

does animal food; and consequently if the food is presented in a state other than the finest pulp, the stomach does not extract the whole of the nourishment—it only takes what there is on the surface of the lump, and not from the centre of it.

As with boiled roots, so with raw ones, every particle of the food that passes through the animal in the shape of a lump is lost and wasted.

In ruminants, such as the ox, the loss is not so great as with the horse and pig. The ruminant chews and swallows his food hastily, and when it is softened it is again brought to the mouth, and re-chewed and swallowed; the stomach each time accepting and passing on all such as is sufficiently finely divided to pass its exit orifice easily, and rejecting and returning to the mouth in the shape of "cud" all those portions which are not so finely divided, to be re-crushed by the teeth. But the modern and scientific farmer has ascertained that all this is attended with a loss of muscular power, and the use of muscular power causes a loss of his profit which is derived from the fat of the animal; and hence, with the aid of the pulper, and every other possible mechanical contrivance, he lessens the labour of the animal, presents the food to the stomach in the most finely comminuted state, and he finds his advantage in it.

As against this it may be said in Canada, that labour is so dear as to prevent all such mechanical aid being profitably used. In reply, it should be urged that to those who do their own labour, either solely or within their own families, it cannot make much difference whether the attendant looks on while the animal prepares his food, or himself attends to the preparation of it. Most farmers now have horse powers; and a pulper, whether home made or purchased, can easily be attached to the horse power, and the work is then done without personal labour. At all events, the end of all personal labour is profit, and if more profit can be made with pulpers than without, no doubt the pulpers will find their way into the hands of the farmer.

VECTIS.

Pig Breeding and Feeding.

The same rule applies to pigs as to other farm animals—choose a good breed, especially in the male parent. Where there is a great natural tendency to fatten, follow the advice of the late Mr. Fisher Hobbs, who said, when selling a breeding sow, "Let her work hard for a living; don't feed her bountifully, or she will get fat and have no pigs, or very few." There was wisdom in this; but remember that the kind of food you give her is a most important consideration. The fetus cannot be properly formed unless the materials are of the right sort, for there must be the elements of bone, muscle, and fat—the latter alone is of little use; therefore,

avoid the fatal mistake of giving to the sow a large quantity of roots before parturition. The same mistake is often made with sheep and cows. If a sow is allowed to range at large, she does well, having access to pasture, because in a good pasture we have a great variety of plants, possessing various and valuable qualities—aromatic, condimental, and others, generally available to the juvenile formation and development, which the natural instinct of the animal teaches her to select. This may be supplemented by pollard, bran, a little meal, boiled potatoes, and a few Swedes or white turnips, but very few mangolds, especially when fresh and succulent. A moderate supply of peas, beans and barley, or soaked Indian corn, may be added; also tares, clover, and green beans with the pods on. Cabbage is very safe food. Nothing comes amiss to a sow. The great point is to take care that the food should consist of a variety, and not, as is too often the case, confined to one sort, especially roots. After parturition roots may be much more liberally given, and especially cabbage, in conjunction with other food; but as the period of parturition approaches, and especially immediately after parturition, to guard against fever, the diet should be sparing and cooling. I know some who invariably give an ounce of Epsom salts in the liquid food to the sow after parturition. After recovering from the excitement, the necessary materials for milk-making must be contained in the food. Cottagers are often successful with their sows, where they have a chance of roaming in lanes and coming home to receive a little meal, boiled potatoes, pot liquor, vegetables, &c. In cold weather, warmth and shelter are essential. Never allow a pig to bury itself in stable manure, or make holes in the floor and lie in them, for cold will strike the heated side and give him heaves or lung complaint. Young pigs, when taken from the mother, should have pollard, a little meal, and a variety of food but especially skimmed milk with fine pollard or middlings; as they grow older, peas, soaked Indian corn, &c. A few roots and green food are always acceptable. For fattening pigs nothing beats one-third pea-meal and two-thirds barley-meal, if mixed with skimmed milk so much the better. Pigs may be fattened very rapidly by steamed roots mixed with meal or boiled potatoes, the food given warm. Although bulky looking, they will not weigh so well, or eat so well, as those fattened on pea and barley meal, with or without milk. I was very successful in fattening pigs or large hogs in hot weather by placing them on sparred floors, with a pit under them. There is a natural tendency in pigs to huddle together; if placed on soft barley-straw, there is no circulation of air under them; therefore stiff reedy wheat-straw is much to be preferred. They get fever in hot weather, unless there is circulation of air around them, and plenty of water. The latticed or sparred floors have

an immense advantage in this respect. The urine all passes through and away, and they lie clean, cool, and dry, with air circulating around them. Pigs naturally deposit their solid excrement in a corner, away from their bed. When barley was 18s 6d per qr. I fattened about 400 pigs, and was always very successful in avoiding disease; they were all placed on sparred floors. In hot weather we showered occasionally upon them from the jet about 50 gallons of water per minute. After the first alarm they enjoyed it. Their skin became as clean as the back of one's hand, and they fed and prospered most satisfactorily. It pays to give a pig when he first comes from market a good scrubbing with soap and water. In winter it is necessary to put some straw upon the sparred floor, or to enclose the place so as to keep it warm, providing sufficient ventilation. Pigs pay (in manure) as well or better than most animals, but the meat market will not carry a heavy supply, for, unlike beef or mutton, it is easily over-supplied. October and the cool months are best for town markets. Fat pigs in the country sell well at, and immediately after harvest, also at hoeing time. Pigs, like other farm animals, should always have access to water, also to a lump of rock salt. Bear in mind that pigs have no wool, and if well bred very little hair, therefore they require warmth, if you desire to economise food and produce fat. As sows are very apt to overlie their young, this is easily prevented by a ledge or board, of about 8 inches wide, projecting from the wall of the piggy, 6 to 7 inches from the floor. The little pigs are safe from pressure under this ledge.

J. J. MECHI.

Basement Stables.

Formerly it was the custom to place barns but little above the level of the ground, with the stables in one side or end, provided with small slide windows of wood for throwing out the manure, which lay under the caves exposed to the deteriorating effects of the elements. Farmers who build at present seek to elevate the barn so as to allow of a basement or 'cellar,' as it should often be called, and many old barns are raised so as to provide a basement storey, which is in many cases formed in part by excavations from a hill-side, with cellar walls on one or more sides backed up with earth.

These basements, when properly constructed, are of great value for some purposes, but few of them can be converted into suitable stables for cattle.

When one side is walled up with stone supported with earth on the outside, there is a constant moisture on the walls which communicates dampness to the atmosphere. In winter, when the nights are long, and the power of the sun is feeble, the effect of such walls on the air is extreme, and when more than one side is furnished with stone walls the