

brood should be highly fed, both with corn and soft herbage, remarking that a meagre race necessarily springs from an emaciated parent.

Thus far the remarks of the poet refer only to stallions; but equal pains, he says, must be bestowed on the dams. During pregnancy, he recommends kind and careful treatment; they must not, he says, be allowed to draw the car, to leap across the road, to fly through the meadows, or to swim through the rivers. On the contrary, they must be conducted to a quiet lawn, plentifully supplied with limpid water, which they can easily reach, and where they may recline on a mossy bank, under the shade of a rock, or find shelter in a cavern.

The training of the horse, both for war and the race, seems to have occupied much time and attention, and to have been conducted with a degree of skill which could not have been attained without considerable study and experience. The steed, says Virgil, should first be accustomed to see, without fear, the arms of the warrior in fight, and to endure the clangour of the trumpet, to listen to the bridles rattling in the stalls, and to hear the rumbling of the chariots over the ground. When yet a colt, he should be soothed by kindly tones from his master's voice, and gently patted on the neck, till he comes to rejoice in being commended and flattered. At the beginning of his fourth year he must be trained to run in the ring with measured pace, and to bend his legs with ease, and to prance in "changeable curves." His speed must be gradually increased till he seems to challenge the wind as he flees with ardour through the level meadow, unconscious of his reins, skimming so lightly as scarcely to print the surface of the sand.

After having been thus trained, the poet directs that the animal should be plentifully fed with corn and other fodder, until the body becomes large and robust; but, he remarks, if pampered with corn before being trained, he will become high-mettled, and will even, though held, rebel against the lash and the curb. Nothing, he further remarks, will more improve the strength of the males, than to keep them apart from the females; the same observation he extends to cattle.

The poet with characteristic feeling, commends the steed worn down by disease or old age to the tender care of the husbandman. To condemn him to wear out his few remaining days, as is now too often done, in the lowest species of drudgery, must have appeared to the poet an ungrateful return for the services of his better days.

The dog—an animal so serviceable to the husbandman, does not escape the notice of the rural poet. Among the uses to which dogs were put, in his time,

he enumerates guarding the fold from the nightly thief, hunting the wolf, protecting the husbandman from robbers, hunting the wild ass (*onanger*), the hare, the deer, the boar, and the stag.

The *onanger* appears to have been hunted. Varro says that animal is to be found both in Phrygia and Lycaonia; and Pliny remarks, that those of the most delicate flavor were found in Africa. The latter notices, as a singular taste of Mæcenas, that he preferred the colts of the tame ass to those of the *onanger*; but since according to Varro, there were none but tame asses in Italy, it has been supposed that the wild breed had been introduced by certain epicures about the time of Virgil. The *onanger*, according to Buffon, abounds in the deserts of Lybia and Numidia: it is of a grey color, and so fleet that the best barbury horses can scarcely overtake it. Their flesh is eaten there by the natives.

The flesh of the tame ass is denounced by Galen as a pernicious aliment, which produces diseases. The poet speaks of the *onanger* as a timid creature; as all animals are said to be that have long ears and acute hearing.

Of the dog, Virgil particularly recommends the Molossian and Spartan breeds; the former remarkable for his fierceness, and therefore suitable for a watch-dog; the latter distinguished for his fleetness, and consequently fitter for hunting. The Molossian dogs, from Molossia, a city of Epirus, are spoken of by Aristotle as of two kinds—one used for hunting, and the other large and fierce, and therefore employed in guarding the folds. Buffon supposes that the shepherd's dog is the original stock of the dog-kind; but the animal he had in view must have been very different from the Molossian, as he remarks that it is rather small. He speaks also of Spartan dogs, which, he says, have long and tender snouts—a circumstance from which we might infer that they are remarkable for the acuteness of their scent. The poet, who never fails to manifest a laudable anxiety about the feeding of the animals under the care of the husbandman, enjoins him liberally to supply his dogs with "fattening whey." G. M.

#### CHEESE-MAKING AT HIGH ALTITUDES IN FRANCE.

A writer in *Le Journal Pratique d'Agriculture* presents a characteristic phase of French rural economy in his account of the cheese manufactory of M. Charles Durand, who took the prize medal at the *Concours Régional Agricole* of Mende in 1874. Mende is one of the three arrondissements of the department of Lozère, in Southern France, an isolated, mountainous region consisting mostly of a

plateau from 2,300 to 3,000 feet above sea-level, above which numerous mountain-crests rise beyond the line of perpetual snow. Grain-culture in such a region is limited to a few localities, and its scanty yield of food is eked out by chestnuts, acorns, and other spontaneous products of the forest. The population is scanty, poor, indolent, ignorant, and, as might be supposed, intrrenched in local prejudices. Many of the working men migrate to neighboring departments during the summer months to win a precarious subsistence for their families by day labor at low wages. Agriculture here is mostly pastoral and primitive. Farming capitals are small, and the amount and character of live stock held are generally indifferent. The processes and implements of culture are also very rude. Yet this unpromising region has attracted a few enterprising and intelligent agriculturists, whose labors in utilizing its imperfect resources have developed very unexpected and gratifying results. Among these Mr. Durand has made a tract of bleak mountain land the scene of a profitable stock-raising and cheese-manufacturing industry. His estate known as Salles-Basses, consists of 4,010 acres, of which 185 are in meadow, and the remainder, in natural pasture, interspersed with "bouquets" of trees. It is located in the mountains of Aubrac, about fourteen miles from Marjevol, and at an altitude of 4,382 feet above sea-level, where heavy snows, long winters, and rigors of climate render cereal culture impossible. Here comfortable dwellings, large stables and granaries, and two large cheese-factories (*burons*) have been built; large areas have been inclosed, and extensive labors for sanitary and soil improvement and irrigation have been executed. Meadows already existing were brought to maximum fertility by judicious fertilization and irrigation; good pastures were transformed into meadows, and in ordinary pastures the sod was made to extend itself gradually over heather and moor. These results have been accompanied by soiling animals, leveling, draining swampy declivities, and utilizing the surplus waters for irrigation, &c. The pastures are fertilized successively by shifting the stock-inclosures, and the meadows by stable manure, which is carefully preserved. In the case of milch cows with calves, only the latter are kept constantly inclosed; the mothers, being allowed free range, are kept by maternal affection near their offspring, thus concentrating their droppings upon a small surface. The fences are high and close, in order to protect the animals from the severe winds of the region, and consequently to increase their flow of milk.

The herd consists of 400 animals, of which 200 are milch cows. The latter are gathered into two large ranges. Of