeable and uncomfortable to be without them; but to jaded appetites it is pleasanter to lack than to enjoy. However, he cannot be said to lack who does not want: my contention is that not to want is the pleasanter thing.

But even granting that youth enjoys these pleasures with more zest; in the first place, they are insignificant things to enjoy, as I have said; and in the second place, such as age is not entirely without, if it does not possess them in profusion. Just as a man gets greater pleasure from Ambivius Turpio if seated in the front row at the theatre than if he was in the last, yet, after all, the man in the last row does get pleasure; so youth, because it looks at pleasures at closer quarters, perhaps enjoys itself more, yet even old age, looking at them from a distance, does enjoy itself well enough. Why, what blessings are these — that the soul, having served its time, so to speak, in the campaigns of desire and ambition, rivalry and hatred, and all the passions, should live in its own thoughts, and, as the expression goes, should dwell apart! Indeed, if it has in store any of what I may call the food of study and philosophy, nothing can be

pleasanter than an old age of leisure. We were witnesses to C. Gallus — a friend of your father's, Scipio — intent to the day of his death on mapping out the sky and land. How often did the light surprise him while still working out a problem begun during the night! How often did night find him busy on what he had begun at dawn! How he delighted in predicting for us solar and lunar eclipses long before they occurred! Or again in studies of a lighter nature, though still requiring keenness of intellect, what pleasure Naevius took in his *Punic War*! Plautus in his *Truculentus* and *Pseudolus*! I even saw Livius Andronicus, who, having produced a play six years before I was born — in the consulship of Cento and Tuditanus — lived till I had become a young man. Why speak of Publius Licinius Crassus's devotion to pontifical and civil law, or of the Publius Scipio of the present time, who within these last few days has been created Pontifex Maximus? And yet I have seen all whom I have mentioned ardent in these pursuits when old men. Then there is Marcus Cethegus, whom Ennius justly called "Persuasion's Marrow" — with what enthusiasm did we see him exert himself in oratory even when quite old! What pleasures are there in feasts, games, or mistresses comparable to pleasures such as these? And they are all tastes, too, connected with learning, which in men of sense and good education grow with their growth. It is indeed an honourable sentiment which Solon expresses in a verse which I have quoted before — that he grew old learning many a fresh lesson every day. Than that intellectual pleasure none certainly can be greater.

15. I come now to the pleasures of the farmer, in which I take amazing delight. These are not hindered by any extent of old age, and seem to me to approach nearest to' the ideal wise man's life. For he has to deal with the earth, which never refuses its obedience, nor ever returns what it has received without usury; sometimes, indeed, with less, but generally with greater interest. For my part, however, it is not merely the thing produced, but the earth's own force and natural productiveness that delight me. For received in its bosom the seed scattered broadcast upon it, softened and broken up, she first keeps it concealed therein (hence the harrowing which accomplishes this gets its name from a word meaning "to hide"); next, when it has been warmed by her heat and close pressure, she splits it open and draws from it the greenery of the blade. This, supported by the fibres of the root, little by little grows up, and held upright by its jointed stalk is enclosed in sheaths, as being still immature. When it has emerged from them it produces an ear of corn arranged in order, and is defended against the pecking of the smaller birds by a regular palisade of spikes.

Need I mention the starting, planting, and growth of vines? I can never have too much of this pleasure — to let you into the secret of what gives my old age

repose and amusement. For I say nothing here of the natural force which all things propagated from the earth possess — the earth which from that tiny grain in a fig, or the grape-stone in a grape, or the most minute seeds of the other cereals and plants, produces such huge trunks and boughs. Mallet-shoots, slips, cuttings, quicksets, layers — are they not enough to fill anyone with delight and astonishment? The vine by nature is apt to fall, and unless supported drops down to the earth; yet in order to keep itself upright it embraces whatever it reaches with its tendrils as though they were hands. Then as it creeps on, spreading itself in intricate and wild profusion, the dresser's art prunes it with the knife and prevents it growing a forest of shoots and expanding to excess in every direction. Accordingly at the beginning of spring in the shoots which have been left there protrudes at each of the joints what is termed an eye. From this the grape emerges and shows itself; which, swollen by the juice of the earth and the heat of the sun, is at first very bitter to the taste, but afterwards grows sweet as it matures; and being covered with tendrils is never without a moderate warmth, and yet is able to ward off the fiery heat of the sun. Can anything be richer in product or more beautiful to contemplate? It is not its utility only, as I said before, that charms me, but the method of its cultivation and the natural process of its growth: the rows of uprights, the cross-pieces for the tops of the plants, the tying up of the vines and their propagation by layers, the pruning, to which I have already referred, of some shoots, the setting of others. I need hardly mention irrigation, or trenching and digging the soil, which much increase its fertility. As to the advantages of manuring I have spoken in my book on agriculture. The learned Hesiod did not say a single word on this subject, though he was writing on the cultivation of the soil; yet Homer, who in my opinion was many generations earlier, represents Laertes as softening his regret for his son by cultivating and manuring his farm. Nor is it only in cornfields and meadows and vineyards and plantations that a farmer's life is made cheerful. There are the garden and the orchard, the feeding of sheep, the swarms of bees, endless varieties of flowers. Nor is it only planting out that charms: there is also grafting — surely the most ingenious invention ever made by husbandmen.

16. I might continue my list of the delights of country life; but even what I have said I think is somewhat over long. However, you must pardon me; for farming is a very favourite hobby of mine, and old age is naturally rather garrulous — for I would not be thought to acquit it of all faults.

Well, it was in a life of this sort that Manius Curius, after celebrating triumphs over the Samnites, the Sabines, and Pyrrhus, spent his last days. When I look at his villa — for it is not far from my own — I never can enough admire the man's own frugality or the spirit of the age. As Curius was sitting at his

hearth the Samnites, who brought him a large sum of gold, were repulsed by him; for it was not, he said, a fine thing in his eyes to possess gold, but to rule those who possessed it. Could such a high spirit fail to make old age pleasant?

But to return to farmers — not to wander from my own metier. In those days there were senators, *i. e.* old men, on their farms. For L. Quinctius Cincinnatus was actually at the plough when word was brought him that he had been named Dictator. It was by his order as Dictator, by the way, that C. Servilius Ahala, the Master of the Horse, seized and put to death Spurius Maelius when attempting to obtain royal power. Curius as well as other old men used to receive their summonses to attend the Senate in their farm-houses, from which circumstance the summoners were called *viatores* or “travellers.” Was these men’s old age an object of pity who found their pleasure in the cultivation of the land? In my opinion, scarcely any life can be more blessed, not alone from its utility (for agriculture is beneficial to the whole human race), but also as much from the mere pleasure of the thing, to which I have already alluded, and from the rich abundance and supply of all things necessary for the food of man and for the worship of the gods above. So, as these are objects of desire to certain people, let us make our peace with pleasure. For the good and hard-working farmer’s wine-cellar and oil-store, as well as his larder, are always well filled, and his whole farm-house is richly furnished. It abounds in pigs, goats, lambs, fowls, milk, cheese, and honey. Then there is the garden, which the farmers themselves call their “second flicht.” A zest and flavour is added to all these by hunting and fowling in spare hours. Need I mention the greenery of meadows, the rows of trees, the beauty of vineyard and olive-grove? I ‘will put it briefly: nothing can either furnish necessities more richly, or present a fairer spectacle, than well-cultivated land. And to the enjoyment of that, old age does not merely present no hindrance — it actually invites and allures to it. For where else can it better warm itself, either by basking in the sun or by sitting by the fire, or at the proper time cool itself more wholesomely by the help of shade or water? Let the young keep their arms then to themselves, their horses, spears, their foils and ball, their swimming baths and running path. To us old men let them, out of the many forms of sport, leave dice and counters; but even that as they choose, since old age can be quite happy without them.

17. Xenophon’s books are very useful for many purposes. Pray go on reading them with attention, as you have ever done. In what ample terms is agriculture lauded by him in the book about husbanding one’s property, which is called *Oeconomicus*! But to show you that he thought nothing so worthy of a prince as the taste for cultivating the soil, I will translate what Socrates says to Critobulus in that book:

“When that most gallant Lacedaemonian Lysander came to visit the Persian prince Cyrus at Sardis, so eminent for his character and the glory of his rule, bringing him presents from his allies, he treated Lysander in all ways with courteous familiarity and kindness, and, among other things, took him to see a certain park carefully planted. Lysander expressed admiration of the height of the trees and the exact arrangement of their rows in the quincunx, the careful cultivation of the soil, its freedom from weeds, and the sweetness of the odours exhaled from the flowers, and went on to say that what he admired was not the industry only, but also the skill of the man by whom this had been planned and laid out. Cyrus replied: ‘Well, it was I who planned the whole thing these rows are my doing, the laying out is all mine; many of the trees were even planted by own hand.’ Then Lysander, looking at his purple robe, the brilliance of his person, and his adornment Persian fashion with gold and many jewels, said: ‘People are quite right, Cyrus, to call you happy, since the advantages of high fortune have been joined to an excellence like yours.’”

This kind of good fortune, then, it is in the power of old men to enjoy; nor is age any bar to our maintaining pursuits of every other kind, and especially of agriculture, to the very extreme verge of old age. For instance, we have it on record that M. Valerius Corvus kept it up to his hundredth year, living on his land and cultivating it after his active career was over, though between his first and sixth consulships there was an interval of six and forty years. So that he had an official career lasting the number of years which our ancestors defined as coming between birth and the beginning of old age. Moreover, that last period of his old age was more blessed than that of his middle life, inasmuch as he had greater influence and less labour. For the crowning grace of old age is influence.

How great was that of L. Caecilius Metellus! How great that of Atilius Calatinus, over whom the famous epitaph was placed, “Very many classes agree in deeming this to have been the very first man of the nation”! The line cut on his tomb is well known. It is natural, then, that a man should have had influence, in whose praise the verdict of history is unanimous. Again, in recent times, what a great man was Publius Crassus, Pontifex Maximus, and his successor in the same office, M. Lepidus! I need scarcely mention Paulus or Africanus, or, as I did before, Maximus. It was not only their senatorial utterances that had weight: their least gesture had it also. In fact, old age, especially when it has enjoyed honours, has an influence worth all the pleasures of youth put together.

18. But throughout my discourse remember that my panegyric applies to an old age that has been established on foundations laid by youth. From which may be deduced what I once said with universal applause, that it was a wretched old age that had to defend itself by speech. Neither white hairs nor wrinkles can at

once claim influence in themselves: it is the honourable conduct of earlier days that is rewarded by possessing influence at the last. Even things generally regarded as trifling and matters of course — being saluted, being courted, having way made for one, people rising when one approaches, being escorted to and from the forum, being referred to for advice — all these are marks of respect, observed among us and in other States — always most sedulously where the moral tone is highest. They say that Lysander the Spartan, whom I have mentioned before, used to remark that Sparta was the most dignified home for old age; for that nowhere was more respect paid to years, no-where was old age held in higher honour. Nay, the story is told of how when a man of advanced years came into the theatre at Athens when the games were going on, no place was given him anywhere in that large assembly by his own countrymen; but when he came near the Lacedaemonians, who as ambassadors had a fixed place assigned to them, they rose as one man out of respect for him, and gave the veteran a seat. When they were greeted with rounds of applause from the whole audience, one of them remarked:

“The Athenians know what is right, but will not do it.” There are many excellent rules in our augural college, but among the best is one which affects our subject — that precedence in speech goes by seniority; and augurs who are older are preferred only to those who have held higher office, but even to those who are actually in possession of imperium. What then are the physical pleasures to be compared with the reward of influence? Those who have employed it with distinction appear to me to have played the drama of life to its end, and not to have broken down in the last act like unpractised players.

But, it will be said, old men are fretful, fidgety, ill-tempered, and disagreeable. If you come to that, they are also avaricious. But these are faults of character, not of the time of life. And, after all, fretfulness and the other faults I mentioned admit of some excuse — not, indeed, a complete one, but one that may possibly pass muster: they think themselves neglected, looked down upon, mocked, Besides with bodily weakness every rub is a source of pain. Yet all these faults are softened both by good character and good education. Illustrations of this may be found in real life, as also on the stage in the case of the brothers in the *Adeiphi*. What harshness in the one, what gracious manners in the other The fact is that, just as it is not every wine, so it is not every life, that turns sour from keeping, Serious gravity I approve of in old age, but, as in other things, it must be within due limits: bitterness I can in no case approve. What the object of senile avarice may be I cannot conceive. For can there be anything more absurd than to seek more journey money, the less there remains of the journey?

19. There remains the fourth reason, which more than anything else appears to torment men of my age and keep them in a flutter — THE NEARNESS OF DEATH, which, it must be allowed, cannot be far from an old man. But what a poor dotard must he be who has not learnt in the course of so long a life that death is not a thing to be feared? Death, that is either to be totally disregarded, if it entirely extinguishes the soul, or is even to be desired, if it brings him where he is to exist forever. A third alternative, at any rate, cannot possibly be discovered. Why then should I be afraid if I am destined either not to be miserable after death or even to be happy? After all, who is such a fool as to feel certain — however young he may be — that he will be alive in the evening? Nay, that time of life has many more chances of death than ours, Young men more easily contract diseases; their illnesses are more serious; their treatment has to be more severe. Accordingly, only a few arrive at old age. If that were not so, life would be conducted better and more wisely; for it is in old men that thought, reason, and prudence are to be found; and if there had been no old men, States would never have existed at all. But I return to the subject of the imminence of death. What sort of charge is this against old age, when you see that it is shared by youth? I had reason in the case of my excellent son — as you had, Scipio, in that of your brothers, who were expected to attain the highest honours — to realise that death is common to every time of life. Yes, you will say; but a young man expects to live long; an old man cannot expect to do so. Well, he is a fool to expect it. For what can be more foolish than to regard the uncertain as certain, the false as true? “An old man has nothing even to hope.” Ah, but it is just there that he is in a better position than a young man, since what the latter only hopes he has obtained. The one wishes to live long; the other has lived long.

And yet, good heaven! what is “long” in a man’s life? For grant the utmost limit: let us expect an age like that of the King of the Tartessi. For there was, as I find recorded, a certain Agathonius at Gades who reigned eighty years and lived a hundred and twenty. But to my mind nothing seems even long in which there is any “last,” for when that arrives, then all the past has slipped away — only that remains to which you have attained by virtue and righteous actions. Hours indeed, and days and months and years depart, nor does past time ever return, nor can the future be known. Whatever time each is granted for life, with that he is bound to be content. An actor, in order to earn approval, is not bound to perform the play from beginning to end; let him only satisfy the audience in whatever act he appears. Nor need a wise man go on to the concluding “plaudite.” For a short term of life is long enough for living well and honourably. But if you go farther, you have no more right to grumble than farmers do because the charm of the spring season is past and the summer and

autumn have come. For the word “spring” in a way suggests youth, and points to the harvest to be: the other seasons are suited for the reaping and storing of the crops. Now the harvest of old age is, as I have often said, the memory and rich store of blessings laid up in easier life. Again, all things that accord with nature are to be counted as good. But what can be more in accordance with nature than for old men to die? A thing, indeed, which also beliefs young men, though nature revolts and fights against it. Accordingly, the death of young men seems to me like putting out a great fire with a deluge of water; but old men die like a fire going out because it has burnt down of its own nature without artificial means. Again, just as apples when unripe are torn from trees, but when ripe and mellow drop down, so it is violence that takes life from young men, ripeness from old. This ripeness is so delightful to me, that, as I approach nearer to death, I seem as it were to be sighting land, and to be coming to port at last after a long voyage.

20. Again, there is no fixed borderline for old age, and you are making a good and proper use of it as long as you can satisfy the call of duty and disregard death. The result of this is, that old age is even more confident and courageous than youth. That is the meaning of Solon’s answer to the tyrant Pisistratus. When the latter asked him what he relied upon in opposing him with such boldness, he is said to have replied, “On my old age.” But that end of life is the best, when, without the intellect or senses being impaired, Nature herself takes to pieces her own handiwork which she also put together. Just as the builder of a ship or a house can break them up more easily than any one else, so the nature that knit together the human frame can also best unfasten it. Moreover, a thing freshly glued together is always difficult to pull asunder; if old, this is easily done.

The result is that the short time of life left to them is not to be grasped at by old men with greedy eagerness, or abandoned without cause. Pythagoras forbids us, without an order from our commander, that is God, to desert life’s fortress and outpost. Solon’s epitaph, indeed, is that of a wise man, in which he says that he does not wish his death to be unaccompanied by the sorrow and lamentations of his friends. He wants, I suppose, to be beloved by them. But I rather think Ennius says better:

None grace me with their tears, nor weeping loud
Make sad my funeral rites!

He holds that a death is not a subject for mourning when it is followed by immortality.

Again, there may possibly be some sensation of dying and that only for a short time, especially in the case of an old man: after death, indeed, sensation is either what one would desire, or it disappears altogether. But to disregard death is a lesson which must be studied from our youth up; for unless that is learnt, no

one can have a quiet mind. For die we certainly must, and that too without being certain whether it may not be this very day. As death, therefore, is hanging over our head every hour, how can a man ever be unshaken in soul if he fears it?

But on this theme I don't think I need much enlarge: when I remember what Lucius Brutus did, who was killed while defending his country; or the two Decii, who spurred their horses to a gallop and met a voluntary death; or M. Atilius Regulus, who left his home to confront a death of torture, rather than break the word which he had pledged to the enemy; or the two Scipios, who determined to block the Carthaginian advance even with their own bodies; or your grandfather Lucius Paulus, who paid with his life for the rashness of his colleague in the disgrace at Cannae; or M. Marcellus, whose death not even the most bloodthirsty of enemies would allow to go without the honour of burial. It is enough to recall that our legions (as I have recorded in my *Origins*) have often marched with cheerful and lofty spirit to ground from which they believed that they would never return. That, therefore, which young men — not only uninstructed, but absolutely ignorant — treat as of no account, shall men who are neither young nor ignorant shrink from in terror? As a general truth, as it seems to me, it is weariness of all pursuits that creates weariness of life. There are certain pursuits adapted to childhood: do young men miss them? There are others suited to early manhood: does that settled time of life called "middle age" ask for them? There are others, again, suited to that age, but not looked for in old age. There are, finally, some which belong to Old age. Therefore, as the pursuits of the earlier ages have their time for disappearing, so also have those of old age. And when that takes place, a satiety of life brings on the ripe time for death.

21. For I do not see why I should not venture to tell you my personal opinion as to death, of which I seem to myself to have a clearer vision in proportion as I am nearer to it. I believe, Scipio and Laelius, that your fathers — those illustrious men and my dearest friends — are still alive, and that too with a life which alone deserves the name. For as long as we are imprisoned in this framework of the body, we perform a certain function and laborious work assigned us by fate. The soul, in fact, is of heavenly origin, forced down from its home in the highest, and, so to speak, buried in earth, a place quite opposed to its divine nature and its immortality. But I suppose the immortal gods to have sown souls broadcast in human bodies, that there might be some to survey the world, and while contemplating the order of the heavenly bodies to imitate it in the unvarying regularity of their life. Nor is it only reason and arguments that have brought me to this belief, but the great fame and authority of the most distinguished philosophers. I used to be told that Pythagoras and the Pythagoreans — almost natives of our country, who in old times had been called

the Italian school of philosophers — never doubted that we had souls drafted from the universal Divine intelligence. I used besides to have pointed out to me the discourse delivered by Socrates on the last day of his life upon the immortality of the soul — Socrates who was pronounced by the oracle at Delphi to be the wisest of men. I need say no more. I have convinced myself, and I hold — in view of the rapid movement of the soul, its vivid memory of the past and its prophetic knowledge of the future, its many accomplishments, its vast range of knowledge, its numerous discoveries — that a nature embracing such varied gifts cannot itself be mortal. And since the soul is always in motion and yet has no external source of motion, for it is self-moved, I conclude that it will also have no end to its motion, because it is not likely ever to abandon itself. Again, since the nature of the soul is not composite, nor has in it any admixture that is not homogeneous and similar, I conclude that it is indivisible, and, if indivisible, that it cannot perish. It is again a strong proof of men knowing most things before birth, that when mere children they grasp innumerable facts with such speed as to show that they are not then taking them in for the first time, but remembering and recalling them. This is roughly Plato's argument.

22. Once more in Xenophon we have the elder Cyrus on his deathbed speaking as follows: —

“Do not suppose, my dearest sons, that when I have left you I shall be nowhere and no one. Even when I was with you, you did not see my soul, but knew that it was in this body of mine from what I did. Believe then that it is still the same, even though you see it not. The honours paid to illustrious men had not continued to exist after their death, had the souls of these very men not done something to make us retain our recollection of them beyond the ordinary time. For myself, I never could be persuaded that souls while in mortal bodies were alive, and died directly they left them; nor, in fact, that the soul only lost all intelligence when it left the unintelligent body. I believe rather that when, by being liberated from all corporeal admixture, it has begun to be pure and undefiled, it is then that it becomes wise. And again, when man's natural frame is resolved into its elements by death, it is clearly seen whither each of the other elements departs: for they all go to the place from which they came: but the soul alone is invisible alike when present and when departing. Once more, you see that nothing is so like death as sleep. And yet it is in sleepers that souls most clearly reveal their divine nature; for they foresee many events when they are allowed to escape and are left free. This shows what they are likely to be when they have completely freed themselves from the fetters of the body. Wherefore, if these things are so, obey me as a god. But if my soul is to perish with my

body, nevertheless do you from awe of the gods, who guard and govern this fair universe, preserve my memory by the loyalty and piety of your lives.”

23. Such are the words of the dying Cyrus. I will now, with your good leave, look at home. No one, my dear Scipio, shall ever persuade me that your father Paulus and your two grandfathers Paulus and Africanus, or the father of Africanus, or his uncle, or many other illustrious men not necessary to mention, would have attempted such lofty deeds as to be remaindered by posterity, had they not seen in their minds that future ages concerned them. Do you suppose — to take an old man’s privilege of a little self-praise — that I should have been likely to undertake such heavy labours by day and night, at home and abroad, if I had been destined to have the same limit to my glory as to my life? Had it not been much better to pass an age of ease and repose without any labour or exertion? But my soul, I know not how, refusing to be kept down, ever fixed its eyes upon future ages, as though from a conviction that it would begin to live only when it had left the body. But had it not been the case that souls were immortal, it would not have been the souls of all the best men that made the greatest efforts after an immortality of fame.

Again, is there not the fact that the wisest man ever dies with the greatest cheerfulness, the most unwise with the least? Don’t you think that the soul which has the clearer and longer sight sees that it is starting for better things, while the soul whose vision is dimmer does not see it? For my part, I am transported with the desire to see your fathers, who were the object of my reverence and affection. Nor is it only those whom I knew that I long to see; it is those also of whom I have been told and have read, whom I have myself recorded in my history. When I am setting out for that, there is certainly no one who will find it easy to draw me back, or boil me up again like second Pelios. Nay, if some god should grant me to renew my childhood from my present age and once more to be crying in my cradle, I would firmly refuse; nor should I in truth be willing, after having, as it were, run the full course, to be recalled from the winning — crease to the barriers. For what blessing has life to offer? Should we not rather say what labour? But granting that it has, at any rate it has after all a limit either to enjoyment or to existence. I don’t wish to depreciate life, as many men and good philosophers have often done; nor do I regret having lived, for I have done so in a way that lets me think that I was not born in vain. But I quit life as I would an inn, not as I would a home. For nature has given us a place of entertainment, not of residence.

Oh glorious day when I shall set out to join that heavenly conclave and company of souls, and depart from the turmoil and impurities of this world! For I shall not go to join only those whom I have before mentioned, but also my son

Cato, than whom no better man was ever born, nor one more conspicuous for piety. His body was burnt by me, though mine ought, on the contrary, to have been burnt by him; but his spirit, not abandoning, but ever looking back upon me, has certainly gone whither he saw that I too must come. I was thought to bear that loss heroically, not that I really bore it without distress, but I found my own consolation in the thought that the parting and separation between us was not to be for long.

It is by these means, my dear Scipio, — for you said that you and Laelius were wont to express surprise on this point, — that my old age sits lightly on me, and is not only not oppressive but even delightful. But if I am wrong in thinking the human soul immortal, I am glad to be wrong; nor will I allow the mistake which gives me so much pleasure to be wrested from me as long as I live. But if when dead, as some insignificant philosophers think, I am to be without sensation, I am not afraid of dead philosophers deriding my errors. Again, if we are not to be immortal, it is nevertheless what a man must wish — to have his life end at its proper time. For nature puts a limit to living as to everything else. Now, old age is as it were the playing out of the drama, the full fatigue of which we should shun, especially when we also feel that we have had more than enough of it.

This is all I had to say on old age. I pray that you may arrive at it, that you may put my words to a practical test.

MARCUS PORCIUS CATO



From the Encyclopædia Britannica, 1911

MARCUS PORCIUS CATO (234–149 B.C.), Roman statesman, surnamed “The Censor,” *Sapiens*, *Priscus*, or *Major* (the Elder), to distinguish him from Cato of Utica, was born at Tusculum. He came of an ancient plebeian family, noted for some military services, but not ennobled by the discharge of the higher civil offices. He was bred, after the manner of his Latin forefathers, to agriculture, to which he devoted himself when not engaged in military service. But, having attracted the notice of L. Valerius Flaccus, he was brought to Rome, and became successively quaestor (204), aedile (199), praetor (198), and consul (195) with his old patron. During his term of office he vainly opposed the repeal of the *lex Oppia*, passed during the Second Punic War to restrict luxury and extravagance on the part of women. Meanwhile he served in Africa, and took part in the crowning campaign of Zama (202). He held a command in Sardinia, where he first showed his strict public morality, and again in Spain, which he reduced to subjection with great cruelty, and gained thereby the honour of a triumph (194). In the year 191 he acted as military tribune in the war against Antiochus III. of Syria, and played an important part in the battle of Thermopylae, which finally delivered Greece from the encroachments of the East. His reputation as a soldier was now established; henceforth he preferred to serve the state at home, scrutinizing the conduct of the candidates for public honours and of generals in the field. If he was not personally engaged in the prosecution of the Scipios (Africanus and Asiaticus) for corruption, it was his spirit that animated the attack upon them. Even Africanus, who refused to reply to the charge, saying only, “Romans, this is the day on which I conquered Hannibal,” and was absolved by acclamation, found it necessary to retire self-banished to his villa at Liternum. Cato’s enmity dated from the African campaign when he quarrelled with Scipio for his lavish distribution of the spoil amongst the troops, and his general luxury and extravagance.

Cato had, however, a more serious task to perform in opposing the spread of the new Hellenic culture which threatened to destroy the rugged simplicity of the conventional Roman type. He conceived it to be his special mission to resist this invasion. It was in the discharge of the censorship that this determination was

most strongly exhibited, and hence that he derived the title (the Censor) by which he is most generally distinguished. He revised with unsparing severity the lists of senators and knights, ejecting from either order the men whom he judged unworthy of it, either on moral grounds or from their want of the prescribed means. The expulsion of L. Quinctius Flamininus for wanton cruelty was an example of his rigid justice. His regulations against luxury were very stringent. He imposed a heavy tax upon dress and personal adornment, especially of women, and upon young slaves purchased as favourites. In 181 he supported the *lex Orchia* (according to others, he first opposed its introduction, and subsequently its repeal), which prescribed a limit to the number of guests at an entertainment, and in 169 the *lex Voconia*, one of the provisions of which was intended to check the accumulation of an undue proportion of wealth in the hands of women. Amongst other things he repaired the aqueducts, cleansed the sewers, prevented private persons drawing off public water for their own use, ordered the demolition of houses which encroached on the public way, and built the first basilica in the forum near the curia. He raised the amount paid by the publican for the right of farming the taxes, and at the same time diminished the contract prices for the construction of public works.

From the date of his censorship (184) to his death in 149, Cato held no public office, but continued to distinguish himself in the senate as the persistent opponent of the new ideas. He was struck with horror, along with many other Romans of the graver stamp, at the licence of the Bacchanalian mysteries, which he attributed to the fatal influence of Greek manners; and he vehemently urged the dismissal of the philosophers (Carneades, Diogenes and Critolaus), who came as ambassadors from Athens, on account of the dangerous nature of the views expressed by them. He had a horror of physicians, who were chiefly Greeks. He procured the release of Polybius, the historian, and his fellow-prisoners, contemptuously asking whether the senate had nothing more important to do than discuss whether a few Greeks should die at Rome or in their own land. It was not till his eightieth year that he made his first acquaintance with Greek literature. Almost his last public act was to urge his countrymen to the Third Punic War and the destruction of Carthage. In 157 he was one of the deputies sent to Carthage to arbitrate between the Carthaginians and Massinissa, king of Numidia. The mission was unsuccessful and the commissioners returned home. But Cato was so struck by the evidences of Carthaginian prosperity that he was convinced that the security of Rome depended on the annihilation of Carthage. From this time, in season and out of season, he kept repeating the cry: "Delenda est Carthago."

To Cato the individual life was a continual discipline, and public life was the discipline of the many. He regarded the individual householder as the germ of the family, the family as the germ of the state. By strict economy of time he accomplished an immense amount of work; he exacted similar application from his dependents, and proved himself a hard husband, a strict father, a severe and cruel master. There was little difference apparently, in the esteem in which he held his wife and his slaves; his pride alone induced him to take a warmer interest in his sons. To the Romans themselves there was little in this behaviour which seemed worthy of censure; it was respected rather as a traditional example of the old Roman manners. In the remarkable passage (xxxix. 40) in which Livy describes the character of Cato, there is no word of blame for the rigid discipline of his household.

Cato perhaps deserves even more notice as a literary man than as a statesman or a soldier. He was the first Latin prose writer of any importance, and the first author of a history of Rome in Latin. His treatise on agriculture (*De Agricultura*, or *De Re Rustica*) is the only work by him that has been preserved; it is not agreed whether the work we possess is the original or a later revision. It contains a miscellaneous collection of rules of good husbandry, conveying much curious information on the domestic habits of the Romans of his age. His most important work, *Origines*, in seven books, related the history of Rome from its earliest foundations to his own day. It was so called from the second and third books, which described the rise of the different Italian towns. His speeches, of which as many as 150 were collected, were principally directed against the young free-thinking and loose-principled nobles of the day. He also wrote a set of maxims for the use of his son (*Praecepta ad Filium*), and some rules for everyday life in verse (*Carmen de Moribus*). The collection of proverbs in hexameter verse, extant under the name of Cato, probably belongs to the 4th century a.d. (See Cato, Dionysius.)

Authorities. — There are lives of Cato by Cornelius Nepos, Plutarch and Aurelius Victor, and many particulars of his career and character are to be gathered from Livy and Cicero. See also F. D. Gerlach, *Marcus Porcius Cato der Censor* (Basel, 1869); G. Kurth, *Caton l'ancien* (Bruges, 1872); J. Cortese, *De M. Porcii Catonis vita, operibus, et lingua* (Turin, 1883); F. Marcucci, *Studio critico sulle Opere di Catone il Maggiore* (1902). The best edition of the *De Agricultura* is by H. Keil (1884–1891), of the fragments of the *Origines* by H. Peter (1883) in *Historicorum Romanorum Fragmenta*, of the fragments generally by H. Jordan (1860); see also J. Wordsworth, *Fragments and Specimens of Early Latin* (1874); M. Schanz, *Geschichte der römischen*

Litteratur (1898); article in Smith's *Dictionary of Greek and Roman Biography*, Mommsen, *Hist. of Rome* (Eng. trans.), bk. iii. ch. xi and xiv.; Warde Fowler, *Social Life at Rome* (1909).

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