

composition of such, as in the case of plowing down clover and buckwheat, affords a constant and steady supply of manure to the soil, and the effects of these green manures are more lasting than barn-yard dung on this account. But it takes a long time for green manure to thoroughly rot in the ground. Hence, it should not be expected that—say if a crop of buckwheat were plowed down during the summer—the plant food would become directly available to a crop of wheat next fall, and on this account we think that the beneficial effects of green manuring have been lost sight of, in supposing that any matter can at once be dissolved into available plant food. The effect of plowing down buckwheat, clover and rape, will not probably be seen for several seasons after. There is a mechanical effect, however, of plowing down green stuff besides the mere manurial action, and that is keeping heavy land porous and open. For instance, the big, coarse straw of buckwheat keeps apart the atoms of soil, and thus admits air and thorough percolation of water. So much for the physical effects.

A good crop of clover, observes a noted agriculturist, which has been allowed to stand for seed, will add to the land a fertility for wheat which could not be obtained with the heaviest dressing of guano; but to do this in the best possible manner, the clover must be allowed to come to perfection; must be treated so that it will produce and leave on the ground the greatest possible amount of leaf and root, for in those two portions of the plant consists the virtue of the clover crop. Clover is the very best manure for steep, clayey hills, where the manure is apt to wash away. Our farmers make a great mistake by eating off the clover or cutting a second crop before plowing down. To get the full benefit, as much top should be plowed down as possible.

Buckwheat as a green manure is highly beneficial; although it is not as good or strong a fertilizer as clover, yet the mechanical effects, owing to the coarse straw, are superior for heavy clay land. The middle of June will be an excellent time to sow buckwheat for a plowing-down crop; but the earlier the better, for unless it be plowed under early in August, it will not sufficiently rot to benefit the fall wheat. It should be borne in mind that all soils, to receive the greatest good from the application of green manures, should be capable of bringing them forth with such an abundance as to produce a complete shade to the surface during their growth—when a process of nitrification goes on in the soil—and there should be a large enough mass of vegetable matter to cause rapid and constant fermentation or decomposition when plowed under. With the present scarcity of stock to increase the dung-pile, our farmers cannot do better this season than turning down plenty of green manure to increase the fertility of their soil.

Soiling.

The word "soiling" means cutting green stuff and feeding to stock in stables and yards, or, in other words, following the same farm operation with regard to feeding in summer that is practised in winter. "Soiling" is not followed to any extent by farmers in this country, and hence we have heard several farmers ask what this *soiling* means. Among the cow-keepers around large cities in Great Britain, U. S., France, Holland and Germany, the animals are all fed in stables on the soiling principle. And with a large number of the farmers in European countries soiling is fast coming in vogue. The farmers in France having such small tenures, are almost necessitated in keeping their cattle in yards or stables, in order to keep any number of head, and small farms of 15 acres, by soiling, feed as many cows as a farmer here with three times that quantity, as one acre of grasses, &c., cut and fed in the stall, will support

more stock than five acres in pasture. That the greatest production results from soiling must be evident to everybody, and that on small farms where there is but a limited range, it is the most economical method of feeding. There is no use denying that on the ordinary plan of pasturage there is a great amount of land wasted and impoverished. Indeed, with the amount of waste and impoverished grass land, and the undrained and swamp land, which at least is only producing un-nutritious, miry feed, it is surprising the amount of stock that could be kept upon the soiling system. When it is considered that Ontario and Quebec are equal in size to Great Britain, France and Prussia, and the Maritime Provinces to Holland, Belgium, Greece, Portugal and Switzerland put together—saying nothing about the Northwest—it can easily be seen the unlimited resources we have for stock feeding, even in the older settled Provinces; but how do we compare with any of the countries mentioned, in stock feeding and dairying, compared with our resources? There is no doubt that our stock and dairy productions, on the smaller farms in this country, could be doubled by attention to a proper system of soiling, as one acre under the latter will keep as many head of cattle as 3½ under pasturage. Of course there is one great drawback to this soiling, and that is the cost of labor, and also the advantage to farm animals by having a free range on pasture. But, then, to counterbalance this, the cattle are protected from exposure to the blaze of a noon-day sun in July, on probably a burnt-up pasture. It is here where the benefit of soiling will be more apparent—when the flush of grass is eaten down in mid-summer, and the pastures are bare, and cows commence to run off their milk. Soiling to this extent cannot fail to be profitable, and would be available to any of our farmers, whether great or small. We do not anticipate that soiling will take the place of pasturage amongst farmers, but it may be used profitably as an aid, or in connection with it.

Take, for example, a few acres of pasture that could keep a good supply of grass until the middle of July, or when our native grasses have seen their best; in addition to this, let an acre or more of ensilage corn be grown, as the case may be. In any kind of fertile corn-land 15 tons of sweet, esculent food can be raised to the acre, and, allowing a cow 25 lbs. a day, it is not difficult to see what number of animals can be fed on an acre by soiling.

Ensilage corn planted in the middle of June, or thereabout, if on good soil, would make a respectable cut by the middle of July, and, as the summer advances, there will be a luxuriant growth, and will last until fall pasturage comes in, if soiling is not altogether depended upon. Besides the corn crop, a rotation of tares, clover and Hungarian grass may be brought in to supply the deficiency in pasturage. We should strongly advise our farmers to try soiling on a small scale, and we are certain they will be satisfied with the results; and be better prepared to arrive at a conclusion how it would be likely to work on a larger scale.

An important consideration in soiling, and especially to small farms, is the manure. By feeding the produce of your land by soiling, you are hoarding up manure in summer as well as winter; and what is most wanted at the present time on the majority of lands, is plenty of dung. Not only is soiling advantageous in this way, but the farmer has a reserve supply of succulent food, especially for such times of deficiency in the grass growth as now and then are sure to come through dry seasons and other causes.

We are fully persuaded that the amount of manure saved by soiling for use upon the field crops, would pay for the time and trouble entailed under this practice.

Hungarian Grass.

The present month offers an excellent opportunity to those who are scarce of meadow, or where the catch has not been good, to sow Hungarian grass. This is not only an excellent green forage crop, but when properly cured, makes a sweet, nutritious hay. We are fully persuaded our farmers do not grow enough. There are various opinions about its nutritive qualities compared with timothy. We do not consider Hungarian grass as nutritive as timothy, but it bears a far heavier crop to the acre, making up in quantity what it lacks in quality. It is also an excellent crop to clean land and to tone down a piece of land that has a tendency to grow too rank a crop of straw. The trouble about Hungarian grass is that it is not generally cut at the proper time. Half a bushel should be sown to the acre, about the middle of June, and if cut right, makes fine hay, and on good land should yield from two to three tons per acre. It should be cut when in the first blow, before any seed is formed; wilt in the swath the same as clover, and make in the cock. The stalk will then be nearly solid and the hay very heavy, and it will be as green as grass. If cured in this way, it is excellent feed for horses and cows. But if allowed to turn yellow and form seed, it is the same as any other grain, and will, of course, injure a horse the same as if he were fed wheat in the bundle to excess; and for this reason we often hear of the injurious effects resulting from feeding Hungarian grass—that is, when it is cut too old and fed indiscriminately. When harvested at the proper time, there is no more danger in feeding it to stock than clover or timothy. If cut at the proper time, it will sometimes sprout up and make good fall feed, or a green crop to turn under. If an early crop is cut, it may be cut a second time for seed, but it will be short and will scarcely pay. Hungarian grass comes in as a seasonable soiling crop, and every farmer should have an acre or so on hand to feed milch cows and horses when they come up at night. The crop pays.

A Potato Bug Day.

Since the advent of the Colorado potato bug, some twelve years ago, the cultivation of potatoes has been less profitable owing to the additional labor in combating the ravages of this pest, and as labor continues high, so, too, will this tuber be raised at a disadvantage. Indeed, where a large acreage is cultivated the additional labor is so much that the bugs are only partially destroyed, and large armies of them are left to breed and commit their ravages another year. The loss to this continent through this since it first came, if counted up, would be enormous, and we doubt if all the other pests, such as weevil, Hessian fly, pea bug, &c., have done one-half the damage, and according to present appearances this pest is likely to be with us for an indefinite length of time unless more stringent measures are put in force for its destruction. Why it has been perpetuated so long and in such increased numbers is from the fact that there has not been a united effort to stamp it out. Year after year there are always sufficient bugs left untouched by Paris green to keep a good stock on hand. It is often the case that one neighbor makes a complete job in destroying them, and hardly a bug is to be seen on his patch; again, another just works sufficiently at them that his crop may not prove a total failure, and leaves bugs enough to kill half the crop. The consequence is, taking the country all over, the bug appears in increased force every spring. It was thought at one time that after completing a certain cycle of time it would disappear, or that parasitical enemies would prey upon it and kill the