

FARM AND FIELD.

MANAGING MEADOWS.

There is much of our grass land that does not pay, yet its improvement would be easy and comparatively inexpensive, and it is a great loss if it is not secured. But farmers have been discouraged by unsuccessful efforts in this direction. The custom was to scatter a little seed over the field, and so leave it. Now, if the soil had not strength to support the one crop, how could it be expected to carry the two? Then it has been tried to harrow the meadow, sow the seed and roll. This proved to be better, but still not satisfactory. Our best farmers do this, with the important difference of adding manure—spread either in fall or winter, or early spring, best in the fall. The surface soil will then have received the washings of the manure, the harrow bringing up fresh soil; this mixed with the manure, which should be fine, there will be a bed for the seed. The manure should be clean; if it is old, it will be so. Such a course never fails if there is sufficient enrichment, and the work can be done early, so as to get some of the winter moisture in case there should be an early drouth.

I have mentioned harrowing. Some object to this—which is another error. All crops raised by the farmer are benefited by cultivation. Harrowing is one of the most successful modes of tillage, giving the air a chance, and stimulating the plant. Unless a meadow is as good, or almost as good, as it can be, the harrow will improve it; it will be cultivating the grass. Yet there are those who are horrified at the thought of "tearing up the sod," as I have frequently heard it expressed. This tearing up, however, always proves an advantage, twice passing over being better in general than once. Harrow and cross-harrow and then roll. After that, some concentrated fertilizer may be applied, or a light coat of finely comminuted manure from the barn or compost heap, which, of course, is to be evenly spread. This will be a guard, in some measure, against drouth, and being old manure, will be taken up at once, as fast as the plant can appropriate it.

Sometimes, where a meadow is badly run out, the land is ploughed, yet this does not always give satisfaction. The reason is very evident: there is a lack of fertility. It is but the common fault—an attempt to do without manure, or as little as possible, when it should be the object to see how much can be used. To plough a meadow deep for re-seeding, in our clay or drift soil, is to spoil it. In land porous or leachy it will sometimes succeed, that is, to grow a moderate crop. But in our cold, compact clays it will not do. Sometimes an improvement is made by ploughing very lightly, say two or two and a half inches. Thus a mellow seedbed is more apt to be obtained. But it is a pity in such case to go to the trouble of preparing the land and incur the expense of seed without manure, the very thing that is needed. It does not need much; only let it be of good quality, fine, and, most of all, evenly spread. In lumps or spots there will be unevenness, and much of the strength will be lost.

Neglect to use the roller on meadows in spring will result in loss amounting to several times the cost of roller and labour. The benefit of rolling has long been known; and it is almost equally beneficial to pastures, only the smoothness of surface is not here required as in the other case, where the mower is employed. The effect of frost upon grass lands is to loosen the soil, which, to a certain extent, is a benefit; but beyond this it is hurtful, as it admits too much air, especially if an early drouth and severe winds should occur. Besides, in some seasons much of the grass is

started from its place, and some lifted out. This is more the case with clover, and almost always on wet soil or land not sufficiently drained, and there is much of the latter. Pass the roller over this, and it will give compactness to the soil and fix the plants in it. But it is to be done at the right time, when the land is neither too wet nor too dry—just so that it will bear the horses and avoid the mud, smoothing at the same time the land. The time is to be watched; yet it must not be done so early that subsequent frosts will require re-rolling.—*Cor. N.Y. Tribune.*

LIFE ON THE FARM.

As to its drudgery—whatever has been the case in the past, when there were stumps to be pulled and mortgages to be lifted from almost every field; when it was a long way to market, and the buyer paid for produce in "trade;" when almost all implements were laboriously hewn out at home or clumsily hammered out by the village blacksmith—there is, happily, less drudgery on the farm now, and less need of it every year. Taking the year through, the working hours of a man on a farm are no longer than those of the section hand on the railway or the artisan in the shop, who has his own garden to hoe before breakfast or after supper. The busy lawyer or the doctor in average practice works longer and harder than the farmer. The grocer and the editor and book-keeper each sees less of their children in their waking hours than the farmer who sometimes envies them their "easy life."

It must be conceded, of course, that the profits of farming are not so large on the average as those which are realized by men who are successful in mercantile or professional life. But, such as they are, they are surer—twenty-fold surer, at least. Large profits are always contingent on large risks. One must not expect the same rate of interest from Government bonds as from mining stocks. The wear and tear, the losses and defeats of business men in the last ten years, have been an experience that no farmer need covet. He may well be satisfied with the small income that, taking one year with another, is such a sure one; to resign the five chances of shining success in commercial life to those who are willing to take the ninety-five chances of sure failure.

The cities and towns are full of men who once had visions of a business success that would in monthly profits put to shame the small profits of a farmer's lifetime. On the home-stretch of three-score-and-ten they find themselves dependent for a livelihood on salaried positions, which they hold by a dismally uncertain tenure, or on the precarious commissions of a canvasser or a commercial traveller. In comfort and in income, the lives they have led make a shabby showing compared with what they might have done as farmers, and point an important moral for the young men who are now debating whether they will turn their backs on the farm, and try their luck in the lottery of city life.—*Good Company.*

THE USE OF THE ROLLER.

The *New England Farmer* has a timely article on this subject. Indeed, it is almost always timely to talk about the good effect of rolling land. The roller will not make moisture, but it will tend to retain some of it that is already in the soil, and its use may make the difference between a crop and no crop on land that is to be seeded down during a dry period. In a soil made compact by the roller, a light shower may afford sufficient moisture to the surface to germinate the seeds and give them a healthy start, while in an over-mellow soil they would lie dormant or merely sprout, and then dry up and die. The iron roller

is far better than a wooden one in every respect. It turns easily, being made in short sections; it is heavy according to its size, and bears harder on the soil it covers. The weight of a large wooden roller is distributed over too much surface at once. The roller is often useful in the spring for compacting the surface of newly-seeded mowing or grass fields, sown the previous autumn, and which the frosts of winter have loosened up or torn to pieces. If clover seed be sown on such land, the roller becomes almost indispensable, and some farmers practise covering their grass seed with a roller in place of a harrow or brush, which is an excellent method where the soil is sufficiently moist. Another good use of the iron roller is upon mowing lands recently top-dressed with stable manure. The weight is needed to press the manure down close to the surface, where it will keep moist, and all the sooner help start the new growth, at the same time leaving the surface smooth for the scythe or mowing machine. It is also used by gardeners to break up lumpy soil, and with alternate harrowings, to render it fit for receiving the seeds of tender garden vegetables.

UNDERDRAINING.

In prospecting for the underdraining of a piece of bottom land, the first thing to be sought for is the outlet. This should be always the lowest point in the plot. When there is running water this is easily ascertained. It would then be well to get by actual measurement the difference between this and the highest point of the central drain, and the distance between the two points. By this means the grade can be ascertained, which should be uniform from one end to the other. A fall of one foot in a hundred will be sufficient in most cases. Something more than this would be better; less than this would not always insure success.

The workmen should begin at the lowest point, and complete the central ditch first. Then the lateral ditches may be dug, beginning at the upper end and running them as near parallel as possible, having an eye to the grade, and the springs of water to be tapped.

The tiles being put down, the turf should be thrown upon them bottom upwards, and the soil be placed on top, and the whole trodden down as firmly as possible, to prevent the damage from heavy rains, which might occur soon.

Sometimes in prospecting for ditches it is proper to use a sounding rod, in order to avoid rocks which often interpose, and require blasting, or a change in the course after much work has been done unnecessarily. This implement is made of iron, about an inch in diameter, and five or six feet long, with a tapering point and a head about two inches thick, with an eye in it, and an iron bar some two feet long through it, in order to aid in its extraction when driven into the ground. This is effected with a sledge-hammer where there is any suspicion of underlying rocks.—*Pendleton's Scientific Agriculture.*

THE HESSIAN FLY.

There are two broods of the Hessian fly (*Cecidomyia destructor*), one in the spring, and the second in autumn. The fall brood appears in August or September, and each female deposits about thirty eggs on the leaves of the young winter wheat.

The eggs hatch in four days, and the larvae or maggots make their way down to the base of the leaf, and remain between the leaf and stem, where they feed upon the juices of the plant, and cause it to turn yellow. In about a month after the eggs are laid, the "flax-seed" state is assumed, in which the larva remains until the warm days