

brought before the Society, the various tests that have been made in reference to soils, grains, roots, and manures, have all been instrumental in effecting great improvements; as also the premiums offered for breeding stock by the Society for the best animals of each kind.

"I believe there is no subject upon which there exists so great difference of opinion, as on that of breeding animals.

"There are established in almost every county in England Agricultural Societies, for the exhibition of live stock, and I believe it is generally admitted that great good arises from them. I am disposed to think that as there are great varieties of soil, and variations of climate, so there may be selected various sorts of animals best adapted respectively to them. The Smithfield Cattle Show, is the grand emporium at Christmas, where meet the best animals of their respective kinds in competition.

"The great and important question to which it is my object to draw your attention, is a practical test of the comparative value of animals. It is no unfrequent occurrence amongst breeders of two or more distinct sort of animals, to make matches, and show publicly: the one defeats the others; but who can now tell whether the animals which lose, might not be the most valuable for general purposes? Large animals, be their kind what they may, are generally preferred by the majority; and provided the weight produced be greater, after compensating for the value of the food consumed, they are preferable.

"I know persons who occupy similar soils, located within a few miles, breeding four different kinds of cattle; and it is quite clear that these cannot all be the best calculated for the situation. Our great aim, if I mistake not, should be to cause the surface of England to be covered with the best stock of their kinds, for the purpose of feeding the population at the cheapest rate.

"I look upon this question to be of greater importance to the breeders and feeders of stock, and to the community at large, than any of those subjects that remain to occupy the attention of the Royal Agricultural Society. I feel persuaded that with practical data, based upon such authority as that of this Society, we should see the weight of shambles' meat increased, and consequently the price to the consumers reduced, at the same time, paying the producers better.

"However strong may now be the bias of any of us, as breeders, in favour of the sort of cattle or stock we may keep, we should from motives peculiar to our individual interest, abandon those which have been proved inferior, and preserve only those which have been ascertained to be superior."

These communications may be equally useful to the farmers in British America, as for those in England. The sure criterion by which the value of animals can be judged of, is by ascertaining what they consume and what they produce.

The Importance of Systematic Economy in Feeding Horses.

The cost of feeding horses is such a heavy charge upon the farmer, that none should be kept whose labour is not absolutely required. It demands the most serious consideration from every agriculturist, as to the number absolutely required to perform the necessary work upon the farm, as well as to the most advantageous and economical method of feeding those that are to be kept, so as to make them fully equal to the labour they will have to perform. The distance travelled by a team in ploughing an acre of land, the furrow eight inches wide, will be *twelve miles*, and 660 yards, besides the turnings at the headlands, which in a field of 200 yards long, might be something over half a mile. It has been proved that a team going at the respective rates of a mile and a half, and two miles an hour,

will plough in nine hours as follows:—

Width of Furrow.	Rate per hour.	A. R. P.
Eight inches,	1 mile and a half,	1 0 0
Nine inches,	do.	1 0 20
Eight inches,	2 miles,	1 1 10
Nine inches,	do.	1 2 0

It is of some importance to the farmer to know how he can keep his horses in good working condition fully equal to their work, with the least possible expense. There are three things respecting the food of horses, deserving of serious attention from every man that keeps them.

- 1st. The food most natural for them.
- 2nd. The quantity of food requisite to keep their condition equal to their work.
- 3rd. The best manner of giving them their food with a view of its being speedily eaten, so that they may lie down to rest.

The most natural food for a horse is corn, hay, and grass: but man, having reduced that noble animal to a state of servitude, has also adopted various sorts of food suitable to his state of vassalage. For a length of time it was supposed that grass, corn, and pulse constituted the only sort of fodder in which was contained the nutriment required for the sustenance of horses; and in consequence of the expensive nature of these articles in some seasons, many farmers did not give sufficient nutritive food to their horses; whilst others, that took pride in the appearance of, and condition of their teams, used to incur a heavy expense by running into the opposite extreme. It has, however, now been fully proved that beside corn, pulse, and grass, various other articles may be substituted, without detriment to the health or strength of the animals; and that various means of preparing the ordinary food may, also, with great advantage be adopted. The plants most usually substituted in Britain for hay and corn, or rather conjointly with them are, potatoes, parsnips, carrots, Swedish turnips, and Mangel wurtzel, together with straw, beanstalks, pea haulms, gorse, vetches, clover, and other cultivated grasses cut green. In British America most of these plants may be converted to the same purpose.

The quantity of fodder required for a horse, depends upon its kind and quality. The allowance for cavalry horses is, every twenty-four hours, twelve pounds of hay and ten pounds of oats, (or fourteen pounds of bran in lieu); and these horses, upon their allowance, are always in good condition and equal to their work. The highest allowance for horses working the mails, and other fast coaches in England, that travel at the rate of twelve or fourteen miles an hour, is twelve and a half pounds of oats, two and a half pound of bran, and fourteen pounds of hay or straw cut.

Horses ought to be well groomed and well fed. If they suffer from bad grooming, and bad feeding, they cannot be equal to the performance of more than half work; and consequently, not only half the value of their labour, but also half the labour of the man that follows them, will be completely wasted. Every labourer, kept beyond what there is full employment for upon the land, is an additional and unnecessary charge to the farmer of from £25. to £35. a year. It is therefore of importance that the farmer should suit the number of labourers to the work that is to be done. To keep too many labourers in proportion to the work, is an inexcusable waste of money; whilst to keep too few is a ruinous econo-

my. Whatever number of labourers may be required, should always be paid liberal though not extravagant wages. The employer has a right to demand a full day's work from the labourers, but the labourer in return is justly entitled to wages equivalent to his labour. A man that is badly paid and badly fed is not able to do a full day's work, and he must be less than a man who would expect it of him.

Whatever fodder be used, it should be supplied in such a form as to be eat forthwith that the poor animals might enjoy refreshing rest; to secure this, the fodder should be cut or crushed, and placed in the manger. If this plan was adopted, when the respective feeds will have been consumed, every horse will lie down to rest; his hunger being satisfied, there will be no temptation to keep him standing for hours, as would be the case, were his rack stuffed with hay, according to the too general custom of farmers. With respect to corn and peas, the general practice is to measure each feed; but that mode is neither just towards the horse nor his owner. The nutriment contained in every variety of grain, depends upon its weight—and there will be more or less nutriment, according to the weight, in the same measure. There is likewise a great misunderstanding with respect to the relative value of different kinds of grain, as food for horses, which, where many are kept, is productive of no small loss. To guard against this loss the price and weight of the different kinds of grain, with respect to each other, ought to be taken into consideration. Suppose a bushel of oats to cost two shillings, and its weight to be forty pounds: the relative value of other grains to oats, according to that price would be as follows:—

Oats.	Tick Beans.	Horse Beans.	Common Grayspeas.	Barley.	Rye.
Wt. 40 lbs.	60 lbs.	56 lbs.	60 lbs.	50 lbs.	52 lb
2s.	3s.	2.5d	3s.	2s. 7d	2s. 9d

By attending, therefore, to the market prices, one sort of grain might with great advantage be substituted for another, with benefit to the farmer, and without the slightest detriment to the horses. By the following table, it will likewise appear, that the weight as well as the price of corn, is deserving of serious attention. This experiment was made with oats, but the same principle is applicable to every other kind of grain. Such tables as these are useful to the farmer, not only as regards the feeding of horses and cattle, but to enable them to judge accurately of the value of grain for other uses, and what proportion the market prices of the several grains bears to their comparative real value. With respect to oats, though seasons and varieties may make some difference, yet the result will be nearly as follows:—

Weight per bushel, Avoirdupoise.	Produce in Meal.	Produce in Husk.
lb.	lb. oz.	lb. oz.
42	25 2	16 14
40	23 6	16 10
38	21 12	16 4
36	20 3	15 13
34	18 11	15 5
32	17 5	14 11
30	16 1	13 15

From the above it will be perceived that husks are much cheaper to buy as husks, than as poor corn: and generally speaking, grain is much cheaper to buy for horses than hay, independent of the extra work they will be equal to by being corn fed. They must, however, always have a due proportion of hay, and perhaps