

FARM AND FIELD.**CLOVER.**

A field of clover should be in the rotation of crops on every farm. Why? 1. It makes the best of hay, cut early and well cured. 2. The roots and dead leaves ploughed under are equal to a good coating of manure. 3. It is one of the best of cleaning crops. Even the Canada thistle cannot stand before it. Cut at the proper time, thistles and all other weeds are prevented from going to seed. The second growth of clover will smother the thistle and other weed roots. This plan cleans better than fallowing, and keeps a crop in the ground all the time. No field goes to waste. Suppose you have six arable fields of ten, twelve, or fifteen acres. Establish a six years' rotation. Manure a field each year. Clover a field each year. The farm will improve. There will be an end to "running down." Red clover is a long, tap-rooted plant. It will find the elements of fertility that may be in the soil, bring them to the surface, and store them there for future grain crops. Clover does most good sown alone. Prepare the land in the fall. Sow twelve pounds to the acre at the earliest moment in spring. A fair cutting may be had the first season. The second will give a better, and when the hay is off a second crop may be taken off for seed. Then plough under the old roots and dead leaves. The result will be a good seed bed for any grain you wish to sow.

VALUE OF DRAINAGE.

As a matter of fact there is very little land in our country that would not be improved by drainage. Many light soils are springy, and the crops are injured in them by stagnant water. Heavy land can never do its best until drained. Vast areas of low-lying but rich land are practically valueless for want of drains to carry off the redundant moisture which forbids the growth of any but aquatic plants. Many who admit the importance of this improvement are puzzled about the ways and means of effecting it. The *Drainage Journal* mentions the following plan, which is well worthy of serious consideration: "Some enterprising tile manufacturers select careful farmers who own flat lands and make them something like the following propositions: That the farmer make a careful estimate of his average crops, and the tile manufacturer proposes to furnish the tile necessary to drain thoroughly the lands designated in the agreement, the farmer to furnish the labour of putting in the drains at a stipulated price, to be paid out of the excess of crops grown on the land over and above the average yield before agreed upon, and the tile manufacturer agreeing to take the balance of the increase in four or five crops (as agreed), to cover the cost of the tile. On level lands, where the average crop in five years runs low and the land by nature is rich, it is a safe proposition for the tile manufacturer if the farmer honestly performs his part of the contract. On rich level lands, that need drainage and need it badly, it will pay twenty-five per cent. annually on the investment, and in some instances more."

ON THE FARM NOW-A-DAYS.

As the last month of summer is passing and September approaches, the labours of the farm necessarily change and become more diversified. The principal hay and grain harvests having been secured other crops demand attention, while ploughing for fall seeding must not be neglected by those who would make seasonable preparations for that important operation. Early ploughing and thorough preparation of the soil for wheat usually pays good dividends.

After a careful cultivation and pulverization of ground designed for sowing to wheat or other winter grain, the farmer should take special pains to secure pure seed of the best varieties. A change of seed, especially of wheat, often proves highly beneficial, and some farmers aver that seed grain procured from a distance is altogether preferable to that grown in the neighbourhood. Many of our most successful grain growers practise changing seed every few years, and claim that it proves greatly to their advantage.

The use of plaster (gypsum) on pastures and meadows, particularly on light or sandy lands, and notably in dry seasons, adds materially to the yield of grass. Plaster, though the great panacea for clover, etc., is a valuable fertilizer for corn and other spring crops, the benefits derived from its liberal use, at the right time, being best understood and appreciated by those accustomed to its annual application to their crops, pastures and meadows. The grass crop of this country is of great value and importance, and is from year to year largely increasing the wealth of the rural population. It may truly be affirmed (somewhat in the style of the old saying, though not in its exact language) that no grass, no stock; no stock, no manure; no manure, no crops; no crops, no agricultural prosperity or increase of wealth. Hence, attention to pastures and meadows, the augmenting of the grass production, is of vital consequence over large areas of the Dominion.

Now is the time to follow up the pursuit (which of course was commenced months ago) of insect enemies and to destroy them effectually, or so far as possible. Potato beetles and squash and other bugs, as well as all insects which prey upon fruits and flowers, should be pursued with vigour and be accorded heroic treatment. This also is the season for cutting, digging up, or otherwise destroying Canadian thistles, bushes, briars and evil weeds generally. No plant that is a nuisance should be permitted to go to seed on the farm or along the highway. Just now, while the pests are maturing is the time to act, and all interested should do so energetically, remembering that vigilance is necessary to conquer or even check the cumberers of ground which ought to yield abundantly of valuable products.

HOME-MADE SUPERPHOSPHATE.

A good corn fertilizer may be made by taking five hundred pounds of finely ground bone, and mixing it with two hundred pounds of sulphuric acid (oil of vitriol) and six hundred pounds of plaster of paris (gypsum). A convenient way of mixing is thus described: Procure a good sized hoghead, and saw it in two. Then divide the ground bone into two equal parts, and place half in each of the half-hogheads. Divide the acid the same way, and pour upon the bone. The ground bone is to be thoroughly mixed with the acid by means of a hoe, and allowed to stand three or four days, or until it becomes a complete paste. Then the plaster is to be added, and this is usually done by shovelling out a bushel or so upon the barn floor, sprinkling on the plaster and working it over with a hoe until it is well mixed, and shovel it into a barrel, and take out another batch which is to be treated in the same way until the whole is mixed. Cover up the filled barrels and allow them to stand and ferment for a week. To prepare it for use, pour a barrel of the fermenting mixture upon the barn floor, and work into it one or two bushels of dry loam or muck. Let it remain a few days, and it becomes pulverized and all ready for use.

A gentleman says he has used this formula, or one much like it, for many years, and has tried it side by side with purchased superphosphates, and with more satisfactory results. Its cost, aside

from the labour of manufacture, is about seventeen dollars per ton, or considerably less than half that of the commercial superphosphate; labour included, it would not cost more than half. There is no doubt that fertilizers of this kind are of great benefit to vegetation in giving it an early and vigorous start, even if one has an abundance of stable manure. Our seasons are short, at the best, and a week's start, for corn, by means of superphosphates, may save the entire crop from an early frost.—*Farmers' Cabinet.*

FEEDING EXPERIMENTS.

A report by Professor Brown concerning certain experiments in feeding stock at the Ontario Experimental Farm, for the market during the winter of 1880-81, has been issued in advance of the usual annual report of College work, in order that farmers may avail themselves of the result arrived at in their arrangements for the coming fall and winter. These results are not to be considered final, for, as the report states, in large print, that it may be carefully noted: "All experiments must be repeated again and again ere confidence can be established."

SHEEP EXPERIMENTS.

First crosses from pure-bred Leicester, Cotswold, Oxford Down and Southdown rams, or ordinary Canadian ewes, have been bred and fattened at the Model Farm during five years. The results, as given in this report, will be an astonishment to our farmers who have been inclined to favour the long-wooled and big-bodied breeds. To quote Professor Brown's summing up of this matter: "Combining wool and flesh value, the Southdown grade gives the highest returns, as much as double that of the Cotswold grade, and thirty-five per cent. over that of the Leicester grade, as also slightly in advance of the Oxford Down grade."

CORN, OATS AND PEAS.

A series of experiments on the feeding value of these grains is confirmatory of their chemical analysis, and shows no less than twenty-one per cent. in favour of peas. This is equivalent to \$4.50 per head of increased profit during one winter's feeding, or \$4,500 in a stable of 1,000 head. It is calculated that 100,000 head of three-year old cattle were supplied to the British market by Ontario last winter. A single winter's feeding of this aggregate on peas would mean a profit of \$450,000 to the whole Province. In this view of the matter Professor Brown is comforted as to the protective duty on corn, seeing that it is not, as many erroneously suppose, the cheapest producer of beef. But what about the pea-weevil? It is said that it could easily be put down if buggy peas were not allowed to be sold. We should need an Inspector with a microscope in every market effectually to prevent this. It is the opinion of many good judges that the only way to get rid of this insect is to starve it out. If no peas were grown throughout the Province for a single season, it is thought the nuisance might be abated. Pity we could not do this, and take a fresh start in growing a grain at once so profitable and so well suited to our climate.

LETTER FROM DOCTOR LAWES, OF ROTHAMSTEAD, ENGLAND.

There is embodied in the report a letter from this distinguished British agriculturist, commenting on a prior report of Professor Brown's, which was confirmatory of opinions given to the public by Dr. Lawes. It is highly complimentary to the care and accuracy with which the experiments have been made at the Ontario Agricultural College, and Professor Brown is to be congratulated on having received commendation of his work from one so well fitted to judge of it. The upshot of this communication goes to show: 1. That the increase upon a fattening animal is of less value than the