

## AGRICULTURE IN ANCIENT GREECE

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What we know of ancient Greece relates more to its political institutions, its arts, its architecture, its literature, its history, its philosophy, etc., but very little about its agriculture. This is because the ideas concerning the rural life in ancient Greece are dispersed in a few fragments of its literature, particularly in its pastorals. About eight decades ago, Mr. St. John's *History of the Manners and Customs of Ancient Greece* was published in which the author had collected all that could possibly be known on the subject. Based on this work, a lengthy account of the "Rural Life in Greece" was given in No. 34 of "Chambers's Repository" published in the fifties of the last century. The material for the following account of agriculture in ancient Greece has been taken from the latter publication.

In olden days the mountains and hills of Greece were clothed richly with wood and as a result of this there were numerous streams and brooks by which the land became fertile. The fields were generally separated from each other by hedgerows; from farm to farm there were small pathways with rustic stiles and seats at intervals to assist women of the different farms to visit each other and between the several estates ran small roads or green lanes generally shaded with trees.

In the earlier ages, no doubt, varieties of cultivation and the animals bred were few but as civilisation advanced, "the arts of the husbandmen were multiplied and refined, new breeds of animals were introduced; the economy of the farmyard became more complicated; the introduction of one new fruit followed that of another; gardens were constructed, partly for profit, partly for pleasure; and all the beautiful varieties of trees, shrubs and flowers, known to the climate, were planted for use or luxury".

It was common to erect farmhouses in the midst of plantations of silver-fir, which in winter gave protection from cold, and in summer attracted breeze. Towards the centre of the grove, with a spacious court in front, and a garden behind, stood the house, sometimes with flat and sometimes with pointed roof. There were numerous outhouses, such as the stables, sheds for cattle, hen-roosts, pigsties, etc. which extended round the court, while the back-front opened upon the garden or the orchard. Great care was taken in selecting the site of the farmhouse. The houses were generally large and roomy.

The breeding of birds was considered very important; geese, ducks, pigeons, peacocks, pheasants, partridges and the common



barnyard fowl were bred on most farms besides goats, pigs and dogs. Sheep and cattle commanded a large share of attention. Horses were not numerous in Greece and they were not employed in agriculture but were used chiefly for military purposes, for religious pomps and processions and for chariot races at Olympia. The mule and the ass were much used. The oxen were useful in ploughing, treading out the corn, drawing manure to the fields and bringing the produce home, although mules were also sometimes used at the cart and the plough. The milch-cows were generally fed on cytissus and clover. The milking time was usually in the morning, immediately after the peep of dawn and in the evening, just when the twilight closed; though occasionally cows, sheep and goats were milked several times in the course of a day. Butter was little used but of cheese many varieties were manufactured. The milkwomen, churners, and cheese makers were adepts in all the arts of their profession. To detect the presence of water in the milk they used to dip a pointed reed into the milk, and if the milk ran off easily, it had been diluted, or if a few drops of the milk were poured on thumb-nail, that which was pure would remain there while the adulterated milk would speedily make its escape.

Bee-keeping was one of the important employments of the farmers. Owing to the climate and soil, bees thrive better and produced more honey than in many other parts of the world. In the Homeric age bees had not been accommodated with hives but were forced to search for their own dwellings in hollow rocks. In course of time, many persons devoted even their whole lives to studying the natural history of the bee, "living alone in sequestered spots, where, at their ease, they might watch its habits, observe it busy through 'the shining hours' enjoy the delicious taste of its honey, and breathe with this the rich fragrance of the flowers on which it loves to feed".

The bee-keeper who tended the insect for profit devoted great care and attention. "In a sheltered spot, generally on the slope of hill, covered by thyme, the hives were arranged in the midst of flowers, delicate plants and odoriferous shrubs; and if nature had not scattered there the necessary kinds, the gardener planted and cultivated them. Experience soon taught them what blossoms yielded the best honey and were most agreeable to the bees. These, in Attica, were supposed to be the wild pear tree, the bean, the clover, a pale coloured vetch, the Syrian myrtle, wild poppy, wild thyme, and almond tree. To these may be added the rose, balm-gentle, the galingale or odoriferous rush, the basil-royal, and above all the cytissus, which begins to flower at the vernal equinox and blooms until the end of September. Of all the plants, however, affected by the bees, none is so grateful as is the thyme, which, in Attica and Messinia, so extensively abounds as to perfume the whole atmosphere. x x x x Great care was taken to conduct near the assemblage of hives small runnels of the purest



water, not exceeding two or three inches in depth, with shells and pebbles just rising dry above the surface, whereon the bees might alight to drink. When, of necessity, the apiary was situated in the margin of a large stream or lake, other contrivances were resorted to for the convenience and safety of the airy labourers. × × × × The hives were of various kinds, some made of the supple bark of trees, others of hollow trunks; while there was one sort constructed with *Lipis secularis* which being almost as transparent as glass, enabled the curious owner to contemplate the movement and work of the bees".

The cultivation of flowers and shrubs of delicate foliage was widely practised because these were being constantly required for forming garlands, crowns and wreaths made use of by the Greeks on innumerable occasions. "When they offered sacrifice to the Gods, when they were present at the Olympian, Isthmian, or Nemean games, when they went to the theatre, when they attended at the banquets or when they visited their mistresses their heads were habitually crowned with flowers. These also were piled on altars and the doors of temples; and frequently the whole front of the houses of the women they loved appeared like one blaze of garlands. For this reason the cultivation of flowers was as much attended to in most parts of Greece as that of fruit trees or the vegetables most commonly in use". "They were worn at some of the ceremonies attending the birth of infants, many of the games of youth, during courtship, marriages, and at every religious festival and private banquet or public procession. And lastly, the corpse, before being placed in the coffin, was crowned with a chaplet; garlands and ever-lastings were laid on the tomb, mourners, when they came to visit the grave, wore wreaths of flowers upon their brows. This taste is still prevalent in Greece; and on May-day every door in Athens is decorated with a garland".

As will be seen from the following extracts several flower plants and herbs were known to the Greeks and were cultivated.

"Copses of *Agnus castus*, roses myrtles, and other sweet-smelling shrubs, intermingled with a pomegranate tree in the midst, were usually planted on elevated spots, that being thus exposed to the winds, they might the more freely diffuse their fragrance. The spaces between these masses of foliage, were sometimes filled with roses and lilies, and violets and golden crocuses, and sometimes presented a breadth of smooth close green-sward, sprinkled with flowers, such as the violet, the blue veronica, the pink and the pale primroses, the golden mother-wort, the cowslip, the daisy, the pimpernel and the periwinkle".

"Bowers and arbours were often formed entirely of myrtles. Occasionally these were intertwined with the honeysuckle, the egglantine, the jasmine, and the broad-leaved phillyrea, whose yellow tufts



mingling with jasmine and myrtle constituted one of the most graceful adornments of the Greek gardens. Thickets composed of other beautiful shrubs, lay between the bowers and the copses, the flower beds, and the turfy slopes, with those loftier piles of verdure consisting of the pine-tress, the smilax, the cedar, the carob, the maple, the ash, the elm-tree, the platane, and the ever-green oak, which here and there waved their stately foliage over the ground ”.

“ A netting of wild thyme, tufted with sweet mint and marjoram which, when crushed by the foot, yielded the most delicious fragrance was spread over the stony hillocks ; while here and there, singly or in beds, grew a multitude of other herbs and flowers, some prized for their medicinal virtues, others for their beautiful colour, others for their delicate odours—as the geranium, the spike-lavender, the rose-mary, with its white and purple flowers, the basil, the flower-gentle, the hyssop, the white privet, the cytisus, the sweet-marjoram, the rose-campion or columbine, the yellow amaryllis and the celandine”.

Besides roses, lotus and lily, the pansy, the purple cyperos, the iris, the water-mint, the hyacinth, the narcissus, the willow-herb, the blue speedwell, the marsh marigold, or brave bassinet and the jacinths and early daffodil also flowered profusely.

There were also some other plants of minor importance. A very considerable trade was carried on in herbs and plants which were exported to all the countries lying on the shores of the Mediterranean.

The gathering, drying and preserving of medicinal herbs and roots which required much study and toil, were done by professional herbalists who travelled, at the proper seasons of the year, through mountainous provinces etc.

The orchard, which lay beyond the garden, was usually surrounded by close hedges of black and white thorn, and sometimes by rows of olives. The trees were numerous, the following being the more important:—the apple, the pear, the cherry, the plum, the quince, the apricot, the peach, the nectarine, the walnut, the chestnut, the filbert, the hazel-nut, the medlar, the mulberry, the fig-white, purple and red, the pomegranate, the orange, the citron and the lime, the date-palm, the pistachio, the almond and the cornel tree.

Many vegetables were grown—the radishes, turnips, asparagus, broccoli, garlic, peas, beans, gourds, cucumbers, and lentils being the more important.

The fruits, vegetables and flowers were taken to the market for sale. The space allotted for the sale of agricultural produce was in most cities very considerable. There were fruit booths, green-grocers' stalls, stands for flower-sellers, etc.

The cultivation of vine was one of the ordinary occupations of life among the Greek farmers. They knew what soils would produce



the best vine and enable them to make the most money. In this branch of industry they displayed great intelligence and skill.

After selecting the soil it was enclosed with a hedge sufficiently thick and strong to keep out goats and foxes which loved to prey upon the vine. The next thing was to grub up the hazel-bush and the oleaster, after which the ground was trenched and thrown into lofty ridges, which by the operation of the summer sun and the rains and winds and the frosts of winter, were rendered mellow and genial. Occasionally a species of manure of pounded acorns, lentils and other vegetable substances was dug in, for the purpose of giving the soil that warmth and fertility required to nourish the vine. After the ground remained in this state for a whole year, its surface was levelled and a series of shallow furrows traced for the slips to be planted.

There were three kinds of vine, *first*, that which was supported on short props, *second*, the vine which climbed over trees, and *third*, that which being planted in stony places, on mounds or on the steep sides of hills, was suffered to spread over the ground and to ripen the grapes in that situation.

Stout reeds were used as props and when reeds were not obtainable ash props were substituted, having been first carefully barked and smeared at top with pitch, to prevent their being decayed by rain. The vines in rich lands were allowed to attain a height of six feet while in the case of lighter soils and on the slopes of hills they were allowed to reach only three feet.

The trees commonly used for training the vines were the black poplar, the ash, the maple, the elm, and probably also platane. These were planted in straight lines and rising behind each other, terrace above terrace, at intervals of 23 or 24 feet. The face of the trees along which the vine climbed was cut down smooth like a wall against which the purple or golden clusters hung thickly suspended; while the young branches crept along the boughs or over bridges of reeds, uniting tree with tree. The lower boughs of the trees were, however, carefully lopped off. Winding of the vine round the trunk of the tree was carefully avoided by inserting wooden wedges here and there between the stem and the tree. The space between the trees was ploughed and sown with beans, gourds, cucumbers and lentils. Sometimes the ground was used for growing pomegranate, olive, quince and apple.

While the grapes were growing they were shaded by a thick crop of leaves; but as soon as they began to turn colour the leaves, which of themselves then shrivelled, were carefully stripped off, to allow the full force of the sun's rays to pour upon the fruit and hasten the ripening. Such clusters that ripened before others were cut off.

The season for vintage operations was determined by law and only when the magistrate declared that the season of vintage was come,



the operations were started. The vintage season was one of boisterous and frolicsome mirth to those engaged in the several operations.

Immediately after the vintage, the country-people turned their attention to the gathering of the olives and the making of oil, which constituted an important branch of their husbandry. Both the oil and the olives themselves formed important articles of trade with many other fruits, such as figs, quinces, pears, apples, grapes and currants, almonds and walnuts.

The cultivation of field crops was also an important feature of ancient Greek agriculture. They adapted the grain to the soil. They chose rich plains for wheat, and cropped them at intervals with vegetables. Barley was sown where the ground was "oily and soft" while "thin and hungry" tracts they gave up to lentils, vetches, lupines and other pulses, which were cultivated on a large scale. Beans and peas were supposed to thrive best on "level and fat lands".

In light soils, they had recourse to a sort of spade-husbandry. Where ploughing was resorted to, they usually repeated the process thrice; and the third time the ploughman cast the grain into the furrow as he advanced, while a lad, following behind, broke the clods and covered the seed, to secure it against the birds.

In very hot weather, they often laboured all night, thus protecting themselves and the oxen against the sun, as well as profiting by the dew, which rendered the soil more moist and pliable. This practice might well be tried in our country. In choosing the ploughman, they carefully fixed upon one of great vigour and stature that he might be able to wield the implement easily; nor would they have him under forty years of age lest he should be unsteady in the performance of his duties. This is a sound advice which might be adopted by those who engage hired labour for agriculture.

The principal sowing season was in autumn; for as soon as the equinotical rains had moistened the earth, the sower went forth to sow, and committed to the ground the hopes of the future year. The time for wheat was September. In sowing they took care to distribute the seed equally over the field. They often made use of a sowing sieve made of wolf's hide, pierced with thirty holes, as large as the tip of fingers. To protect the seed from birds they set up scarecrows of various kinds, and had recourse to charms and enchantments.

The crops were generally weeded twice and the weeding was carefully done. When the harvest was to commence labourers collected in the market-place where they stood arranged in bands till persons hired them. They then, with sharp sickles and lightly clad, proceeded to the fields, where, dividing into two parties they commenced reaping at either end of an expanse of standing corn, each party striving which should reach the middle first. Women, in many



parts of Greece, joined in these labours. The produce of the harvest was never considered safe until it had been lodged behind strong walls in the farmyard. The implements used were the sickle and the scythe; the former for wheat and the latter for barley and inferior grains.

As a long succession of fine weather could generally be counted on, thrashing-floors were constructed in the open fields, where the grain was separated from the straw by the oxen. In winnowing, they trusted, on windy days, entirely to the breeze; but in calm weather, they made use of a machine, which, though turned by hand, would seem to have possessed great power, as we may infer from its having been used in cleansing vetches and beans. To save the chaff which was too valuable to be lost, pits were sunk all round the thrashing-floor, which, for the passage of men and cattle would appear to have been covered, except in the direction of the wind.

For immediate use the grain was sufficiently cleaned by one winnowing; but when designed to be laid up in granaries, it underwent a second cleaning process. "In the construction of granaries, they displayed great skill, and were successful in proportion; insomuch that by their method wheat could be preserved for fifty, and millet for a hundred years. The contrivances varied in various countries, but throughout antiquity, so much care was bestowed on this object that famines rarely made their appearance; and even during war the inhabitants of fortresses and besieged cities were not often compelled to surrender through lack of provisions".

The agriculturists of Greece often evinced considerable interest in the theoretical studies about the subject although they were more guided in their agricultural operations by the past experience. Naturally, rules of husbandry were transmitted from father to son. Although most of the instructions were given orally, there were some writers who occasionally produced treatises on the subject. But many of the poets embodied the ideas in their works. Besides the instructions in the various operations of agriculture studies were made on the following subjects also by the agriculturists of ancient Greece. "Observing the variations of the year; the influence of the sun and moon; the rising and setting of stars; the motion of the winds; the generation and effects of dews, clouds, meteors, showers and tempests; origin of springs and fountains; and migration of birds and other animals. All information connected with springs was peculiarly valuable in Attica, which was chiefly watered by means of wells. These, in long and dry summers, often failed, and caused among the citizens of the democracy a scarcity of vegetables, which, owing to their peculiar tastes and habits, was regarded as a national calamity". A careful observation of the weather and of all those signs by which its changes are foreshown formed an important study of the agriculturist.