

material mixed with them, should be moistened if dry.

Another farmer, Mr. Davy, who tried the mixture of bones with ashes at my suggestion, informs me that 16 bushels of unprepared bones, 4 bushels of heated bones, and two bushels of sulphated bones or superphosphate, gave each the same yield of Swedes. The principal at work is evidently Putrefaction taking place in the gelatinous substance of the bone; but no disgusting smell produced, merely a strong odour of ammonia when the heap is open. Most of this ammonia is probably drilled into the land—an advantage over the process of dissolving bones in acid, which seems to drive the ammonia away.

The acre here spoken of is the statute acre.

1. Now, for an Irish acre, we would recommend 15 bushels of the bones mixed with 60 bushels of ashes, sand or dry clay so dissolved, and when put on, let the heap be well mixed with an equal bulk of good burnt ashes, made from weeds or clay. This will be a good top dressing, and costs about 2/ 10s. per Irish acre. It ought to be applied in January, February, or March.

2. Another meadow dressing which has been very successful on newly laid down grass lands, is Peruvian guano, say 4 cwt. per Irish acre. It ought to be made into a compost of weed, clay, or good cinder ashes—say, six times the quantity of ashes to the guano. If properly manipulated, fermented, and mixed, the ashes and clay should be made to absorb the whole guano, and to fix it, to be applied to the ground when quite cool. This dressing would cost about 2/ 10s. per Irish acre.

3. A third top dressing may be tried with a similar compost of good Bolivian or phosphatic guano and ashes, increasing the quantity of the guano, so as to make experiments 2 and 3 of equal cost.

4. Superphosphate top dressing. Use 6 cwt. of the best superphosphate of lime, made into a similar compost, made in a like manner, cost 2/ 8s or 10s.

Soot, 20 bushels at 6d. . . . £0 10 0

Gypsum, 3 cwt. a 2s. 0 6 0

Mix these up well

1 Cwt. of nitrate of soda added 0 18 0

1 do of best superphosphate 0 16 0

£2 10 0

6. One half in value of Peruvian guano, and the other half in superphosphate; the whole mixed up and made into compost as above—say, 12. 5s. each, or 2/ 10, per Irish acre.

Those who try these several applications, or any of them, will please report the result to us for publication. We are satisfied that such top-dressings applied at the proper time will double the ordinary produce of the ground thus paying the first year for the whole manure, and adding greatly to the future fertility and worth of the soil.

Small tenants who cannot afford to buy

guano or superphosphate would do well during winter to turn over all useless fences and mounds of earth, to prepare compost, then to lead some unslacked lime, cover it with the earth and when fallen, to mix the whole together. This will do well for top-dressing meadow ground, and increase the oat crop greatly when the ground is broken up.

FATTENING ANIMALS.

There are certain principles which apply to the feeding of all animals which we will shortly notice:

1. The breed is of great importance. Well bred animals not only affords less waste, but have the meat in the right places, the fibre is tender and juicy, and the fat is put on just where it is wanted. Compare the hind legs of a full blooded Durham ox, and a common one. The bone at the base of the tail extends much further in the former affording more room for flesh, and the thigh swells out of convex or circular shape; while in the common ox it falls in, dishing and hollow. Now the "round" is the most valuable cut, and is only found in perfection in high-bred stock.

The same is the case over the whole body.

So well do eastern butchers understand this, that their prices are regulated by the breed, even where two animals are equally fat. They know that in a Durham or Hereford ox, not only will there be less offal in proportion to weight, but the greatest quantity of meat will be where it brings the highest price when retailed, and will be of a richer flavour and more tender fibre. The same in the case with hogs. A large hog may chance to make more meat on a given quantity of food than a small one, but the meat of the first will be coarse and tasteless compared with the other: and in the east, flavor and tenderness greatly regulate prices. Consequently moderate sized, short-legged, small headed hogs always; in the long run, beat large breeds in flavour. In preparing for market, "fashion and taste" must be as much considered by the farmer as by the tailor.

This one fact is at present revolutionizing the English breed of sheep. The aristocracy always paid well for small Welch and Scotch mutton; but the great consumers, the mechanics preferred large fat joint. The taste is now changed. In Manchester and other such cities, these large joints have become unsaleable; and all the efforts of the breeder are now turned towards small breed maturing early, with comparatively little fat. According to late writers, the large Leicester and Cotswolds are going quite out of fashion.

When we give \$3000 for a Durham bull it is not that his progeny are "intrinsically" more valuable to that amount, but the increased value and fashion together make up the difference. And it is thus, that while Durhams and Herefords are preferred for ships packing, Devons are high in repute for private families. The joints are smaller but the meat has a peculiar richness, probably

found in no other kind of stock; and the proportionate waste is said to be less than in any other breed. Thus in the London market, the Scotch Kyloes, and the Devons, (the former even smaller than the latter, (bring the highest price, because preferred by the aristocracy. So in Dublin, spayed heifers are sought for. But the breed also regulates the profit. There is nothing more certain than that one kind of animal will fatten to a given point on much less food than another, and as fattening our stock is only another mode of selling our grain and gras, those animals are to be preferred which come to maturity soonest, and fatten on the least food.

The difference in hogs is very great and important. While some breeds must be fed for two or even three winters, others are full grown and fattened at ten months old; and the difference in profit is enormous. We cannot go into particulars, but the following rules may be considered as applying to all: an animal may be expected to fatten easily when it has fine bone, and fine soft elastic skin with thin or silky hair; the head and legs short, the "barrel" large but chest and lungs small, and when it is quiet, sleepy and easy in temper. An unquiet, restless, quick tempered animal is generally a bad feeder, and unprofitable.

2. Much depends in fattening on outward and mechanical management. Fat is carbon, or the coal which supplies the body with heat.

If we are exposed to cold, it is burnt up in our lungs as fast as it is deposited by the blood; but if we are kept warm, by shelter or clothing, it is deposited throughout the body, as a supply on hand when needed. Warm stables and pens are a great assistance in fattening, and should never be neglected. So, also, quiet and peacefulness are important.

Every excited action consumes some part of the body which has to be supplied by the food, and detracts from the fat. In the climate of Michigan, warm stables, regular feeding at fixed hours, and kind treatment, with perfect cleanliness, save many a bushel of grain.

Animals fed at irregular times are always messy and fretting.

3. Ground and cooked food fatten much more profitably than raw food. Mr. Ellis found that hogs made as much flesh on one pound of ground and boiled to mush as two pounds raw unground; though the first did not fatten quite as rapidly, as they could not consume as much food in the 24 hours. By grinding and soaking, ten hogs will each gain 100 pounds in weight, on the same food that five would do if it were raw.

4. A change of food helps in fattening.—Thus an ox fed entirely on corn and hay will not fatten as fast, or as well, as one which has roots, pumpkins, ground oats or buckwheat, &c., fed to it at regular periods. The latter may contain intrinsically less nourishing matter than the corn, but the change produces some unknown effect on the stomach and system, that adds to the capability of de-