

growth of straw which we have to contend against in the use of dung. I am encouraged in this hope from the satisfactory results of an investigation on this subject which I am prosecuting at the present time.

When farm-yard manure is employed it is almost always succeeded by a wheat crop, the use of dung for oats or barley being very exceptional. We shall subsequently have an opportunity of seeing, even more fully than has yet been explained, that when manure cannot be applied directly to the wheat crop we may attain the desired result by allowing another crop to intervene. As an instance of this, I may mention the practice of applying dung for beans, or upon clovers, when it cannot be used for wheat. This answers a double purpose; for it promotes the growth of crops which thrive under its direct action, and these crops leave the land enriched with materials required for the wheat.

Artificial Grasses.—Upon these crops the use of dung is generally attended with highly satisfactory results, and the extension of this practice is very desirable. Advisable as the application of dung in its early stages of fermentation may be for stiff soils, when it is to be plowed into the ground, the case is different when it has to remain upon the surface. Dr. Voelcker has shown that in a well fermented sample of farm-yard manure we have the ammonia present chiefly in the form of a humate, which is readily dissolved by water, but is not volatile, and, therefore, it is well prepared for being washed into the soil as soon as rain falls upon it, but is safe from being dispelled either by the heat of the sun or the passage of the wind. For these and other reasons, the dung intended for our artificial grasses should always be carefully fermented, so that it may be rotted when spread upon the land. Upon stiff soils the autumn is the usual time of application. The valuable powers which clay soils possess for the preservation of the manure added to them renders a frequent application unnecessary, and thus we find a well manured fallow or fallow crop generally relied upon for carrying the land through its course of four or five years' tillage without additional help from the farm-yard. If, however, the fallow crop has been removed from the land, it becomes desirable and economical to apply some manure to the seeds in the manner stated. Another cause which has led to the extension of this practice is the opportunity it offers for drawing this bulky manure to the land during a period of comparative leisure, instead of delaying the cultivation for swedes by its use for the root crop. In this instance artificial manure is entirely relied upon for the root crop, and thereby a considerable saving of time and labor is effected during this urgent and critical seed time.—*Journal of Royal Agricultural Society of England.*

Flax Culture.

We are indebted to John A. Donaldson, Esq., Canada Government Emigration Agent at Belfast, Ireland, for a copy of the following valuable instructions in regard to the culture and management of flax, which, especially as we have lately received a considerable number of inquiries on the subject, we have much pleasure in laying before our readers:—

THE NORTH EAST AGRICULTURAL ASSOCIATION OF IRELAND.

Directions for the Proper Management of the Flax Crop, orig. by compiled by the Committee of the late Royal Flax Improvement Society; Revised by the Special Committee of the North-East Agricultural Association of Ireland, for promoting the Growth of Irish Flax. Belfast, March, 1860.

SOIL AND ROTATION.—By attention and careful cultivation, good flax may be grown on various soils; but some are much better adapted for it than others. The best is a sound, dry, deep loam. It is almost essential that the land should be properly drained and subsoiled; as, when it is long saturated with either underground or surface water, a good crop need not be expected. The subsoiling should be executed the year of the green crop, so as to be completed at least two years before the flax is grown.

The best rotation is to grow after wheat, on average soils; but on poor soils, where wheat does not succeed, it is often better to grow after potatoes. Flax should on no account be grown oftener than once in five years, and once seven is considered safer.

Any departure from this system of rotation is likely to cause loss and disappointment.

PREPARATION OF THE SOIL.—One of the points of the greatest importance in the culture of flax, is by thorough draining, and by careful and repeated cleansing of the land from weeds, to place it in the finest, deepest and cleanest state. This will make room for the roots to penetrate, which they will often do to a depth equal to one half the length of the stem above ground.

After wheat, one ploughing may be sufficient on light, friable loam, but two ploughings are better; and on stiff soils, three are advisable—one immediately after harvest across the ridges, and two in Spring, so as to be ready for sowing in the first or second week of April. Much will, of course, depend on the nature of the soil, and the knowledge and experience of the farmer. The land should be so well drained and subsoiled, that it can be sown in flats, which will give more even and much better crops. But until the system of thorough draining be general, it will be advisable to plough early in Autumn, to the depth of six or eight inches. Throw the