sisted by a good meal of roots in the course of the day, and a few oats might be added by those who wish to keep them very high. Cut hay and straw mixed have been found to answer as well as hay by itself, and the saving is of course the difference between the price of hay and straw, on one half of the feed. The chaff-cutter should be on a good principle, so that the money saved in the hay be not lost in cutting the chaff, for that would be but a bad way of improving oneself; it would be much better were it fixed to a horse-power, in which case a few hours with one horse would cut enough to last a moderate quantity of cattle for a week. Indeed, all hay and straw should be cut up before being fed to any animal, as well as straw cut into four or six inch lengths for litter, so that green *manure would plough in easily*. But as labor is dear, and food cheap in comparison, it would not do to run hastily into the expense of machinery, when the cost of the food saved might not perhaps counterbalance the expense. It is certain, however, that a horse-power for one or two horses would be of great service on a farm, for not only would it be of use in cutting chaff, but it might turn a small threshing machine, and perhaps a circular saw and many other articles that are of use to a farmer. I intend myself to use my horse-power, (a two horse, fitted for three,) for many purposes besides driving the threshing machine it properly belongs to. It has also been shown that hot salt-water sprinkled over cut straw alone makes it much more palatable to stock, and if to each bucketful of water about half a pound of linseed meal be added the food will be greatly improved at a very slight additional expense, as linseed meal can be purchased at about $5½ a hundred, the object being to make the animal consume enough straw to keep it thriving; it being nutritious to a certain extent, and also assisting to fill the stomach out, which is absolutely necessary for ruminants, a large quantity of poor food being more useful to them than the same in a more concentrated form. I need hardly quote a higher class of mixture for cattle, but one seems so simple in all cases where farmers feel inclined to buy a little to increase the quantity of manure, and consequent fertility of the land, that I cannot help mentioning it.

"Into a copper pour six pails of water, and let it boil, sprinkle into it one pail of linseed meal,—another person meanwhile stirring it. In five minutes the mucilage being formed,—a tub is placed near the copper,—throw into the tub a basket of turnip tops, besides chaff or cut straw, upon which pour three or four quarts of mucilage, stir with a manure fork; other turnip tops, &c., are then added, and mucilage, and well incorporated. It is then pressed down as firmly as possible, and covered with a thick cloth or cover. In three hours the straw will have absorbed the mucilage, and the turnip tops been partially cooked, it is then ready for use."

Such a mixture will keep good for many hours, and of course can be made in quantities to suit. The tops also of turnips, carrots, mangel wurzel, &c., in many countries are put by in brick pits, with a good allowance of salt, for winter and spring feed; they ferment and form a pasty mass, which is devoured with great avidity by cattle. As regards the roots themselves, it has been shown that for fattening beasts, 80lbs. of turnips, cut up and fed with a good allowance of straw, is as good as 200lbs. given otherwise, and in fact beyond a certain amount the principal office they perform seems to be to slake the thirst, which, seeing all roots contain from 80 to 90 per cent. of water, they are eminently calculated to do. Great advantages would be reaped also if the plan of tying up cattle when feeding were pursued, for then every beast would have his own share of food and no more, and the master animals would be confined to one spot, and instead of chasing the weaker ones round the yard in their jealous anxiety to get all the food themselves, and thus *not only preventing others from feeding* but feeding themselves at a great disadvantage, they would be able to take each his own food comfortably and quietly without interference from any other animal. This plan would be of advantrge with the cows in particular, being now all in calf they are less able to bear the driving about, and the weaker ones, which want the more peace and food to help them to bring a good calf, would thus get it. I find a common trace chain, with a long hook put on the link end by the blacksmith, to hook round the neck, and a staple driven into the post or beam to hook the smaller hook into, so that it may be removed, or drawn up shorter, at will;—a most efficient article, at the cost of some 1s. 3d. or 1s. 6d.

When attempts are made to feed cattle, regularity is one of the cardinal virtues; for it is notorious that a little given carefully at stated times, is much better than a great deal given irregularly and wastefully. As a proof of the superiority of tying up cattle when feeding them, it has been shown that oxen fed loose in a yard, eat or spoil enough to keep twelve oxen when tied up.

As regards feeding sheep, it is with us a very simple operation. Pea straw seems quite as agreeable to them as hay, and they get their regular allowance either of one or the other three times a day, with roots in the spring, especially for the purpose of increasing the flow of milk in the ewes. It would be better for them too, were their food cut up and fed to them in troughs, for they are clean feeding animals, and never like to eat what has been trampled under foot, and as they pull their hay about and snatch it one from the other, much of it must be wasted. For fattening sheep in the winter, a pint of oats or grain of some kind is requisite, per day, and half a pound of oil-cake would be of advantage also, particularly in enriching the manure. Keeping them close and warm would also assist, as I will now proceed to show.

A Mr. Childers selected two lots of Leicester yearling wethers, of 20 in each; one was placed under shelter in a yard, the other folded in the field. They all received the same food, viz: 12 lbs. cut turnips, as many as they could eat, half a pound of linseed cake, half a pint of barley, a little hay, and salt per day, for each sheep. At first they each ate about 19 lbs. of turnips a day, but after three weeks, those in the shed eat 2 lbs. a piece less, and in the 9th week, 2 lbs. a