

into pieces as large as convenient, and load them. The place, if suitably drained, has a more cheerful aspect. The muck is much more easily loaded on a sled than a cart, and more easily drawn. I prefer to draw to the nearest upland, if far from the field or yard, as I estimate the shrinkage in weight three-quarters, in a few summer months, if ploughed a few times. Swamps, without artificial drainage, are generally too wet in the winter, but should be prepared in the summer by ditching around a piece and removing the roots of trees, logs, &c., leaving the turf to be cut when it is frozen.—*L. S. Safford, in Maine Farmer.*

**FARMING IN THE SANDWICH ISLANDS.**—The agricultural interests of the Sandwich Islands are exceedingly prosperous. A few years ago whaling was the chief reliance, but when this declined, a large amount of capital was released for investment in sugar culture. The growth of cane has steadily augmented, till the production of the present season is estimated at no less than 10,000,000 pounds, against 7,000,000 last year, and 5,000,000 pounds the year before. The amazing yield of the soil under this system of culture, appears from the fact that one planter took off five tons of sugar from a single acre, and 1,000 tons from 600 acres. This throws Louisiana far into the shade. San Francisco always offers a large and profitable market for all that is grown. Of the choice sugar lands of the Islands, not a titho is yet under cultivation. No frost ever shortens the crops, and certain varieties of cane propagate themselves from year to year, putting forth from the old stalk.

**DISPENSING WITH STEEPING FLAX.**—It appears from the *Society of Arts' Journal*, that a French manufacturer, named Bertin, has invented what is reported to be a successful method of dispensing with the steeping of flax. After the fibres have been crushed in the ordinary way, M. Bertin submits them to a new process, that of friction between two channelled tables, which have a sideway as well as to-and-fro motion; in fact, the action is similar to that of rubbing the fibres between the palms of the hands, but under considerable pressure, and with great rapidity. The fibre is afterward beaten in water, which carries off every particle of woody matter, and leaves the flax completely unbroken and in parallel masses. The principle of friction tables has been applied by M. Bertin in other cases, and is said to furnish an economical, rapid, and perfect mechanical action.

**NATURE OF PLANTS.**—Plants, like animals, require care in feeding. It does not follow that because a man in a harvest-field may drop down dead from the effects of drinking cold water a plant so heated will do the same; but its death, although slower, is perhaps as certain to follow. Now, it may be laid down as a rule to be adhered to strictly, that water, or liquid manure, when given to plants, under every condition, should be a few degrees warmer than the temperature of the soil in which they are growing. The roots are thereby in some measure cherished and stimulated, not chilled and checked.

## The Breeder and Grazier.

### Origin of the Domesticated Animals.

THE origin of our domesticated animals, like that of most of our ordinary cereals, is involved in an almost impenetrable obscurity. Questions connected with this interesting enquiry have been warmly debated by naturalists of the greatest erudition, who have left several of them as much undecided as ever. The habits and uses of the domestic animals, and their relation to and dependence on, man, are subjects that will well repay the most diligent attention of the enquiring and intelligent farmer. "The cow not only gives milk for a few weeks after parturition to nourish her calf, but continuously, or nearly so; the horse, with scarcely any instruction, performs the various offices of draught; the sheep forms wool, not so much for its own use as its master's; and the dog not only attaches himself more to man than to his own species, but even understands and obeys the language of its owner. There is a wide difference between *taming* and *domestication*. Any animal may be tamed, and many frequently are, as, for example, otters, squirrels, and even lions. But the offspring of such tamed animals are born with the instincts and propensities

of wildness, and if they are to dwell with man, require as much taming as their sires did. But the young of domesticated animals are born tame, and willing to submit to man, and to have tasks and labours imposed on them."

It is almost unnecessary to say, that, although the number of wild animals is very large, that of the domesticated is very small, and only includes the dog, the ox, the horse, the sheep, the ass, the goat, the pig, and the various kinds of poultry,—in this country; with the camel, the elephant, &c., in other countries. Two theories prevail regarding the origin of the domesticated breeds. One supposes that they have all arisen from parents originally wild, that have been tamed by man, and kept tame for so many generations, that they have acquired the habit of tameness, and the other habits of domestication. The other asserts that these races were created domesticated, for the use of man and were from the beginning such as they are now. Those who support the latter opinion maintain that no types of the domesticated animals are to be seen in a wild state. There are, indeed, in some parts of the American continent plenty of wild horses, cattle, and pigs; but these we know, are merely the descendants of domesticated animals of the species introduced into the country not three centuries ago. Farther, if taken under human protection, individuals of these so-called wild breeds can, without any trouble, become again subjected to the influence of man, and their progeny retain their domesticated habits and propensities. Those that advocate this view farther allege, that to suppose that man by art subdued the different domesticated animals, pre-supposes that man himself was once savage; and they say, that if man had not been originally created civilized, he would have remained a savage to this day.

For our part, we have never held this view, nor have admitted the strength of the above arguments. We believe that all our domesticated races have been artificially procured from wild ones. And as to which of the two opinions is right is not a mere abstract question,—inasmuch as, if one view be true, we can never hope to have a greater number of domesticated breeds than we have at present; whereas, if the other be the right one, we can multiply them almost at pleasure. The following arguments are adduced in support of this view:—

After the fall of our first parents the tendency of the race appears to have been, in the main, towards degeneracy, and by far the larger portion of mankind became reduced to the savage state. At the present day, we see whole nations of savages, quite capable, nevertheless, of civilization, and many of whom are becoming civilized. Farther, we know that all the present civilized nations of Europe are the descendants of savages. And it is almost certain, from the researches that have been made, that the ancestors of the Grecians and Romans were in a like condition. We also know from geological observations, that very long, probably many thousands of years before man was created, some of the species of domesticated animals had an existence. Oxen, for instance, were common in the periods in which many of the tertiary formations were deposited; so also was the horse; and it is a familiar fact, that the elephant, perhaps the most thoroughly domesticated of all animals save the dog, had a pre-Adamite existence. The existence of these domesticated breeds, long before man was called upon the scene, appears as a strong argument against the opinion that they were domesticated from the beginning.

We are also entitled to infer, that the different breeds of subjected animals have been domesticated by degrees, and that, in particular, the dog was subdued long before the horse. Researches made into sepulchral monuments have made it probable that, in the progress of man from the state of a savage to that of a civilized being, three periods can be distinguished—the stone period, during which the inhabitants were only acquainted with stone as a material for imple-

ments and weapons; the bronze, in which they had obtained a knowledge of the properties of copper and tin; and the iron period, which last was the one immediately preceding the historical, and during which mankind became familiar with iron. Now, in examining the houses and sepulchres of the inhabitants of the stone period, we find the bones of dogs, and there can be little doubt but that these are the bones of domesticated dogs; we also find the bones of oxen, and it is impossible to say whether these are the remains of the skeletons of wild or reclaimed cattle; but we find no bones of the horse until we come to the examination of the graves, &c., of the men of the iron period, when they became common.

Although it is difficult to fix upon an existing wild species from which the sheep, for instance, has been derived, yet, in the case of the dog, for example, we may conclude that it may have been derived from the wolf. Wolves and dogs breed together quite as readily as do dogs of different kinds; the period of gestation in each is sixty-three days; and the difference in their organization, &c., is simply, the wolf has his hair of a uniform deep grey colour, while that of the dog is variegated; the tail of the wolf is bushy, and that of the dog not; the wolf howls, and the dog barks;—thus there is a little difference in the shape of the cranium of the two animals. But if the dog be allowed to run wild for some generations, his cranium comes to resemble that of the wolf; his tail becomes bushy, his hair has a uniform grey tint, and he no longer barks, but howls. He has, in fact, returned to his original type; and if he remained long enough in the wild state, would probably soon altogether cease to differ in any appreciable degree from the wolf. On the other hand, although a wild wolf has never been domesticated, that is, put into that state that its pups are born tame, yet the case with which it is tamed, and the affection that it shows, indicate a possibility of this. In point of fact, the domestication of, at any rate, dogs and horses, is to a certain extent still going on. For example, sporting dogs not only have new modes of sporting, but they transmit their education to their posterity; and horses acquire new habits, which their descendants inherit. The improvement of domesticated animals kept for food is notorious.

Just as we see the domesticated animals improving by slow degrees, we have a right to infer that, if restored to a savage life, they would degenerate slowly; and to this it is, we suspect, that we must refer the condition of the so-called wild horses and cattle of South America. Regarding them in this view, we can understand how it comes that they can be readily reclaimed by man. Neither is it strictly correct to say that we do not know the original of any of our domesticated animals, and that none still exists in the wild state. All naturalists are agreed that the domesticated hog, a creature of diurnal habits, is descended from the wild boar, a creature of nocturnal habits. We have here, then, an instance of a common source, and although altogether differing in habits, appearance, and even in internal structure, proving, by breeding together, and by the offspring so produced being fruitful, that they are one and the same stock.

➤ Tie your horse in the centre of his stall, or he will "drive" more on one rein than the other.

➤ TO PREVENT A HORSE FROM PULLING AT THE HALTER.—Tie a rope around the neck, put it through a hole in the edge of the manger, and tie it around the fore leg below the knee, and when the horse pulls, the rope will slip through the hole and pull up the fore leg, he will soon give it up.—*Country Gentleman.*

➤ CUTTING FEED.—The London Omnibus Company, by cutting their hay and straw, and breeding their oats by machinery, effected a saving of 5 cents in our money, per day, in the feed of each horse—a small sum, as it may appear, until the reader learns that this company keeps 6,000 horses, and therefore saves in this single item \$300 per day, or in round numbers nearly \$110,000 per year!