## June Preparation of the Soil for Wheat.

Genuine wheat soil is the first requisite to success. Good seed, genuine and unadulterated, the second.

The soil best adapted to the wheat plant is found on uplands, and is known by having a clear red clay subsoil. All soils will produce wheat; but all soils will not, nor can they be made to, produce good grain or remunerative crops. Low lands, for instance, having too much alluvium and humidity, almost always fail in bringing wheat to maturity. A surplus of straw food and moisture in the atmosphere builds the straw up, but fails to develop the grain. Rust invariably follows, and swivels the grain; and then both are lost.

The preparation of the soil for wheat should be commenced early—much earlier than is customary. So soon as the first clover crop is cut off in June, and while the soil is in its best condition, it should be turned flat, leaving not a single turf uncovered to harbor the fly. Before turning, a liberal supply of manure from the compost heap behind the cow-stalls should be spread on the land; or, if manure is scarce, caustic lime may be spread with great advantage. It decomposes the green crop, and assists in rapidly reducing the vegetable matter in the soil to plant food. Early turning has another great advantage. Decomposition will have been accomplished before wheat sowing; and the farmer saves much more by the dry process of decomposition, during July and August, than he does by the wet process, which takes place after his wheat is put in. Clover sod pays the farmer at least twenty-five per cent. to fifty per cent. more by early turning. So soon as turned, it should be double harrowed and rolled. Great care should be taken in having every hole and hollow, bunch of clover or sod, covered completely, that the fly may have no place to lay her eggs. During July and August the vegetable growth on this land should be kept down by shallow cultivation.

*The Seed.*—It should never in any case be taken from the bin. Seeds of all kinds should be selected in the field. It is there and only there that the farmer can select genuine grain, pure and perfect. He should take the best formed, largest, and that which ripens earliest. For choice seed, to sow on some choice piece of land, by way of experiment, the farmer will find it greatly to his interest and satisfaction to pick by hand every year two or three bushels of the centre heads that come from his largest tillers, or stools, and are earliest ripe. It prevents disease, smut, fly cockle, and cheat from making inroads into his crop. There is much more money, and a vast deal more satisfaction, to the scientific farmer in these methods of treating his seed and soil than there is in cultivating (?) so much land. Good seed properly selected and sowed, and properly put in, in good soil and well prepared, will make remunerative crops nine years out of every ten. To sum up seed and soil in a few words: It requires clean land to prevent the ravages of the fly; it requires early sowing to insure a good stand; it requires potash in some form to prevent the rust, even on elevated lands; it requires salt to stiffen the straw and perfect the grain, and it requires a well-balanced head to make the wheat crop pay.—*Scientific Farmer.*

## Thistles and Red Root.

I notice an article in the *Farmer* of April 9, in regard to Canada thistles and the State law forbidding their growth, even on the roadside, which is all right in my estimation, as they are certainly a pest and a nuisance. But I see nothing written in regard to other noxious plants the farmer has to contend with, such as milk weed, daira and red root, (I give common names, not knowing the scientific ones). Having had over 20 years experience with all kinds of foul stuff, and my boyhood experience with Canada thistles in Wayne Co., N. Y., I must say red root is the worst to get rid of after getting well established on a farm. If it be a lot you cut for hay and then grow a crop of cloverseed, as we often do, it gets largely distributed, and is sure to grow if it gets in the ground. The weed also seems to keep well in the ground; even if buried deep too, and it is brought to the surface and will grow and blossom by the 1st of May, and keep on maturing seed all season. All the seed (there are thousands in one plant) seems to be good, no blasting or shrinkage, no failure to grow on their part If one knows he has red root in a lot, he can kill by summer fallowing, but if (as I have said) it gets well established on a farm, it takes a long time to get entirely rid of it. When you think you have got the last of it, you naturally neglect you vigilance, and in a year or two you will come across a few plants in one lot; you pull them; there is another place and so on, there has got to be a constant watchful care, or it will get headway again. I know of a farm that is nearly covered with it, and would take four to six years with energy and perseverance to get rid of it entirely. I got my farm sprinkled with it through hay and clover seed, and the clover straw and chaff. The next year the lot was pastured, and then we found the first that I had seen on the farm, that was five years ago. The first thing was to pull by hand every small plant, and every time we went into the lot we looked for it and kept it out of sight. We find it in other lots one plant in a place. Sold some clover seed to my neighbors; they found a few plants, attended closely, and have got rid of it, so they say. I supposed I had got entirely rid of it two years ago, and rather relaxed my vigilance in looking for it, and last year found some in my wheat. Again this spring I found quite a patch in the wheat lot where it originally started. It has become a fixed habit with me to look for red root. I expect to get rid of it in time, but there must be no let up or it never will be done. I say to farmers, get acquainted with it and watch it, so you can pull the first crop clean, and you will save yourselves much annoyance and trouble.—*Michigan Farmer.*

## Fodder Corn.

There is a wide difference between fodder corn and corn fodder; the latter, when grown as forage for cattle, is usually sown broadcast, or in drills, at the rate of from two to four bushels per acre, seeding with some large variety of Western or Southern corn, making a swamp of green foliage, succulent, but not nutritious. Plants of corn grown thus contain ninety-three per cent. and upwards of water, a good substitute for water in time of drought, when some farmers must drive their herds a long distance to slake the cattle thirst.

Such forage will do but little in the milk or beef producing line, a conclusion to which many farmers have arrived, after having tried it green as well as wilted, which latter is some improvement on the former. Farmers have also tried to cure it, but have become disgusted with it in every form. If by chance there is a long time of dry weather, it may be cured by staking up the stooks, or hanging the bundles across the fence. However handled, its value is very small, and is worth but little more than the same weight of swamp flags. Hence many intelligent, observing farmers have turned their attention to a better substitute for green pastures, and a full hay crop.

Instead of the former practice of lavishing from two to four bushels of seed per acre, to produce an almost worthless crop, from six to ten quarts of some large varieties of sweet corn are sown in drills, well manured, and as early as the ground is warm enough to germinate corn. When the corn plant is up sufficiently large to hoe, the cultivator should be run through between the rows as for a field crop. With such treatment it will expand and cover the ground, at the same time caring out quite heavily. When the time arrives that the fodder is needed to supplement the short pasture, commence to cut it, doing the same the day before it is to be used, that it may wilt, thus enhancing very much the nutriment in a given quantity. Continue to cut as wanted for feeding, until the corn is full in milk; then cut it all, and stook as is usual with the field crop. It has sufficient stamina to stand securely for any length of time.

Continue using this fodder corn while it lasts, and the longer the better for the interest of the dairymen, since from this kind of feed butter or cheese can be made as extensively and of as fine quality, during the entire fall, as from the best pastures in June. This practice obviates the necessity of turning the cows upon the meadows, to eat the next year's crop, as too many feel obliged to do to keep the cows from failing altogether. This kind of fodder will yield from eight to ten tons of dry feed per acre. Some dairymen think to extend the profits of the crop by plucking off some of the ears for the hogs before feeding the fodder corn to the cows, but it is a reprehensible practice. As an old Quaker once said, in describing the progress of cheese-making, that "some people remove in the morning the yellow scum from the milk which forms through the night, but he always let it remain, and liked the cheese rather the better for it." So with the cows; they prefer the fodder rather as nature has left it.

Now for the reason why fodder of the last description is far more valuable than the kind described at the head of this article. The corn plant grown in a dense mass, without earing, contains very little starch or sugar; in fact, any barren stalk of corn, grown in the field crop, has but a small amount of sugar as against one that produces corn. The barren stalk is destitute of the constituents which nature has provided to furnish the nutriment required to perfect the ear, of which the stalk partakes liberally at the same time, thus increasing its value over the barren stalk. In northern Vermont and New Hampshire the Sanford white corn is being grown quite extensively for fodder, and this is probably the next best variety to the sweet corn, since cattle eat it quite clean. Dairymen need have no fears that the cattle will reject the butts, however large, if the sweet varieties are grown. No prudent farmer should neglect to provide against a short crop of grass, when he deliberately counts the cost of so doing.—*American Cultivator.*

## The Pea Weevil.

A correspondent of one of our foreign exchanges makes the following statements in regard to the pea weevil:

At the meeting of the Ashmolean Society of Oxford recently, I exhibited a number of small weevils which had been sent to me by Rev. J. C. Clutterbuck from Long Whittenham; and which had been found secreting themselves in still standing stubble (having crept heads downward into the tubes of the straw till they reached one of the knots). Mr. Clutterbuck had observed them in this position a couple of months ago, and had sent a short note to the Oxford *Journal* on the subject. It appears that the stubble is usually left standing and the seed of the red clover is sown in drills among the stubble, and that it is often entirely eaten off as soon as it springs up by an insect depredator. In those beetles I immediately recognized the small brown weevil, *Sitona lineta*, which is too well known as destructive to pea and bean crops. Lucerne is also attacked by them, whole fields of which have been destroyed even after two or three sowings. A full account of the insect, as far as its habits were then known, is given by Mr. Curtiss in his "Farm Insects," and it is added that "where the eggs are laid or on what the larvæ of the weevils feed is not known." It is, however, quite certain that the cereal crops are not touched by the weevils in any state of their existence for the purpose of food; and we thence arrive at the conclusion that the weevils have been bred in the neighborhood of the clover in the preceeding summr, and that their instinct leads them to the stubble, the tubes of the straw forming excellent hiding places during the winter months; suggesting further the desirability of burning off the stubble in the cold weather of winter, in preference to leaving it later, when the increasing warmth gives fresh life and activity to the beetles. It is almost impossible to observe them on the ground, as they are just the color of the earth; and, moreover, they have the habit of feigning death when disturbed. Care must therefore be taken that they are not shaken out of the stubble when it is burnt I am further able to state that the grubs of the weevils inhabit small galls in the summer months on the root stems and rootlets of peas and beans, and I exhibited a drawing made some years ago of a pea root from my garden, infested with these galls and their enclosed grubs. Hence the perfect insects are developed from the grubs at the end of the summer and autumn, ready to attack the newly sown peas, vetches, clover, beans, maize, etc., as soon as they appear above ground.

## Extraordinary Yields of Wheat.

The reported yields of wheat in California reminds us of the trite saying, "Hills are green afar off." The report so widely circulated of large fields producing 70 or 80 bushels per acre has induced some Canadian farmers' to seek their fortune in the much-talked-of State. The New York *Tribune* makes the following comments on the extraordinary yields of wheat, demonstrating that the averaging produce is not higher then that of Canada, if really as high:—

Averments of extraordinary yields of wheat in Colorado, California, Oregon and Washington Territory, have been frequently made, rarely with sufficient verification. The upper range of such statements usually comes within 60 to 80 bushels per acre. There is no doubt that exceptional crops