

tion. Another is the fact that a hoed crop being a cleaning crop, should be followed where possible by a grass crop. And yet another—oats being a grass feeding crop may fitly come last in the rotation before the renovation period.

The question of sequence of rotation is worthy of the most careful study. Where agriculture is advanced the farmers will have learned much regarding it which they have embodied in their practice, but they do well to remember that in this, as in other things relating to their most wonderful calling, there are depths to fathom and heights to scale in advance of present practices. The sequence of rotation practised is one of the most important tests of the status of agriculture in any community.

Flax Culture.

If there is any one thing more remarkable than another about the soil of Ontario, it is its wonderful adaptability. The variety of crops which we can grow is very remarkable. Although we may not have the best climate for flax in the world, we can grow it without difficulty, and in some sections of the Province it is now engaging the attention of quite a number of the farmers. Where much attention is given to its culture it is absolutely necessary that flax mills should be at hand to take care of the straw. One of the difficulties of growing flax is the very large amount of labor required in harvesting, as the straw is not nearly so valuable when not pulled by hand, since it requires to be kept straight and unbroken. The binder does not get low enough to secure all the value that may be obtained from the straw when pulled by hand.

Flax requires a good rich soil, and should not come oftener than once in five years in the rotation, as its growth tends quickly to the exhaustion of land. Where the soil is not naturally rich it must be highly manured to obtain good results. Where barn-yard manure is lacking, some quick acting fertilizer will answer the purpose very well. Where a good crop of flax can be grown, and in a section of country near to a fibre factory which will buy the straw, the farming of flax is quite profitable, as there is a double return, one from the straw and a second from the seed.

The best kind of flax to grow in this country is yet an unsettled point, but some of the American experiment stations have taken up this point and will no doubt soon give us light on this important subject. There are many varieties, the flowers of which are blue, white, or yellow. In many sections of this Province, flax will grow in fine form. At present its growth is mostly confined to German settlements, where the patient industry of the people is equal to the task of harvesting and curing properly. The flax industry is a very important one in its relation to stock keeping. Oil-cake is so useful a feeding adjunct that the stockman cannot well do without it, and the more plentifully and cheaply that he can purchase it the better he is likely to succeed in his calling. The stockman may, however, adopt another mode of getting what is the equivalent of oil-cake in a very cheap form. He may sow a pint or more per acre along with oats or barley which are to be fed at home. The flax thus grown is nicely mixed with the grain, for it ripens about the same time, and there is enough of it to fulfil all the conditions and secure all the results obtained from oil-cake. The quantity in the oats or barley is not sufficient to interfere with the grinding, even where this may be done at home. Where the straw is only used for bedding there can be no objection to this method. The equivalent of

oil-cake is thus obtained without apparently any cost, as there will be none the less barley or oats because of the growing of the flax. Where it is cut and used for feed, however, the stalks of the flax are objectionable, owing to their woody nature. When fed without being cut they do not impair the quality of the straw for fodder, as the animals simply leave the flax portion uneaten.

We are pleased to notice that this industry is making progress. An agricultural country is always more prosperous when its interests are varied, for then it does not suffer so much from adverse seasons and vicissitudes of marketing. Every farmer should use more or less of flax or oil-cake, as owing to its gently laxative properties and to the oil which it contains, it is greatly beneficial to the digestive organs, and it gives tone to the system, which shows good results externally in a fine coat.

Woodlands and Pastures.

It is as yet an undetermined point as to where the border-line runs between a woodland and a park-like pasture. It has been repeatedly asserted by those who ought to know that a woodland should not be pastured, and yet the term woodland may be construed to mean anything from a dense forest to a piece of land thinly covered with trees, or clumps of trees, beneath which and between which grass may be growing.

Now, while it is good policy to keep live stock fenced out of timber-land sufficiently dense to prevent the growth of grass, we fail to see the wisdom of not allowing them to feed in shady pastures such as those referred to above. It will be objected that where stock are allowed to graze they will prevent the reforesting of the bare portions by continually cropping the young seedling trees as they appear. But it should be remembered that such trees do not readily grow where a sod has once been formed. The time would come, probably, when such lands would reforest themselves, but the process would be slow. Here and there a tree would appear at first, and these, by their shade, would in time encourage the growth of other trees. Good soils are, however, far too valuable to be devoted to such uses. By such a process of reforesting one would have to wait long years for any return, and when the end had been accomplished the returns might be disappointing, owing to the kinds of timber which would grow. In some instances the timbers that would appear would largely consist of iron-wood, and in others of some of the poplars. A forest consisting mainly of poplar or iron-wood, and indeed of some other woods that may be named, is a possession which need not be much coveted.

Where reforesting is to be done, it can best be done by the aid of man. The kinds may then be grown which are valuable, and with a regularity which could not be obtained in the other case. By cultivation, where this is admissible, early growth would be hastened and a sufficient number of trees could be grown to admit of thinning them, when ready, to be utilized in various ways.

Where grass has already covered the principal portions of the woodland, it would not be wise, as we see it, to exclude the presence of cattle. While it is true that grasses grown in the shade are less nutritious than those grown in the open, it is also true that this lack of nutritive properties is counterbalanced in part at least, by the advantages afforded by shade. It would be better, then, rather to reduce the amount of the shade and thus improve the pastures, than to try and establish a forest by excluding the cattle. There are

always many trees in such places which are unhealthy and unsightly, and yet others of varieties of but little value. By removing these, the grass would be improved and also the appearance of the plot. Indeed such places may be made objects of utility as well as beauty. By giving some attention to the removal of unsightly trees, and such as are of but little use, a park-like appearance may be given to the place which would render it more or less beautiful according to the nature of the surface and the kinds of trees growing upon it. Care should be taken to leave the most beautiful and the most vigorous of the trees, especially those that are young, and yet sufficiently large to protect themselves from the depredations of live stock. The thinning process may be done at seasons of the year when other work is not pressing.

Every farm should have such a park-like pasture. There are seasons of the year when such a protection to live stock is of much value, and this is one of the cheapest and most rational modes of securing it. Other fields might be so related to this one, that access could be had to it at any time. A little attention to this matter would beautify the country more than can be said, and would also benefit the farmer.

Cleaning Land by Means of the Bare Fallow.

One of the most common modes of cleaning land is by the use of the bare fallow. Its prevalence is almost universal, and so deeply rooted has this practice become in the minds of most farmers that they look upon it as the one mode to be adopted in cleaning land, where the work is to be effectively done.

That this system of cleaning lands must change in most localities, is a foregone conclusion. Other modes are being introduced which are quite as effective as the bare fallow, and not nearly so expensive, all things considered.

The labor of the bare fallow is not usually taken into account by the farmer, as it is done without any extra hiring. For this reason its expensiveness is not so apparent. If the labor had all to be hired for the express purpose, it would be found that thorough summer-fallowing could not be done at a less average cost than \$10 per acre. Add to this the loss of an average crop, less the expense of grainage, and we have the total cost of bare fallow. Our contention is, that in sections where corn, field roots, and rape, will grow well, the bare fallow is unnecessary, as the cleaning of the land can be done quite as effectively by growing these crops properly, as by the use of the bare fallow. That, generally speaking, as now grown, these crops do not clean the land thoroughly is true, but this arises rather from imperfect work than from any inherent defect in the system. The crops we have named are usually cultivated well until harvest time, when all further attention ceases. Weeds that have escaped the hoe are then allowed to ripen, and thistles which again make their appearance are left uncut. Thus it is for the lack of attention in the latter stages of growth, that thoroughness of cleaning, which would otherwise result, fails to be secured. There is one class of soils, however, on which these cleaning crops will not grow. It may be necessary, therefore, in cleaning these to adopt the bare fallow in one of its forms. But even in this it is not necessary to lose a crop by the operation.

Good lands may be pastured until the middle of June. They may then be ploughed deeply and carefully. A skimmer should be used on the plow. They are then kept clean by cultivating on the surface sufficiently often to destroy all weeds that may appear.