

ford, of any grass, properly so called, as to the quantity of nutritive matter afforded by the whole crop, when cut at the time of flowering; and meadow cat-tail (timothy) grass affords most food, if cut at the time when the seed is ripe.

11. It grows naturally in wet grounds, in bog meadows, and on the side of ditches, often to the height of four or five feet. Our ignorance of agricultural botany, and of the intrinsic value of this grass, can alone have prevented its being more generally known and cultivated. It must be very valuable for wet grounds, as from its rapid growth it is calculated to smother or keep down the coarser kinds, which naturally abound in these situations.

12. *Rye Grass* is extensively cultivated in Scotland and the north of England; and where cocksfoot has not superseded it, is generally mixed with clover seeds. It is rather declining in public estimation. It does well in pasture; and as it contains much nutriment, is considered valuable for cows and sheep. Dickson says it does best in rich moist meadows. Young does not speak well of it.

13. *Red Clover*. There are many species of the *trifolium*, and several varieties of the red clover. Whether the kind we generally cultivate is the *pratense*, or not, I am unable to determine. The character of red clover as a meliorating fertilizing crop, is too generally known to require illustration. It cannot be depended upon for permanent grass lands; though it yields to no grass for alternating with grain, in convertible husbandry.

14. It formerly was as indispensable in a course of crops in Norfolk, England, (which has been pre-eminent for good tillage,) as turnips; and the maxim was, and still is, "No turnips, no crops." But it appears from Young's survey of that country, that it cannot now be depended on oftener than once in from eight to twelve years. Trefoil, white clover, cocksfoot, rye grass, &c., are therefore alternated with red clover in the grass years. There is reason to believe that neither red clover nor other grasses will bear repeating for a course of years upon the generality of the soils.

15. They must exhaust the ground of the peculiar nourishment required for their support. In Great Britain white clover, trefoil, rye-grass, or cocksfoot is generally sown with red clover seeds. From twenty to thirty pounds of seeds are sown to the acre. In the northern states, timothy is generally sown with clover, though the mixture is an improper one for hay; for the clover is fit for the scythe ten or fifteen days before the timothy has arrived to maturity. If sown alone, from eight to sixteen pounds of clover seed should be put on an acre; more on old land than on new.

16. *White or Dutch Clover* (*trifolium repense*) is considered in England of importance to husbandry, if we are to judge from the great quantity of seed which is there sown annually. With us, many districts produce it spontaneously; but it is too seldom sown. It shrinks greatly in drying, and does not contain as much nutritive matter as red clover; yet its value as a pasture grass is universally admitted. Its increase is very much facilitated by a top dressing of gypsum, lime, or ashes.

17. *Lucerne*, although affording much more green food, contains less nutriment in a single crop than red clover. It must, however, be borne in mind, that it grows much thicker than clover, and will bear cutting twice as often. In the soiling system, an acre of lucerne will keep four cattle or horses from the 15th of May to the 1st of October.

18. I sowed seed in 1821, at the rate of six pounds the acre, with barley. It has stood the winters well, much better than clover; and has been in a state of progressive improvement. Drought has not effected it.—

The plants are very tender the first year, and require either a very clean tith, or to be kept free from weeds and grass with a hoe the first year. It should have a deep loam, as it sends down tap roots five or six feet; and it is equally necessary that the ground should not be wet.

19. It may be sown either in drills or broadcast, with or without grain. Fifteen pounds of seed are required for the acre if drilled, and twenty are not too much if sown broadcast. To the proprietor of a dairy, an acre or two of lucerne would be valuable, to be fed to his cows in addition to ordinary pasture.

20. *Long rooted Clover* is a native of Hungary, and I do not think has ever found its way across the Atlantic. The root is biennial, and if sown in the fall, lasts only during the next season. It penetrates to a great depth in the ground, and consequently is but little affected by drought. It therefore requires a deep, dry soil.

21. The product of this grass, when compared to others that are allied to it in habit and place of growth, proves greatly superior. It affords twice the weight of grass, and more than double the nutritive matter that is given by the common clover. It gives abundance of seed; and, says G. Sinclair, if the ground be kept free of weeds, it sows itself, vegetates and grows rapidly, without covering in, or any operation whatever.

22. Four years it has propagated itself in this manner on the space of ground which it now occupies, and from which this statement of its comparative value is made. This species would, no doubt, prove a valuable acquisition to our husbandry, whether we consider its value for green food, hay, or as a green crop to be turned in preparatory to grain.

23. *Sain Foin* is peculiarly adapted to a calcareous or chalky soil. It is true, it is cultivated in Norfolk, England, which is a soil of sand and loam, naturally destitute of calcareous matter. But it is common there to dress their lands with clay marl, which abounds with carbonate of lime; without which dressing, says Young, Norfolk soils will not grow sain foin.

24. This writer considers it "one of the most valuable plants that were ever introduced into the agriculture of Great Britain."—The well-known Mr. Coke cultivates four hundred acres of this grass, and sows it with out other seeds. Several attempts have been made to cultivate sain foin in this country, but hitherto, I believe, without success.

25. *Timothy*. This grass is distinguished in Great Britain by the name of *meadow cat-tail*; in New England by that of *herd's grass*. It is one of the most valuable grasses that are cultivated; and what is worth the notice of every farmer, it affords more than double the nutriment when cut in the seed than it does in the flower.

26. In tenacious, strong and moist soils, it is entitled to precedence, perhaps, over any single grass for hay, yet does not seem to be suitable to mix with clover seeds when intended for meadow. Another consideration, which renders it particularly worthy of attention, is the seed which it affords, and which may be saved without materially diminishing the hay crop.

27. *Fiorin* has of late years been brought into notice in Great Britain, by the experiments of Dr. Richardson, who particularly recommended it for the cold boggy soils of the mountain districts, where ordinary grasses would not thrive. The peculiar value of the fiorin, and of other grasses of the agrostis family, arises from their fitness for winter pasture; as they lose very little of their bulk or nutriment by remaining in the soil after they had ceased to grow. Its name (creeping bent or couch grass) implies a difficulty in mowing it, except on a surface perfectly smooth.—*To be continued.*

MAGGOT AND RED RUST IN WHEAT.—A correspondent of an English paper, under this head writes as follows:—I have, during the last fifteen years, paid minute attention to the growth of the wheat plant; and by carefully observing it through all its stages, have endeavored to discover the reason of our having a deficiency in this the most valuable of all the productions of the English farmer; and I trust my labors have not been in vain. I shall in the first place confine myself to the cause of the maggot in wheat. When we experience through the spring months a long succession of easterly winds, it invariably follows that we are afflicted with a greater prevalence of blight and fly than is usual. This fly (which is exceedingly small, not larger than a flea) is the parent of the wheat maggot, and to explain fully its attack on the plant, it will be necessary for me to go through the different effects it produces on the ear. It commences by depositing its ova (which are considerable in number) before the ear has made its appearance out of the ribbon, and as soon as the ear gets fairly shot out, the state of the weather decides the fate of the eggs. If it continues moist or wet with occasional gleams of sunshine, the greater part of these eggs come to maturity and produce a small yellow maggot, which immediately commences its work of destruction upon the blossom; before it leaves the wheat shoots forth, the season is hot and dry, the eggs so deposited by cup, and afterwards upon the grain itself; thus causing a total failure wherever it has been able to secrete itself. If, on the other hand, when the fly cannot come to maturity, or at least very few of them—for in all seasons we have more or less of this destructive insect—their ravages are of very little importance, comparatively speaking, if we should have a prevalence of dry weather during the progress of the growth of the grain. I have conversed with many old farmers on the subject of red gum or red rust in wheat, and most of them assert that this disease does little or no injury to the crop; but in this I certainly differ much from them. I do not contend that this is quite so injurious to the grain as the maggot, for that totally destroys the corn, whereas red rust does not, but causes it to shrivel up, and not come to proper maturity, leaving only a half fed grain, producing bran and not flour. The red rust is produced by a moist atmosphere or too much rain immediately after the wheat has shed its blossom; wetness causes the cup to be closed and prevents the escape of the juice or perspiration of the grain, which in dry weather is evaporated by the wind and sun, and makes it become a glutinous substance which adheres to the grain and inner part of the cup; this eventually is a kind of powder or red rust, and produces the sad effects described above. The chaff of some kinds of wheat, and especially the white, being less porous than others, renders them more liable to this disease.

CAUTION TO FARMERS.—Mr. Honey, of Hollingbourne, having last week applied some arsenic and soft soap to the backs of his sheep and lambs, it was afterwards discovered that some mistake had been made as the relative proportions which should have been used, in consequence of which 119 died within two days.—*Dover Chronicle.*

TO PRESERVE OYSTERS FRESH.—Instead of packing them in the usual way, say with the deep shell undermost, pack them as they are taken off the beds, the flat shell undermost. By this method the shells will remain closed, and the fish feed on the liquor for at least three days longer. Those who will not believe let them try the experiment when the oysters are thrown on the beds; such is the instinct of the oyster so placed, that it invariably turns on the under shell.