

done so in England, but for fifteen years I have adopted a different plan, and like our friend, Mr. Johnston, I do not feel disposed to change it until I see my neighbors raise better crops by some other plan. As soon as I have finished spring sowing, I draw my manure out of my yards onto the land intended for corn, taking pains to have it well shaken and evenly spread, and plowed under as quickly as possible.

After speaking of plowing the manure in the bottom of the furrow, Mr. Johnston adds: "where it would be of little if any use in our dry seasons." Now my experience is just the reverse of this; in fact it is on the very account of our dry seasons that I deem it so very advantageous to plow in fresh manure. When I say fresh manure, I do not mean such stuff as we too frequently see dotted about a field, here a load and there a load, which in fact is little better than dry straw. But I mean good solid manure, full of rich juice, which it will be, if properly manufactured in a well shaped and regularly littered yard. Let such manure as this be evenly spread and quickly plowed under, and I maintain, without any fear of being called a theorist, that it is a more economical way of applying manure than to let it lie so long on the top of the ground, "wasting its fragrance on the desert air."

In a sensible letter on this subject in your last publication, subscribed "A READER," occurs this sentence: "It may be laid down as a universal rule, that stable manure, to be applied in the most efficient manner, should be perfectly intermixed with the soil, at precisely such a depth as the roots of plants go in search of nutriment." Now would not this be a difficult operation? Years ago JETHRO TULL, who was styled the father of drill husbandry, made an experiment on this subject in regard to Swedish turnips, which experiment was republished by Cobbett in his *English Gardener*, in 1829. He proved that their roots must have extended a yard all round; this is laterally; there is no mention of depth. But this was tested with wheat about 25 years ago by LORD VERNON, an account of which I have never seen in print, but I had the fact from his own lips. He had long been urging his tenants to adopt a system of deeper cultivation, but without effect, as his tenants persisted that they plowed already as deep as any root would go. To settle the point Lord Vernon put soil into a large barrel, 3 feet deep, and sowed it with wheat. When it was ripe, he called his tenants together, and had the barrel taken apart, when he convinced them by ocular demonstration that the roots had penetrated to the bottom of the barrel, where they had formed a web of fibres. How much farther they would have gone, had the barrel been deeper, deponent cannot say, but it is quite evident that there need be no fear of plowing manure in so deep that the roots of plants cannot search it out.—C. B. MEEK. *Canandaigua, N. Y., Dec. 1, 1856.*

PREPARATION OF FOOD FOR ANIMALS.

The Ohio Farmer lays down the following rules for the management of fattening animals:

1. The fattening animals should have good, wholesome air, and plenty of it.

2. They should be allowed to rest most of the time. Very gentle exercise is all they need.

3. They should have a clean resting place. Filth is always hostile to the best physical condition, whether of man or beast.

4. They should be kept in a tranquil, easy state of mind. We say "state of mind," designedly; for nothing is more clear to the careful observer, than that animals have intelligence and feeling, and that anxiety and fear depress their physical condition, as certainly as they do that of man.

5. They should be placed where their temper will be as even as possible. For this reason, as the season advances, fattening animals should have suitable shelter, especially from cold winds, rains, and snow storms.

6. They should have plenty of the most nutritious food, adapted to the increase of their flesh and fat, as rapidly as may be consistent with health and solidity. The grains are generally best adapted to this end, and accordingly they are generally used; but the condition in which they are used in most cases, greatly lessens their value. In nine cases out of ten, we doubt not, grain is fed entire, that is, unground and uncooked.—This, we are satisfied, is a great mistake; and in this opinion, we are sustained by scientific writers, and by the most experienced stock-feeders in this country.—Grain should be *crushed and cooked*, to yield the greatest amount of nourishment, with a given expenditure of digestive power. With the aid of a corn-crusher, and with the use of some convenient mode of steaming grain and vegetables, (Scott and Hedges' is altogether the best we have seen, we have no doubt that a considerable saving may be made in the use of fattening-food. But let our friends satisfy themselves. Let some one of them take two animals, as nearly alike in every respect as he can find; then let him treat them in every respect alike, except that the grain fed to one has been crushed and steamed, while that fed to the other is in the kernel. At the end of two months let him weigh both. The result will aid him in forming a sound judgment in the matter.

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PASTURE GRASSES.—The subject of improving our pastures is receiving much attention, and is one well deserving of much more consideration than it has yet received. In our natural pastures, from four to six acres are required for the pasturage of one cow. In pastures properly prepared, half this number of acres is found sufficient. Indeed, many instances may be named, in which one acre has yielded an ample supply to a cow for five months. But most of our pasture lands are of such a character, that

we can never hope to reach this standard. Land that will feed one cow per acre, will yield from one to two tons of good hay, worth from twelve to twenty dollars. This is too expensive pasturage. The land is worth more for hay or other crops. Some years ago, I pastured a cow upon an acre of intervalle land, and she did well. But the land would have yielded a ton and a half of good hay, worth fifteen dollars standing. Cows were pastured in the vicinity for 7 or 8 dollars per year. This was not good economy. It was merely a matter of convenience. But if our pasture lands can be made to yield double the amount of feed they now do, the advantage must be too obvious to need a word of comment. Our native pastures contain from twenty to forty kinds of plants. Many of them are little better than worthless weeds. Some of them contain so much bitter extractive matter, that cattle will not eat them. Others are so dry and tough that cattle will not eat them, so long as they can find anything green and succulent. These various grasses arrive at maturity at different seasons of the year. This is a circumstance of great importance—and shows the necessity of having a variety of grasses in a pasture that is to be fed during the whole season. Some grasses, as the meadow foxtail, the orchard grass, the meadow fescue, the herds grass, the sweet vernal grass, and the brome, put forth early and are productive in May and June. Others, as the oat grass, the dogstail, the various meadow grasses, and red and white clovers, and the smooth fescue, yield most feed in the summer months. The various bent grasses, the wheat grass, the birds foot clover, and some others, are green and vigorous in the autumn. By a mixture of these various grasses, a green and tender herbage is furnished through the season. This is seldom or never done in artificial pastures, where but two or three kinds of grass are sowed. The various grasses and plants on which cattle feed, possess very different properties. Some contribute more to the production of fat. Others yield more milk, while others furnish in larger quantity the bone-making materials. Others again have properties by which they affect the various glands of the body. Some promote the secretion of urine, others the bile, others the saliva. When obtained in due proportion, they promote the health and vigor of the animal. The finest natural pastures contain about twenty kinds of valuable grasses, some one or more of which is in a green and thriving state every month in the season, from early spring till late in the fall. The spring grasses are, the *Alopecurus Pratensis*, (meadow foxtail,) *Phleum Pratense*, (meadow cat's tail or herds grass,) *Anthoxanthum Odoratum*, (sweet vernal grass,) *Dactylis Glomerata*, (orchard grass,) *Festuca Pratense*, (meadow fescue,) *Holcus Avenaceus*, (tall oat grass,) *Lolium Perenne*, (rye grass,) *Br. mus Arvensis*, (field brome,) and the *Poa Anqua*, (annual meadow grass.)