

that the soil refuses to grow it, and, in consequence, the farmers have been compelled to substitute Alsike, Dutch, or Hop trefoils, so that, now, the true, or red clover is only sown once in 12 years, to the great detriment of the Wheat crop, which, almost invariably succeeds after clover. I incline to think that a few pounds of "Cocks foot" or "Orchard grass" (*Dactylis glomerata*) might be advantageously add in place of part of the 14 pounds of clover seed sown to the acre. Rye grass, which accompanies it in Scotland, and successfully, in some parts of the east of England has completely ruined the land. If tried here, great caution should be used. Rye grass is a true *cereal*, and, therefore, necessarily unfits the land for the production of grain. One of the finest farms in Cambridge-shire, with which I am well acquainted, fell off in yield at least 40 per cent, in the grain crop, after the introduction of rye grass amongst the clover. This farm (1000 acres) was on a chalk subsoil and averaged, formerly, 56 bushels of Barley, and 44 bushels of Wheat to the acre, so the loss to the proprietor, who farmed it himself, was something fearful.

*Tares, or Vetches.*—This is the next crop on our list, and well known to every farmer. It will grow well on all soils, but prefers a clay-loam. On sands, or gravels, it demands a fair dressing of manure, but on heavy land, in tolerable condition, it can do without. As Tares are inclined to fall down when they are at their best, it is customary to sow 2 or 3 pecks of Rye, or Oats, per acre with them, but as Rye soon becomes uneatable, and horses don't care much for green Oats, at present prices, half a bushel of Wheat would be worth trying.

The quantity of seed required is  $2\frac{1}{2}$  bushels, when the land is in fair order, but 3 bushels would not be too much in rough ground. There are two sorts, the Winter and the Spring Tares; the seed of the former is small, that of the latter much larger, but the quality of the forage of the Winter Tares is so much superior to that of the Spring Tares that, in the East of England, they are sown invariably to the utter exclusion of the other sort. A couple of bushels of Plaster to the acre, on the young plant, will materially assist the yield. It is well to observe that nothing is gained by very luxuriant crops of Tares, as they always fall down and waste themselves, unless cut at the critical time of coming into bloom.

A very productive mixture for forage is;  $1\frac{1}{2}$  bushels of Tares,  $\frac{1}{2}$  bushel of Pease,  $\frac{1}{2}$  bushel of Horse-beans and  $\frac{1}{2}$  bushel of Wheat. Of course, the Roller must follow the Harrow at seed time, or else the unhappy man who mows the crop will lose his temper, and the Farmer's time, pretty frequently. Two sowings should be made, one 3 weeks after the other; the second will, probably, just fill up the interval between the first and second crops of Clover.

I do not think there is any necessity for saying much on the subject of Indian corn. It is, probably, the very feeblest food, in a green state, that can be found. The milk yielded by cows fed on it will need no water for the purpose of dilution; in fact, did I wish to supply a very good imitation of Ass's milk, I should feed a white-skinned cow with Green Indian corn and Brewers' grains; that milk would not disagree with the most delicate infant. Still it is a bulky crop, if sown thickly in rows 27 inches apart with a good allowance of manure; the quantity of seed per acre depends entirely upon the sort of corn, but 2 bushels, to  $2\frac{1}{2}$  bushels should be enough. Individually, I should grudge the manure, as robbing the root crop, and if any of my readers have tried to harvest the corn for the Winter, in a dripping Autumn, I fancy they have not forgotten it.

We now come to the *Hungarian Grass*, (1) and a most useful grass it is; rapid in growth, wonderfully easy to sow, sure to take, if the land is decently prepared; greedily eaten by all sorts of stock, if cut whilst young; and the best butter

producer of all the forage crops grown. Unfortunately, most people who have tried it will let it stand too long. It has only one defect, as far as I know; it won't bear frost; so that, by about the middle of October, it should be all consumed. The land, after the Autumn ploughing, should be re-ploughed in the Spring, harrowed till fine, and rolled after the seed is sown. It will take about 28 lbs. to the acre; with that quantity, hardly a weed can show its face. Two sowings should be made, at an interval of 3 weeks, to have it come in fresh and fresh.

I suppose the time will arrive, when we shall no longer see the sheep lying under the fences, and depositing their invaluable manure, to say nothing of the oily exudations from their fleecy coats, on the grassy borders of the arable lands out of the plough's reach. To the system of folding off green crops all the Summer, as well as all the Winter, the, formerly, poor lands of the East and South of England owe their present fertility. Here, the end of October must, as a general rule, see the flock in the yards, but it is my firm conviction that Canada never will produce the full amount of grain which it is capable of producing, until the sheep is made, what it is in England, the dung-carrier of the farm. On the sandy soils of Bedfordshire, as well as on the chalky clays of Kent, towards the beginning of July, the traveller sees, as he journeys along the roads, large fields of a rich, green plant, something like a tall cabbage stalk, with leaves growing all the way up it, and from 3 to  $3\frac{1}{2}$  feet high. This is *Rape*, or Coleseed, the Colza of the French. The latter, distinguished from the former by the roughness of the leaves (hispid), is supposed to be, and, perhaps, is, the more fattening of the two; but they will both make sheep *ripe fat*, without any other food. Cows are fond of it, and it makes them give plenty of rich milk, but great care must be taken that it is not given to them with the dew on, or in rainy weather. Insects don't trouble it; as it is sown broadcast it requires no hoeing; and no weed can struggle against it. It is grateful for manure, but on good soils, of a moderately heavy quality, it can do without it. A few, say 10 bushels of bones, mixed with as many bushels of ashes, lixiviated if no others can be spared, will, on light soils, produce a crop so luxuriant in its lush abundance, that no one can fail to appreciate it. If it is desired that the Ewes should bring forth twin lambs in the Spring, a fortnight, or three weeks of feeding on Rape, before the Ram is put to them, will have the wished for effect. I remember, in 1853, my Ewes, 250 in number, lambed down 397 lambs. Of 15 that lambed one night, there were 29 lambs born! They were "Hampshire Downs," a breed not much given to twin, but they had lived upon Rape for 3 weeks in the previous September. The plant grows so high, and is so thick on the ground, that the sheep don't trample it down, as they do Clover; for which reason they may be allowed to feed on it at liberty; though of course, the more economical plan would be to divide a small piece off, every two days, or so. I submit a sketch of the newest kind of *Hurdle*; it is usually made of iron, but I have used some of wood, which answered perfectly. It will be easily seen that a boy can move them backwards, or forwards, without difficulty. If sheep are given to jumping, it would be a good plan to leave one of the upright bars of each hurdle 18 inches higher than in the sketch; if a wire is then run along the tops of the bars, loosely will do, the sheep may try to jump at first; but, after a few attempts, the shock they receive on falling back from their spring will so astonish their weak nerves, that they will become disinclined to further adventures. It is in this way alone, that the Welsh Mountain sheep, the wildest domestic animals in Creation, can be kept within bounds. The fresh piece should always be given in the afternoon, say about 2 o'clock, when the sheep will

(1) See engraving, page 31.