THE FARMER'S ADVOCATE.

The Agriculture of the Romans.

It is certain that, at a very early age Italy received colonies from the Pelasgi, an ancient race spread over Greece, and the islands of the Ægean Sea, and Arcadians, also a colony from Greece. In the year 1710 B.C. a colony of Arcadians was led into Italy by Ruotras, and in consequence, with them the arts of Greece were introduced, and we may conclude that there was then a similarity in the practice of agriculture in the two countries. About 753 years before the nativity of Christ, Romulus founded the city of Rome, whose inhabitants were destined to be the conquerors and the improvers of Europe. The Roman Eagle was triumphant in Egypt, Persia, Greece, Carthage and Macedon; and the warriors who bore it on to victory, in these and other countries, being also possessors of land of a larger or smaller extent, naturally introduced upon their return any superior vegetable or improved mode of culture which they observed in the more civilized seats of their victories. Thus the arts of Rome arrived at a degree of superiority that was the result of the accumulated improvements of other nations; and finally, when Rome became in turn the conqueredthe victors became acquainted with this store of knowledge, and diffused it over the other parts of Europe. Of the agriculture of the early Romans we know but little; but of its state during the period of their greatest prosperity and improvement we have fortunately very full information. Cato in the second, and Vasso in the first century before the Christian Era, Virgil at the period of that event, Columella and Pliny but few years subsequently, and Palladius in the second and fourth century, each wrote a work upon Agriculture, which, with the exception of that by Columella. have come down to us entire.

1.-Size of the Roman farms. When Romulus first partitioned the lands of the infant state among his followers, he assigned to no one more than he could cultivate. That was a space of only two acres. After the kings were expelled seven acres were alotted to each citizen. Cincinatus, Curius, Dentatus, Fabricius, Regulus and others distinguished as the most deserving of the Romans, had no larger estates than this. Cincinatus, according to some authorities, possessed only four acres. On these limited spaces they dwelt, and cultivated them with their own hands. It was from the plow that Cincinatus was summoned to be Dictator, and the Samman Ambassadors found Curius Dentatus cooking his own repast of vegetables in an earthen vessel. Some of the noblest families in Rome derived their patronymic names from ancestors designated after some vegetable, in the cultivation of which they excelled, as in the examples of the Fabii, Pisones, Seutali, Cicerones, and the like. In those days, " when they praised a good man they called him an agriculturist and a good husbandman; he was thought to be very greatly honored who was thus praised. As the limits of the Empire extended, and its wealth increased, the estates of the Roman proprietors became very greatly enlarged; and as we shall see more particularly mentioned in our historical notices of gardening, attained to a value of £80,000. Such extensive proprietors let portions of their estates to other citizens, who, if they paid for them a certain rent, like our modern tenants, were called Coloni; and Politores or Partiarii, if they shared the produce in stated proportions with the proprietor. This is similar to many of the tenancies in this country of Canada. Leases were occasionally granted, which appear to have been of longer duration than five years. 2.-Distinction of Soils. Soils were characterized by six different qualities, and were described as rich or poor, free or stiff, wet or dry. The best soil, they thought, had a blackish color, was glutinous when wet, and friable when dry; exhaled an agreeable smell when plowed, imbibed water readily, retained a sufficiency, and discharging what was superfluous; not injurious to the plow irons by causing a salt rust; frequented by crows and rooks at the time of plowing, and when at rest speedily covered with a rich turf. Vines required a light soil, corn or grain a heavy, deep and rich one.

larly esteemed by the Romans for enriching their soils. "Study," says Cato, "to have a large dunghill." They assiduously collected it and stored it in covered pits, so as to check the escape of the drainage. They sowed pulverized pigeon's dung, and the like, over their crops, and mixed it with the surface soil by means of the sarcle or hoe. They were aware of the benefit of mixing together earth of opposite qualities, and of sowing lupines and plowing them in while green. They burnt the stubble upon the ground, and even collected shrubs and the like for the similar purpose of enriching the soil with their ashes. Pliny also mentions that lime was employed as a fertilizer in Gaul, and marl in the same country and Britain; but we can nly surmise thence that they were also probably employed by the Romans.

4.—Draining. The superfluous water of soils was carried off both by means of open and covered The superfluous water of soils drains. Cato is very particular in his directions for making them,

5.-Crops. They cultivated wheat, spelt, barley, oats, flax, beans, peas, lupines, kidney beans, lentils, tares, sesame, turnips, vines, olives, willows, and the like. To cite the authorities who mention each of these would be needless, for they are noticed in all the Roman writers upon agriculture. Of the relative importance or proportion in which the crops were profitable to the Romans, we have this judgment of Cato: "If you can buy 100 acres of land in a very good situation, the vineyard is the first object if it yields much wine; in the second place a well-watered garden; in the third a willow plantation; in the fourth an olive ground; in the fifth a meadow; in the sixth corn ground, or ground for grain; in the seventh an underwood, a plantation yielding stout poles for training the yine; and in the ninth a wood where mast grows (the latter evidently for feeding pigs.) They made hay, and the process appears to have been the same as in modern times. After being cut it was turned with forks, piled into conical heaps, and finally into stacks or under cover. But the mowing was imperfectly performed, for, as soon as the hay was removed from the field, the mowers had to go over it again.

6.—Implements. The plow consists of several parts : the beam, to which the yoke of the oxen was fastened; the tail or handle terminated in a crossbar with which the plowman guided the instrument; it had a plowshare, the sharebeam to which it was fixed, and two mould boards, a coulter and a plow staff for cleaning the plowshare. Some of their plows had wheels, and some were without coulters and earth boards. Besides this they had spades, rakes, hoes with plain and with forked blades, harrows, mattocks and similar im-

ing was performed by the trampling of oxen and horses, by flails, and by means of sledges drawn over the grain. The threshing floor was circular, placed near the house on high ground, and exposed on all sides to the winds. It was highest in the centre, and paved with stones, or more usually with clay, mixed with the lees of the oil and very carefully consolidated. Dressing was performed by means of a sieve or van, and by a shovel, with which it was thrown up and exposed to the wind. It was finally stored in granaries or in pits where it would keep fifty years.

8.—Animals. Oxen, horses, asses, mules, sheep, goats, swine, hens, pigeons, pea-fowls, pheasants, geese, ducks, swans, guinea-fowls, and bees, are mentioned by various authors, as products of the Roman farms. Directions for breeding many of these are given in the third and fourth books of the Georgics.

Such is an outline of the Roman agriculture, and in it we could doubtless find sufficient evidence to warrant you in agreeing that it was but little different from that practiced by the present far-mers in England and her colonies. We are superior to them in our implements, and consequently in the facility of performing the operations of tillage. We perhaps have superior varieties of grain, but we most excel them in our rotation of crops, in our cultivation of green crops, in our stock, and in the management of it. We differ from them also in not practicing the superstitious rites and sacrifices which accompanied almost all their operations. But of the fundamental practices of agriculture they were as fully aware as ourselves. No modern writer could lay down more correct and comprehensive axioms than Cato did in the following words. And whoever strictly obeys them will words. In the word among the ignorant of the art: "What is good tillage?" says the oldest of the Roman teachers of agriculture. "To plow. What is the second? To plow. The third is to manure. The other point of tillage is to sow plentifully, to become your event work, and to remove as choose your seed cautiously, and to remove as many weeds as possible in the season.

Such is a rapid sketch of their agricultural knowledge-a knowledge which has since increased, and will certainly be added to by attending to the advice of another of their writers. "Nature," 'he observes, "has shewn to us two paths which lead to a knowledge of agriculture-Experience and Imitation. Preceding husbandmen, by making experiments, have established many maxims; their posterity generally imitate them; but we ought not only to imitate others, but make experiments, not directed by chance but by reason.

Before I close this article I wish particularly to call the attention of my readers to a few points.

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3,-Manures. The dung of animals was particu-

plements.

7. Operations. Plowing was usually performed by two oxen, though three were sometimes employed. They were yoke abreast, and trained when young to the employment. They were usually yoked by the neck, but sometimes by the horns. There was but one man to a plow, which he guided, and managed the oxen with a goad. They sometimes plowed in ridges and sometimes not. They did not take a circuit when they came to the end of the field, as is our practice, but returned close to the furrow. They were very particular in drawing straight and equal sized furrows. They seem to have plowed three times always before they sowed; and to stiff soils, even as many as nine plowings were given. The furrows in the first plowing were usually nine inches deep. When the soil was only stirred about three inches it was called scarification. They usually fallowed their land every other year. Sowing was performed by hand, from a basket, and that it might be performed regularly the hand moved with the steps. The seed was either scattered upon the land and covered by means of rakes and harrows, or more com monly by sowing it upon a plain surface and cover ing with a shallow plowing, which caused it to come up in rows and facilitated the operation of hoeing. They were particular as to the time of sowing, the choice of seeds and the quantity sown. hoeing. Weeding was performed by hoes, hooks, and by hand. In dry seasons the crops were watered. If they appeared too luxuriant they were ted off. Reaping and mowing were the usual modes of cutting down the grain crops, but the ears were sometimes taken off by a tooth machine, called batilium, which seems to have been a wheeled cart, pushed by oxen through the corn or grain, and catching the ears of grain between a row of teeth fixed to it, upon the principle of the modern daisy rake. In Gaul the grain was cut down by a machine drawn by two horses. They do not seem to have ever bound their grain into sheaves. Thresh-

First of all to what Cato says, and his observation cannot be too deeply impressed on the minds of the young men of Canada, who too often, I fear, look down with great contempt on all matters relating to agriculture, considering it too low, or perhaps I shall not be far from the mark when I say they do not like the hard work. What can be more grand than what the noble Roman says : "When they praised a good man they called him an agricultu-rist and a good husbandman." From this we may infer that the tillers of the land in his time stood, or rather occupied the highest position ; and in our own time who are the men that have raised agriculture to its present high position and made it a science? why the nobles of the land, and the high-est cultivated men of the period. What says the Daily Telegraph (Eng.) of Oct. 26th, 1881? Why, that young scions of the aristocracy of England are not ashamed to work. We learn that the Hon. Captain Moreton, a member of the Earl of D — family is a kind of father to the colony, and farms 1000 acres of land not far from the thriving little town of Le Marr, U.S. He has twenty-two pupils who do all the work of the farm. Lord Hobart, adds the Field correspondent, was mowing -when he went there to see the farm. He was assisted by two of Lord Vincent's sons; Captain Moreton was feeding a threshing machine ; it was very hot, but every one looked happy. Even young Moreton was firing and driving the steam engine. Let agriculture be no longer despised, but let all young men strive to do their best, and make it a still higher science, by judgment, prudence, study and hard work. Already the agriculturist of this day is stepping to the fore, not alone in this country. England now send her agriculturist to Parliament. Who can read the evidence given before the Commissioners on all subjects connected with the land and shut his eyes to the fact that a time has arrived when we must no longer turn our back on the plow and stock raising, but give our whole energy to the land, for there is the large