

De Re Rustica (Management of a Roman estate)
by Columella

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Lucius Junius Moderatus Columella was a 1st century AD inhabitant of Spain, which was a province of the Roman Empire. Not much is known about him personally. He wrote 12 volumes on farming, animal husbandry, and estate management, for which he seems to have had intimate personal experience. Below are selections from one of his works on managing a *Latifundia*, a large Roman agricultural estate.

The size of the villa and the number of its parts should be proportioned to the whole inclosure, and it should be divided into three groups: the villa urbana or manor house, the villa rustica or farmhouse, and the villa fructuaria or storehouse. The manor house should be divided in turn into winter apartments and summer apartments, in such a way that the winter bedrooms may face the sunrise at the winter solstice, and the winter dining-room face the sunset at the equinox. The summer bedrooms, on the other hand, should look toward the midday sun at the time of the equinox, but the dining-rooms of that season should look toward the rising sun of winter. The baths should face the setting sun of summer, that they may be lighted from midday up to evening. The promenades should be exposed to the midday sun at the equinox, so as to receive both the maximum of sun in winter and the minimum in summer. But in the part devoted to farm uses there will be placed a spacious and high kitchen, that the rafters may be free from the danger of fire, and that it may offer a convenient stopping-place for the slave household at every season of the year. It will be best that cubicles for unfettered slaves be built to admit the midday sun at the equinox; for those who are in chains there should be an underground prison, as wholesome as possible, receiving light through a number of narrow windows built so high from the ground that they cannot be reached with the hand.

For cattle there should be stables which will not be troubled by either heat or cold; for animals broken to work, two sets of stalls — one for winter, another for summer; and for the other animals which it is proper to keep within the farmstead there should be places partly covered, partly open to the sky, and surrounded with high walls so that the animals may rest in the one place in winter, in the other in summer, without being attacked by wild beasts. But stables should be roomy and so arranged that no moisture can flow in and that whatever is made there may run off very quickly, to prevent the rotting of either the bases of the walls or the hoofs of the cattle. Ox-stalls should be ten feet wide, or nine at the least — a size which will allow room for the animal to lie down and for the oxherd to move around it in performing his duties. The feed-racks should not be too high for the ox or pack-animal to feed from without inconvenience while standing. Quarters should be provided for the overseer alongside the entrance, so that he may have oversight of all who come in and go out; and for the steward over the entrance for the same reason, and also that he may keep close watch on the overseer; and near both of these there should be a storehouse in which all farm gear may be collected, and within it a closet for the storing of the iron implements.

Cells for the herdsmen and shepherds should be adjacent to their respective charges, so that they may conveniently run out to care for them. And yet all should be quartered as close as possible to one another, so that the diligence of the overseer may not be overtaxed in making the rounds of the several places, and also that they may be witnesses of one another's industry and negligence.

As to the part devoted to the storage of produce, it is divided into rooms for oil, for presses, for wine, for the boiling down of must, lofts for hay and chaff, storerooms, and granaries, that such of them as are on the ground floor may take care of liquid products for the market, such as oil and wine; while dry products, such as grain, hay leaves, chaff, and other fodder, should be stored in lofts. But the granaries, as I have said, should be reached by ladders and should receive ventilation through small openings on the north side; for that exposure is the coolest and the least humid, and both these considerations contribute to the preservation of stored grain. The same reason holds true in the placing of the wine-room on the ground floor; and it should be far removed from the baths, oven, dunghill, and other filthy places which give off a foul odour, and no less so from cisterns and running water, from which is derived a moisture that spoils the wine.

And I am not unaware that some consider the best place for storing grain to be a granary with a vaulted ceiling, its earthen floor, before it is covered over, dug up and soaked with fresh and unsalted lees of oil and packed down with rammers as is Signian work. Then, after this has dried thoroughly, it is overlaid in the same way with a pavement of tiles consisting of lime and sand mixed with oil lees instead of water, and these are beaten down with great force by rammers and are smoothed off; and all joints of walls and floor are bound together with a bolstering of tile, for usually when buildings develop cracks in such places they afford holes and hiding-places for underground animals. But granaries are also divided into bins to permit the storage of every kind of legume by itself. The walls are coated with a plastering of clay and oil lees, to which are added, in place of chaff, the dried leaves of the wild olive or, if these are wanting, of the olive. Then, when the aforesaid plastering has dried, it is again sprinkled over with oil lees: and when this has dried the grain is brought in. This seems to be the most advantageous method of protecting stored produce from damage by weevils and like vermin, and if it is not carefully laid away they quickly destroy it. But the type of granary just described, unless it be in a dry section of the steading, causes even the hardest grain to spoil with mustiness; and if it were not for this, it would be possible to keep grain even buried underground, as in certain districts across the sea where the earth, dug out in the manner of pits, which they call siri, takes back to itself the fruits which it has produced. But we, living in regions which abound in moisture, approve rather the granary that stands on supports above the ground and the attention to pavements and walls as just mentioned, because, as I have said, the floors and sides of storerooms so protected keep out the weevil. Many think that when this kind of pest appears it can be checked if the damaged grain is winnowed in the bin and cooled off, as it were. But this is a most mistaken notion; for the insects are not driven off by so doing, but are mixed through the whole mass. If left undisturbed, only the upper surface would be attacked, as the weevil breeds no more than a palm's breadth below; and it is far better to endanger only the part already infested than to subject the whole amount to risk. For it is easy, when occasion demands it, to remove the damaged portion and use the sound grain underneath. But these latter remarks, though brought in extraneously, I nevertheless seem to have introduced not unseasonably at this point.

The press-rooms especially and the store-rooms for oil should be warm, because every liquid is thinned with heat and thickened by great cold; and if oil freezes, which seldom happens, it becomes rancid. But as it is natural heat that is wanted, arising from the climate and the exposure, there is no need of fire or flame, as the taste of oil is spoiled by smoke and soot. For this reason the pressing-room should be lighted from the southern side, so that we may not find it necessary to employ fires and lamps when the olives are being pressed.

The cauldron-room, in which boiled wine is made, should be neither narrow nor dark, so that the attendant who is boiling down the must may move around without inconvenience. The smoke-room, too, in which timber not long cut may be seasoned quickly can be built in a

section of the rural establishment adjoining the baths for the countryfolk; for it is important also that there be such places in which the household may bathe — but only on holidays; for the frequent use of baths is not conducive to physical vigour. Storerooms for wine will be situated to advantage over these places from which smoke is usually rising, for wines age more rapidly when they are brought to an early maturity by a certain kind of smoke. For this reason there should be another loft to which they may be removed, to keep them from becoming tainted, on the other hand, by too much smoking.

As for the situation of the villa and the arrangement of its several parts, enough has been said. It will be necessary, next, that the villa have the following near it: an oven and a gristmill, of such size as may be required by the number of hands that are to be employed; at least two ponds, one to serve for geese and cattle, the other in which we may soak lupines, elm-withes, twigs, and other things which are adapted to our needs. There should also be two manure-pits, one to receive the fresh dung and keep it for a year, and a second from which the old is hauled; but both of them should be built shelving with a gentle slope, in the manner of fish-ponds, and built up and packed hard with earth so as not to let the moisture drain away. For it is most important that manure shall retain its strength with no drying out of its moisture and that it be soaked constantly with liquids, so that any seeds of bramble or grass that are mixed in the straw or chaff shall decay, and not be carried out to the field to fill the crops with weeds. And it is for this reason that experienced farmers, when they carry out any refuse from folds and stables, throw over it a covering of brush and do not allow it to dry out or be burned by the beating of the sun.

The threshing-floor is to be so placed, if possible, that it can be viewed from above by the master, or at least by the farm-manager. Such a floor is best when paved with hard stone, for the reason that the grain is threshed out quickly, since the ground does not give under the beating of hoofs and threshing-sledges, and the winnowed grain is cleaner and free from small stones and clods which a dirt floor nearly always casts up during the threshing. Adjoining this there should be a shed (and especially in Italy, because of the changeableness of the weather), in which the half-threshed grain may be stacked under cover if a sudden shower comes up. In certain districts across the sea, where there is no rain in summer, this is unnecessary. The orchards, too, and the gardens should be fenced all around and should lie close by, in a place to which there may flow all manure-laden sewage from barnyard and baths, and the watery lees squeezed from olives; for both vegetables and trees thrive on nutriment of this sort too.

7 After all these arrangements have been acquired or contrived, especial care is demanded of the master not only in other matters, but most of all in the matter of the persons in his service; and these are either tenant-farmers or slaves, whether unfettered or in chains. He should be civil in dealing with his tenants, should show himself affable, and should be more exacting in the matter of work than of payments, as this gives less offence yet is, generally speaking, more profitable. For when land is carefully tilled it usually brings a profit, and never a loss, except when it is assailed by unusually severe weather or by robbers; and for that reason the tenant does not venture to ask for reduction of his rent. But the master should not be insistent on his rights in every particular to which he has bound his tenant, such as the exact day for payment, or the matter of demanding firewood and other trifling services in addition, attention to which causes country-folk more trouble than expense; in fact, we should not lay claim to all that the law allows, for the ancients regarded the extreme of the law as the extreme of oppression. On the other hand, we must not neglect our claims altogether; for, as Alfius the usurer is reported to have said, and with entire truth, "Good debts become bad ones if they are not called". Furthermore, I myself remember having heard Publius Volusius, an old man who had been consul and was very wealthy, declare that estate most fortunate which had as tenants natives of the place, and held them, by

reason of long association, even from the cradle, as if born on their own father's property. So I am decidedly of the opinion that repeated letting of a place is a bad thing, but that a worse thing is the farmer who lives in town and prefers to till the land through his slaves rather than by his own hand. Saserna used to say that from a man of this sort the return was usually a lawsuit instead of revenue, and that for this reason we should take pains to keep with us tenants who are country-bred and at the same time diligent farmers, when we are not at liberty to till the land ourselves or when it is not feasible to cultivate it with our own servants; though this does not happen except in districts which are desolated by the severity of the climate and the barrenness of the soil. But when the climate is moderately healthful and the soil moderately good, a man's personal supervision never fails to yield a larger return from his land than does that of a tenant — never than that of even an overseer, unless the greatest carelessness or greed on the part of the slave stands in the way. There is no doubt that both these offences are either committed or fostered through the fault of the master, inasmuch as he has the authority to prevent such a person from being placed in charge of his affairs, or to see to it that he is removed if so placed. On far distant estates, however, which it is not easy for the owner to visit, it is better for every kind of land to be under free farmers than under slave overseers, but this is particularly true of grain land. To such land a tenant farmer can do no great harm, as he can to plantations of vines and trees, while slaves do it tremendous damage: they let out oxen for hire, and keep them and other animals poorly fed; they do not plough the ground carefully, and they charge up the sowing of far more seed than they have actually sown; what they have committed to the earth they do not so foster that it will make the proper growth; and when they have brought it to the threshing-floor, every day during the threshing they lessen the amount either by trickery or by carelessness. For they themselves steal it and do not guard it against the thieving of others, and even when it is stored away they do not enter it honestly in their accounts. The result is that both manager and hands are offenders, and that the land pretty often gets a bad name. Therefore my opinion is that an estate of this sort should be leased if, as I have said, it cannot have the presence of the owner.

8 The next point is with regard to slaves — over what duty it is proper to place each and to what sort of tasks to assign them. So my advice at the start is not to appoint an overseer from that sort of slaves who are physically attractive, and certainly not from that class which has busied itself with the voluptuous occupations of the city. The lazy and sleepy-headed class of servants, accustomed to idling, to the Campus, the Circus, and the theatres, to gambling, to cookshops, to bawdy-houses, never ceases to dream of these follies; and when they carry them over into their farming, the master suffers not so much loss in the slave himself as in his whole estate. A man should be chosen who has been hardened by farm work from his infancy, one who has been tested by experience. If, however, such a person is not available, let one be put in charge out of the number of those who have slaved patiently at hard labour; and he should already have passed beyond the time of young manhood but not yet have arrived at that of old age, that youth may not lessen his authority to command, seeing that older men think it beneath them to take orders from a mere stripling, and that old age may not break down under the heaviest labour. He should be, then, of middle age and of strong physique, skilled in farm operations or at least very painstaking, so that he may learn the more readily; for it is not in keeping with this business of ours for one man to give orders and another to give instructions, nor can a man properly exact work when he is being tutored by an underling as to what is to be done and in what way. Even an illiterate person, if only he have a retentive mind, can manage affairs well enough. Cornelius Celsus says that an overseer of this sort brings money to his master oftener than he does his book, because, not knowing his letters, he is either less able to falsify accounts or is afraid to do so through a second party because that would make another aware of the deception.

But be the overseer what he may, he should be given a woman companion to keep him within bounds and yet in certain matters to be a help to him; and this same overseer should be warned not to become intimate with a member of the household, and much less with an outsider, yet at times he may consider it fitting, as a mark of distinction, to invite to his table on a holiday one whom he has found to be constantly busy and vigorous in the performance of his tasks. He shall offer no sacrifice except by direction of the master. Soothsayers and witches, two sets of people who incite ignorant minds through false superstition to spending and then to shameful practices, he must not admit to the place. He must have no acquaintance with the city or with the weekly market, except to make purchases and sales in connection with his duties. For, as Cato says, an overseer should not be a gadabout; and he should not go out of bounds except to learn something new about farming, and that only if the place is so near that he can come back. He must allow no foot-paths or new crosscuts to be made in the farm; and he shall entertain no guest except a close friend or kinsman of his master.

As he must be restrained from these practices, so must he be urged to take care of the equipment and the iron tools, and to keep in repair and stored away twice as many as the number of slaves requires, so that there will be no need of borrowing from a neighbour; for the loss in slave labour exceeds the cost of articles of this sort. In the care and clothing of the slave household he should have an eye to usefulness rather than appearance, taking care to keep them fortified against wind, cold, and rain, all of which are warded off with long-sleeved leather tunics, garments of patchwork, or hooded cloaks. If this be done, no weather is so unbearable but that some work may be done in the open. He should be not only skilled in the tasks of husbandry, but should also be endowed, as far as the servile disposition allows, with such qualities of feeling that he may exercise authority without laxness and without cruelty, and always humour some of the better hands, at the same time being forbearing even with those of lesser worth, so that they may rather fear his sternness than detest his cruelty. This he can accomplish if he will choose rather to guard his subordinates from wrongdoing than to bring upon himself, through his own negligence, the necessity of punishing offenders.

There is, moreover, no better way of keeping watch over even the most worthless of men than the strict enforcement of labour, the requirement that the proper tasks be performed and that the overseer be present at all times; for in that case the foremen in charge of the several operations are zealous in carrying out their duties, and the others, after their fatiguing toil, will turn their attention to rest and sleep rather than to dissipation.

Would that those well-known precepts, old but excellent in morality, which have now passed out of use, might be held to to-day: That an overseer shall not employ the services of a fellow-slave except on the master's business; that he shall partake of no food except in sight of the household, nor of other food than is provided for the rest; for in so doing he will see to it that the bread is carefully made and that other things are wholesomely prepared. He shall permit no one to pass beyond the boundaries unless sent by himself, and he shall send no one except there is great and pressing need. He shall carry on no business on his own account, nor invest his master's funds in livestock and other goods for purchase and sale; for such trafficking will divert the attention of the overseer and will never allow him to balance his accounts with his master, but, when an accounting is demanded, he has goods to show instead of cash. But, generally speaking, this above all else is to be required of him — that he shall not think that he knows what he does not know, and that he shall always be eager to learn what he is ignorant of; for not only is it very helpful to do a thing skilfully, but even more so is it hurtful to have done it incorrectly. For there is one and only one controlling principle in agriculture, namely, to do once and for all the thing which the method of cultivation requires; since when ignorance or carelessness has to be rectified, the matter at stake has already suffered impairment and never recovers thereafter to such an extent as to regain what it has lost and to restore the profit of time that has passed.

In the case of the other slaves, the following are, in general, the precepts to be observed, and I do not regret having held to them myself: to talk rather familiarly with the country slaves, provided only that they have not conducted themselves unbecomingly, more frequently than I would with the town slaves; and when I perceived that their unending toil was lightened by such friendliness on the part of the master, I would even jest with them at times and allow them also to jest more freely. Nowadays I make it a practice to call them into consultation on any new work, as if they were more experienced, and to discover by this means what sort of ability is possessed by each of them and how intelligent he is. Furthermore, I observe that they are more willing to set about a piece of work on which they think that their opinions have been asked and their advice followed. Again, it is the established custom of all men of caution to inspect the inmates of the workhouse, to find out whether they are carefully chained, whether the places of confinement are quite safe and properly guarded, whether the overseer has put anyone in fetters or removed his shackles without the master's knowledge. For the overseer should be most observant of both points — not to release from shackles anyone whom the head of the house has subjected to that kind of punishment, except by his leave, and not to free one who he himself has chained on his own initiative until the master knows the circumstances; and the investigation of the householder should be the more painstaking in the interest of slaves of this sort, that they may not be treated unjustly in the matter of clothing or other allowances, inasmuch as, being liable to a greater number of people, such as overseers, taskmasters, and jailers, they are the more liable to unjust punishment, and again, when smarting under cruelty and greed, they are more to be feared. Accordingly, a careful master inquires not only of them, but also of those who are not in bonds, as being more worthy of belief, whether they are receiving what is due to them under his instructions; he also tests the quality of their food and drink by tasting it himself, and examines their clothing, their mittens, and their foot-covering. In addition he should give them frequent opportunities for making complaint against those persons who treat them cruelly or dishonestly. In fact, I now and then avenge those who have just cause for grievance, as well as punish those who incite the slaves to revolt, or who slander their taskmasters; and, on the other hand, I reward those who conduct themselves with energy and diligence. To women, too, who are unusually prolific, and who ought to be rewarded for the bearing of a certain number of offspring, I have granted exemption from work and sometimes even freedom after they had reared many children. For to a mother of three sons exemption from work was granted; to a mother of more her freedom as well.

Such justice and consideration on the part of the master contributes easily to the increase of his estate.

But this too I believe: that the duties of the slaves should not be confused to the point where all take a hand in every task. For this is by no means to the advantage of the husbandman, either because no one regards any particular task as his own or because, when he does make an effort, he is performing a service that is not his own but common to all, and therefore shirks his work to a great extent; and yet the fault cannot be fastened upon any one man because many have a hand in it. For this reason ploughmen must be distinguished from vine-dressers, and vine-dressers from ploughmen, and both of these from men of all work. Furthermore, squads should be formed, not to exceed ten men each, which the ancients called *decuriae* and approved of highly, because that limited number was most conveniently guarded while at work, and the size was not disconcerting to the person in charge as he led the way. Therefore, if the field is of considerable extent, such squads should be distributed over sections of it and the work should be so apportioned that men will not be by ones or twos, because they are not easily watched when scattered; and yet they should number no more than ten, lest, on the other hand, when the band is too large, each individual may think that the work does not concern him. This arrangement not only stimulates rivalry, but also it

discloses the slothful; for, when a task is enlivened by competition, punishment inflicted on the laggards appears just and free from censure.