

Directions for Flax Growing.

We are indebted to Mr. Woodside, of this city, for a circular issued by the North-East Agricultural Association of Ireland, and containing directions for the proper management of the flax crop. As spring is at hand, we publish for the information of our readers, many of whom, we hope, have already set apart a field for flax, that portion of the circular which has reference to the preparation of the soil and sowing of the seed, reserving for a future number the hints as to pulling, rippling, rotting, &c. Allowance must of course be made for the difference between the season in Ireland and in this country, as it respects the time for sowing. From the first to the middle of May is as early as the seed can be sown in Canada.

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 in 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 in seven, or even ten, 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 land into ridges, that it may receive the frost and air; and make surface drains to carry off the rains of winter. Plough again in spring, three or four inches deep, so as to preserve the winter surface for the roots of the flax. The spring ploughing should be given some time before sowing, to allow any seeds of the weeds in the land to vegetate, and the harrowing in of the flaxseed will likely kill them, and save a great deal of after weeding. Following the last harrowing, it is necessary to roll, to give an even surface and consolidate the land, breaking this up again with a short-toothed or seed-harrow before sowing, which should be up and down, not across the ridges, or angle-wise. These operations can be varied by any skilful farmer, to suit peculiar soils or extraordinary seasons. The object is to have clean, fine soil, as like as possible to what a garden soil should be.

The rotation we recommend is—

RICH SOIL.	AVERAGE SOIL.	POOR SOILS.
1. Grass.	1. Grass.	1. Grass.
2. Oats.	2. Oats.	2. Oats.
3. Flax.	3. Potatoes or Turnips.	3. Potatoes.
4. Potatoes or Turnips.	4. Wheat.	4. Flax (on knif only).
5. Wheat.	5. Flax (on half only).	5. Hay.
6. Clover Hay.	6. Clover Hay.	
7. Pasture.		

* Omit flax in next rotation on the half

SOWING.

The seed best adapted for the generality of soils is Riga, although Dutch has been used in many districts of country for a series of years with perfect success, and generally produces a finer fibre, but not so heavy a crop as Riga. In buying seed, select it plump, shining, and heavy, and of the best brands, from a respectable merchant. Sift it clear of all the seeds of weeds, which will save a great deal of after trouble, when the crop is growing. This may be done by farmers, and through a wire sieve, twelve bars to the inch. These sieves can be had in Belfast. Home-saved seed has produced excellent crops; yet it

will be best, in most cases, to use the seed which is saved at home for feeding, or to sell it for the oil mills. The proportion of seed may be stated at two Riga barrels, or three and a-half imperial bushels to the Irish or plantation acre; and so on, in proportion to the Scotch or Cunningham, and the English or Statute acre, viz., about 2½ bushels for the Scotch acre, and about 2 for the Statute acre. It is better to sow rather too thick than too thin, as with thick sowing the stem grows tall and straight, with only one or two seed capsules at the top; and the fibre is found greatly superior, in fineness and length, to that produced from thin-sown flax, which grows coarse and branches out, producing much seed, but a very inferior quality of fibre. The ground being pulverized and well cleaned, roll, harrow, and sow. If it has been laid off without ridges, it should be marked off in divisions, eight to ten feet broad, in order to give an equable supply of seed. After sowing, which should be done by a very skilful person, as the seed is exceedingly slippery, and apt to glide unevenly from the hand, cover with a seed harrow, going twice over it—once up and down, and once across or angle-wise, as this makes it more equally spread, and avoids the small drills made by the teeth of the harrow. Finish with the roller, which will leave the seed covered about an inch—the proper depth. The ridges should be raised very little in the centre, when the ground is ready for the seed, otherwise the crop will not ripen evenly; and when land is properly drained, there should be no ridges. Rolling the ground after sowing is very advisable, care being taken not to roll when the ground is so wet that the earth adheres to the roller.

Wood Ashes Injurious.

To the Editor of THE CANADA FARMER.

Sir,—Under the above (erroneous) caption you have given us on page 11, No. 3, Vol. I, CANADA FARMER, the communication of "A Farmer," who hails from Woodhouse, County of Norfolk. Now, Sir, I regret that your correspondent should have allowed "a large heap of leached ashes" to lie idle and wasting away, simply because his neighbour had "told" him that "two bushels of leached ashes per acre" had made his hay crop on a part of his meadow "very poor," "looking sickly," while at the same time, on a part of the same meadow, but where plaster was sown, "an excellent crop of hay was produced. Now, Sir, I cannot see why, "A Farmer" or his "neighbour" should attribute any injurious effects to the ashes, for the whole of their substance had been in plant growth before, and were in an improved condition as food for plants, the truth of which would have been apparent had he applied them with a more liberal hand; but the dose was so small that no appreciable good could be expected. Why, then, "A Farmer" may ask, was the crop good where plaster was sown, and why so bad where the ashes were sown? I answer because the condition of the land was such that without the aid of some fertilizer it would not grow a crop of hay; that an auxiliary was contained in the plaster and not in the ashes, but that should be no reason for condemning the ashes. If a portion of the land had been left without either plaster or ashes, (which ought to have been done to make the experiment, if such it can be called, worth anything;) and if the portion so left had been in any marked degree better than the part sown with ashes, then there would have been some reason for supposing that the ashes had been ungenerous; as it is it only proves that the plaster did more good than the ashes. Although I apprehend there would be no great difficulty, yet I will not at this time attempt to explain or give any reason why the plaster acted so beneficially, but for the especial benefit of your correspondent, and to remove all fears and doubts about using his "large heap of leached ashes." I would state that I have seen large quantities of them used, always with good results. They were thrown from the waggon with a shovel, and probably about four or five loads per acre. The following extracts from a paper now before me are much to the point:—"My experience of soapers' ashes is confined to its application as a top dressing to grass land. I used to apply about twenty loads per acre." "My land never burned, but from the time of its application became of a dark green colour." "It has given me more, but never less, than two tons per acre when left for hay forty-two days, from May 31st to July 11th." This is but one of the many testimonies that could be adduced of the good effects of ashes, and I would advise "A Farmer," as Virgil did the farmers of his day, to be up and doing, "nor hesitate to scatter the dirty ashes over the exhausted soils."

York, Feb. 23, 1864.

Experiments in Manuring the Turnip.

At a meeting of the Chemico-Agricultural Society of Ulster, on New Year's Day last, Mr. Robert Kennedy read a report on experiments with various manures on the turnip crop, which is worthy of attentive perusal. We give it nearly entire, together with some comments on it:—

"The soil on which the experiments were made is a sound, deep, naturally dry gravelly loam, with a gravelly clay subsoil, resting on sandstone; the previous crop, oats, after pasture; the variety of turnip, Skirving's purple-topped swede, sown 7th May, 1863, and taken up 27th November. The manures experimented with were as follows:—

Kind of Manure	Quantity of Manure per acre.	Cost of Manure per Cunningham acre.			Produce per Cunningham acre.		
		£	s.	d.	q.	lb.	q.
Peruvian guano	6 1 0	4	7	0	29	3	0
Phospho guano	7 2 0	4	1	0	17	1	0
Peruvian guano	3 1 0	1	4	0	23	3	0
Ritchie's bone manure	6 0 0	4	4	0	29	0	0
Do. do.	12 0 0	1	4	0	8	0	0
Bone ash	12 0 0	1	4	0	8	0	0
Peruvian guano	3 1 0	1	4	0	30	3	0
Bone ash	6 0 0	8	0	0	27	9	9
Farm-yard manure	40 tons.						
Do. do.	20 tons.						
Peruvian guano	1 0 0	7	7	6	33	1	0
Ritchie's bone manure	2 0 0						

The bulbs only were weighed.

The crop on all the lots, except where farm-yard manure was applied, was perfectly sound; but on these lots it exhibited a considerable amount of disease. The foliage, also, was much more luxuriant on all the lots which had no farm-yard manure than on those which had. This latter circumstance indicates the tendency to decay in the crop grown on farm-yard manure, whereas the numerous leaves and strong stem of all the others are symptomatic of perfect soundness in the bulb. It is worthy of remark, that there should be such a difference in the fertilizing effects of phospho-guano and the other manures experimented with, and to me it seems quite inexplicable, as it contained by analysis more phosphates than any of the other manures, save bone ash, besides the ordinary amount of ammonia generally found in this species of guano. Up to 1862, I found it to exceed in value any of the manures above named, even on various descriptions of soil. Since then the confidence of many intelligent farmers is shaken in its fertilizing qualities, and yet in the laboratory it still maintains its character.

"Perhaps Dr. Hodges, or some other of the scientific gentlemen present, could throw some light on the discrepancy which seems now to exist between its apparent or chemical value, and its real value as a fertilizer. The crop grown on it, for the first four weeks of its growth, exhibited more luxuriance, and at the end of that time had attained a greater degree of forwardness than that on any of the other lots. The plants then assumed an unhealthy appearance, with a yellowish tinge around the margin of the leaf, which appearance was never effectually thrown off. They became permanently stunted, and presented the appearance as if the manure had contained some substance inimical to healthy vegetation.

I purpose noting the effects of the different manures on the succeeding crops.

"Dr. Hodges said the phosphate of ammonia which is produced in guano is rapidly and completely diffused through the soil, and becomes at once available for vegetable nutrition, while the soluble phosphate of lime is, especially on soils containing lime, rendered insoluble and slow in its action. Guano has also the advantage of facilitating the solution of the constituents of the soil. It would be necessary, to judge correctly of the different effects produced by the manures employed by Mr. Kennedy, that the character of the soil, and also the exact composition of the manures used, should be ascertained. This should be borne in mind in continuing the experiments next year."

Another Grass.

To the Editor of THE CANADA FARMER.

Sir.—After five years' experience, I can with confidence recommend you to add to your list of grasses worthy of cultivation (in the last number of your valuable paper,) "Alsike or Perennial Hybrid Clover." It succeeds well on cold moist soil, is less liable to suffer from severe spring frosts than red clover, and yields an abundance of nutritious herbage. I would recommend every farmer to try it. Verdict after trying it—would not do without it.

Ancester, March 7, 1864

W. A. C.