

from successive harvests, the cultivation of those plants that restore most to the soil, must be resorted to.

These principles are confirmed by experience; they form the basis of a system of agriculture rich in its products, but more rich in its economy, by the diminution of the usual quantity of labour and manure. All cultivators ought to be governed by them, but their application must be modified by the nature of soils, climates, and the particular wants of each locality.

To prescribe a series of successive and various harvests, without paying any regard to the difference of soils would be to commit a great error. Unfortunately however, such is the system adopted by many agriculturists, who are too little enlightened to think of introducing into their grounds the requisite changes.

Clover and sainfoin are placed among the vegetables that ought to enter into the system of cropping, but these plants require a deep and not too compact soil, in order that their roots may fix themselves firmly.

Flax, hemp, and corn require good soil, and can be admitted as a crop only upon those lands that are fertile and well prepared.

Light and dry soils cannot bear the same kind of crop as those that are compact and moist.

Each kind of soil, then, requires a particular system of crops, and each farmer ought to establish his own upon a perfect knowledge of the character and properties of the land he cultivates.

As in each locality the soil presents shades of difference, more or less marked, according to the exposure, composition, depth of the soil, &c., the proprietor ought so to vary his crops, as to give to each portion of the land the plants for which it is best adapted; and thus establish a particular rotation of crops upon the several divisions of his estate.

The wants of the neighbourhood, the facility with which the products may be disposed of, and the comparative value of the various kinds of crops, should all be taken into the calculation of the farmer, in forming his plan of proceedings.

ON THE FEEDING AND MANAGEMENT OF HORSES.

While it is important on the part of the industrious farmer to attend to the improvement of his land, and the proper cultivation of his crops, it is not less necessary that he should secure the most profitable application of his produce, when obtained. Even on farms having considerable pretension to good management, it is by no means uncommon to see large quantities of hay, and other matters, actually wasted, which, if turned to proper account, would contribute to the support of a great number of additional animals, and afford a further source of revenue to the farmer.—This is especially the case in the feeding of horses; and when the great number of these animals maintained in the country, for agricultural and other purposes, is taken into consideration, it is manifest that a very trifling saving in the maintenance of each, would afford a most important result in the aggregate, and, in a national point of view, be an object of serious consideration.

Hay and oats form the chief food of the horse, indeed in many cases, the food allowed him. The usual proportions of these, for farm horses, are from twenty five to thirty pounds of the former, and about ten pounds of the latter. A still larger allowance of hay is frequently supplied, not that it is actually consumed by the horse, but a considerable quantity goes to waste, owing to the defective manner in which it is usually supplied. The allowance of oats varies according to the work to be performed. During the period of active labor in the spring, the quantity is usually increased to fifteen pounds, and in the summer and autumn, the allowance of oats is either nearly or altogether withdrawn. Taking the entire season, however, the quantity of hay and oats consumed by every horse on the farm may be assumed at a quarter of a cwt.

of the former, and ten pounds of the latter. The cost of maintaining a horse on the farm, according to this data, is therefore, easily ascertained:

Hay for ten months, $\frac{1}{4}$ cwt each day, at £2 10/ per ton,	£9 10 0
Oats for ten months, 10lbs each day, at 5/4 per cwt.	8 13 4
Grass, two months in summer,	1 10 0

Annual maintenance of each horse,.....£19 13 4

From this it appears that the support of the working stock of the farm is a severe tax on the farmer, and in every case in which, horses of a good description are high and properly fed, we are satisfied, under the present system of management, their maintenance will not fall short of this amount. In proposing a more economical system of feeding, we purpose introducing a greater variety of substances, and applying them in a different form.

In the feeding of every description of animal, a certain amount of nutriment must be applied, nor is the form in which this is conveyed a matter of indifference; a certain bulk of food must be given, to maintain the healthy action of the bowels. Though the oat is the most valuable article of food which has yet been discovered for the horse, yet he could not live so well on oats, if fed entirely on them, as when a portion of fodder is given, to make up the quantity of food required for the healthy action of the bowels, to which allusion has just been made. But, again, the supply of the coarser food may be carried too far, and the animal may have his bowels loaded with too large a quantity of innutritious matters; when nothing less than such a mass as will render him unfit for exertion, will be sufficient to afford even a scanty degree of nourishment. Hence it is that a proper arrangement in the properties and proportions of the food of the horse becomes a matter of important consideration.

The horse, like other animals, especially when not supplied regularly with food, is apt to indulge at times, by which, as in the case of other animals, various diseases are generated, and during the period of repletion, he is unfit for any exertion. Every person accustomed to the management of horses must have perceived when a horse is actively exercised after a full meal, and probably as much water as he felt inclined to drink, he soon begins to purge, becomes fatigued, and gets into a profuse perspiration. Hence the important precaution of not allowing a horse to load his stomach before starting on a journey. In the case of the farm-horse repletion is not so injurious, his exercise not being active; but even in the case of the farm horse, it is well that his food, in the intervals for feeding, should be rather of a nutritious character, so that he may not suffer from repletion; and hence the propriety of allowing the horse oats during the intervals from work, even should it be withdrawn in the evening, when coarser food may be given for the night.

In supplying both hay and oats to horses of every description, the approved practice now is to make them undergo a certain degree of previous preparation; the one is to be cut into lengths, varying from a quarter to half an inch and the other bruised or ground into a coarse meal. This is productive of very great convenience to the animals, little labour being then required in the mastication of the food; and the whole of the nutriment which it contains is available, as is abundantly proved by the fact of the grains found in the stable manure freely vegetating afterwards. It is not necessary to shell the grain previously, as in the manufacture of oaten meal. It is sufficient to grind up the whole altogether.

In addition to hay and oats, several other matters may be used in combination for the feeding of horses, as, straw, beans, peas, potatoes, carrots, &c. Straw may be substituted for hay, with great advantage and economy; and has in fact, been so used for a length of time, even in some of the largest posting establishments in England and Scotland, in which cases it is cut by the straw and hay cutting machine, which may now be obtained from every manufactory of agricultural implements. Steamed or boiled potatoes form a most valuable addition to the mass, and unless