

capital, or value of the wool; but after making allowance for all such items, it is evident that wherever there is a demand for meat, it is much more profitable to feed green crops with stock than to plow them under. (1) A sale of meat to the amount of £5 or £6 per acre would go a long way towards paying the cost of cultivation, instead of throwing the whole of this cost upon the succeeding crop of corn which must be done when the green crop is ploughed in.

In districts of the United States where there is little or no demand for meat, I have often advocated the ploughing under of such green crops as peas, and clover, as being a much cheaper method of fertilizing the soil than can be effected by the application of nitrogenous manures. In this country on the other hand the cultivation of arable land without stock, and fertilizing the soil by ploughing under green crops, as also the continuous growth of corn crops by means of purchased manures appear to be processes which can hardly be supported by practical science.

### BREEDS OF SHEEP.

What are the differences and characteristics of the Down sheep? Are they all from the old South-Down sheep? Which breed is best for all purposes combined in one flock—mutton, early lambs, wool, to sell as breeding stock, to be kept in yards on meadows with movable fences? M. A. D. Lawrence, Mass.

[Answer by JAMES WOOD, Westchester County.]

The Down breeds are all descended, in greater or less purity, from the sheep that have occupied the chalk hills in the southeastern portion of England from the times of the earliest mention of sheep in that country. Those occupying the country south of London received the name of South-Downs from the hills they grazed upon. This is the oldest and the purest of the Down breeds, and the smallest in size. Westward, the chalk hills run into Wiltshire, Hampshire, and Dorset, with a deeper and more productive soil. Here, with better feed, the Down sheep attained larger size. But they also had a mixture with a large, strong native breed called the "Notts," and thus the Hampshires were produced. They are South-Downs increased in size, made coarser and stronger, with earlier development and quicker maturity.

In Oxfordshire, where the land is very productive and furnishes heavy crops for fattening sheep, the farmers were long in the practice of buying Hampshire ewes from the adjoining counties on the south, upon which they crossed Cotswold rams from Gloucestershire on the west. The result of this cross was the Oxfordshire-Down. This is the largest of the Down breeds, and clearly shows its parentage. (2)

In the western-central portion of England is the county of Salop. Upon its extensive Morfe common was a native breed of sheep of great vigor. These sheep were improved by infusing Leicester, South-Down and Cotswold blood, in what proportions it is impossible to say. Thus the Shropshires were produced.

All these breeds are very valuable. The South-Downs are beautifully symmetrical, and give flesh of the highest quality. The Hampshires will stand either poverty or affluence, and give excellent flesh. The Oxfords are grand animals in size and attractiveness, and respond well to the highest feeding. The Shropshires are good, practical, every-day sheep, and are deservedly popular in their native district. They and the Hampshires are extending over additional territory at the expense of the other breeds. From present indications it would appear that three breeds of sheep are likely to occupy nearly

all England—the Border Leicesters in the north, the Shropshires in the middle, and the Hampshires in the southern portion.

M. A. D.'s inquiry as to which is the best breed, is one that cannot be answered positively. Only opinions can be given in reply. Opinions as to the best are as numerous as the breeds themselves, for each has its admirers, or, of course, it would cease to exist. Where there is sufficient food and good care, the Oxfords will give the heaviest carcasses and the most wool. The flesh is the coarsest and the wool the longest of the class. The Shropshires' wool comes next in coarseness and length. The flesh is something better. Its ewes are prolific; it is a good all-purpose sheep. The remaining two breeds have neither Cotswold nor Leicester blood, and give the best flesh of the class. The Hampshire is scarcely equal to the South-Down in this respect. The Hampshires are remarkable for strong, vigorous lambs, quickly ready for the butcher. Their wool is shorter and closer than the Oxfords and Shrops. They are more uniform in type than either of these. They and the Shrops, are remarkably free from disease. (1)

The South-Downs are the gentleman's breed. Where quality is the chief object, they are unrivalled. They have so long received such skilful care that in other hands their excellence cannot be maintained, either in this country or in England. Their wool is the shortest and closest of the four breeds.

All the Down breeds stand close-folding very well. Perhaps the Oxfords are superior in this respect.

Country Gentleman.

—CABBAGES FOR COWS.—Mr. J. Chapman says:—My cows have lately had a quantity of cabbage on the grass. Might I ask you if they would give the butter the very strong taste it now has? and, if so, is there anything I can use to take out the taste? The cows have had some oats—what they would eat.

We had better give you the full answer to this question, including cabbages and all other foods likely to affect the quality of milk, which appears in "The Dairy of the Farm" (Bradbury's Handbook series), here somewhat abridged:—The taste of milk is affected by the food of the cows. It occurs in the milk of cows at pasture, sometimes when the buttercup is in full bloom, or when wild garlic has been eaten. It is, however, a more general difficulty during winter time, when cows receive turnips, cabbages, and mangold wurzel. In all cases, the best method is to attempt by heat to dissipate the aroma. This is to some extent possible by cooking the food to which the taste is owing: a mess of steamed turnips and bean-meal, and oat-meal and linseed will produce perfectly sweet milk. But if after milking, it be found to possess the disagreeable taste, then if it be placed in hot water and allowed to steam for half an hour or so before placing it in the vessels in the dairy, the taste and smell will in great measure leave it. The following are among the devices our correspondents have adopted for the more thorough expulsion of the taste:—No. 2 says: Do not feed your cows with turnips until they have been previously milked, by which means the animal has twelve hours to get rid of the flavour of the vegetable. (2) Good hay must also be given in sufficient quantity. Great cleanliness must be maintained, not only in the dairy, but in the cow-house. No stale pieces of turnip should on any account be allowed to remain in the manger, which should be cleaned out before feeding.—No. 4 recommends that as

(1) I have the honour to agree with Sir John Lawes in the most emphatic style. A. R. J. F.

(2) Following of course the true rule of crossing: the dam should be the hardier of the two. A. R. J. F.

(1) Barring the foot-rot. A. R. J. F.

(2) I prefer giving the roots after the evening's milking. This in most cases, would give 14 hours for the digestion to carry off the turnip-taste. Mangels leave no bad flavour. A. R. J. F.