

DISINFECTION OF SEED.

Flax is subject to several diseases which may be carried by infected seed. Before sowing, the seed should be treated as follows:—

Spread the seed in a thin layer on a clean floor or a sheet of canvas. Spray it with a solution of formalin consisting of one ounce of formalin in ten quarts of water, mixing the seed thoroughly so that each seed is covered with the solution. Two quarts of the solution will be sufficient to spray one bushel of seed. Continue to turn and mix the seeds until they are quite dry.

AMOUNT TO SOW.

The amount of seed to sow per acre will depend on several circumstances, such as the nature of the land and the germination of the seed when tested. It will be advisable to sow a little more thickly on heavy soil than on light soil, as in the former a larger number of seeds will probably die without germinating. The seeds must be sown sufficiently close together to keep the plants from branching, but there are some other points to be taken into consideration. From investigations conducted at the Central Experimental Farm during the past year it has been found that flax stems of medium thickness gave a larger percentage of fibre than stouter and coarser stems taken from the same bundle. It therefore follows that the seed should be sown sufficiently closely to produce stems of medium thickness. If it be assumed that there should be at least one plant to each square inch, we can readily form an estimate of the minimum amount of seed to sow. Calculations based on an actual weighed sample of 100 seeds showed that there were 106,728 seeds in a pound. Some samples will give fewer seeds, others a larger number per pound. Taking the above number of seeds per pound, and assuming that the seeds sown are absolutely free from impurities and that every seed will germinate, and that we wish to have one plant per square inch, then 58½ pounds of seed will give this result. This is a little over one bushel if 56 pounds are reckoned to the bushel. But one plant per square inch is a comparatively thin rate of seeding, and no sample of seed is absolutely pure, nor will a sample of seed that germinates 100 per cent in the laboratory attain this germination rate when sown in the field. Consequently a thicker rate of seeding will be necessary. A good sample of flax should be nearly free from impurities and, if the germination after three days is 95 per cent or more, the seed should be sown at the rate of 1½ bushels per acre; if the germination comes between 85 and 95 per cent, 2 bushels per acre should be sown; and with a germination of 75 to 85 per cent, 2½ bushels will be necessary. It is worth remarking that, if the seeds are sown too closely together, the stems may become lodged, or may rot during wet weather. As showing the result of sowing different amounts of seed per acre, the following figures from a report of investigations conducted by Prof. C. A. Zavitz at Guelph, Ont., are of interest. During each of the five years 1905-9, inclusive, four varieties of flax were sown at different rates per acre. The rate of sowing, height, and yield per acre were as follows:—

Amount Sown.	Seed cks.	Height of Crop in Inches.	Yield of Straw in Tons.	Yield of Grain in Bushels.
1		29	1'55	14'9
2		29	1'68	15'2
3		29	1'96	18'6
8		28	2'24	19'9
12		27	2'35	20'2
16		26	2'24	18'0

TIME TO SOW.

Flax should be sown as soon as the ground can be got into proper condition. Light frosts do not injure flax seedlings; only a frost sufficient to freeze the ground