

Central Canada Exhibition, Ottawa, offer prizes for two bushels of white oats, together with sheaf of same, to be taken from a field which has won a prize in the Field-crop Competitions during 1910. Those wishing to enter for the Ottawa competition must communicate with E. McMahon, secretary, Ottawa, who will forward prize list.

Experiments With Farm Crops.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1910 they are prepared to distribute into every township of Ontario material of high quality for experiments with fodder crops, roots, grains, grasses, clovers, and fertilizers, as follows:

No.	EXPERIMENTS.	Plots.
1	Three varieties of oats	3
2a	Three varieties of six-rowed barley	3
2b	Two varieties of two-rowed barley	2
3	Two varieties of hullless barley	2
4	Two varieties of spring wheat	2
5	Two varieties of buckwheat	2
6	Two varieties of field peas	2
7	Emmer and spelt	2
8	Two varieties of Soy, Soja, or Japanese beans	2
9	Three varieties of husking corn	3
10	Three varieties of mangels	3
11	Two varieties of sugar beets for feeding purposes	2
12	Three varieties of Swedish turnips	3
13	Two varieties of fall turnips	2
14	Two varieties of carrots	2
15	Three varieties of fodder or silage corn	3
16	Three varieties of sorghum	3
17	Two varieties of millet	2
18	Grass peas and two varieties of vetches	3
19	Rape, kale, and field cabbage	3
20	Three varieties of clover	3
21	Testing two varieties of alfalfa (lucerne)	2
22	Four varieties of grasses	4
23	Three varieties of field beans	3
24	Three varieties of sweet corn	3
25	Fertilizers with Swedish turnips	6
26a	Two varieties of early potatoes	2
26b	Two varieties of medium-ripening potatoes	2
26c	Two varieties of late potatoes	2
29	Three grain mixtures for grain production	3
30	Three grain mixtures for fodder production	3

Each plot is to be two rods long, by one rod wide, except No. 28, which is to be one rod square.

Any person in Ontario may choose any one of the experiments for 1910, and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. It might be well for each applicant to make a second choice, for fear the first could not be granted. All material will be furnished entirely free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment.

O. A. C., Guelph. C. A. ZAVITZ, Director.

Draining and Early Sowing Pay.

Editor "The Farmer's Advocate":

Wheat, oats or barley should follow a hoed crop, and the land should be thoroughly plowed in the autumn, no matter what the previous crop has been. In spring-time the disk harrow will be found best on land where corn has been grown, as it will not bring the stubble to the surface. If the land is hard, it may require two diskings, and 2 or 3 times over with the smoothing harrow. If the land had roots on the previous year, the spring-tooth cultivator will be most useful, also followed by the smoothing harrows. If the grain is to be sown on sod-land, it should be plowed early the previous autumn, so as to get the sod rotted and firm in the bottom. In the spring, the disk will be found best, and with it the land should be gone over several times, then harrowed. The surface, to the depth of three or four inches, should be thoroughly pulverized before sowing.

In preparing for roots, the land should be thoroughly plowed in the autumn, and, if sub-soiled, all the better. If manure has been applied during the winter, it should be plowed under in the spring, about four inches deep, then thoroughly harrowed, ribbed and rolled before sowing. If land for corn is clean, and manure has been applied, plow about 4 to 5 inches deep, and with not too flat a furrow. Should the land be full of weeds, especially couchgrass or sow thistle, do not plow until the day before sowing the corn, then turn a furrow seven inches deep, if the soil will allow; if not, plow shallower. In all cases work the surface as thoroughly as if you were going to sow garden seeds.

Corn stubble should always be plowed for future crops. The seed-bed can then be made much finer. The two-furrow plow will work the land cheaply, and a better covering and catch of grain and clovers can be secured from the plowed land than from the simple-cultivated corn stubble.

I have used the disk, shoe and hoe drills, and, to my mind, there is no comparison between the others and the single-disk drill. The disk drill

runs more easily, sows even, and pulverizes the soil better than any of the others mentioned. I have also used three different kinds of rollers, and the one I prefer by all odds is the flexible roller. The drum is larger, draws easier, although heavier, and hugs the ground, no matter how uneven it may be, and you can turn quite short at the ends without digging a hole or breaking the pole.

A good catch of clover can be secured by every farmer growing his own clover seed, and sowing more of it. The majority of farmers fail right here. They do not sow enough seed per acre, of good quality. Sow in the spring-time, as soon as the soil is warm and dry enough to germinate the seed. If the soil is raw and cold, do not sow any kind of seed. If sown with the disk seeder attachment, allow the seed to drop behind the disks, but directly in front of the chains. The chains will cover the small seed sufficiently. If sown by hand in a mixture, sow directly behind the seed drill, when the soil is fresh, then run the harrows over the field to cover the seed. After the grain is well up, and the soil dry, pass the roller over the land to smooth the surface. This

those tests it is demonstrated most conclusively how important it is that farmers should sow all their grain crops promptly, and, if possible, within ten days after the ground, prepared by plowing in the autumn, is ready for seeding.

At the present time we have fields drained, partly drained, and fields without drains. In every case where the drains are in, the soil is ready to work from one to two weeks earlier in the spring. There are two fields where the low lands are drained, and the high lands undrained. The high lands would appear not to require draining to the average person. I have no hesitation in saying that if this high land was underdrained the crop would be doubled each year. A few of the benefits of tile drainage are that it promotes filtration, renders the soil more porous, and facilitates through cultivation. It warms the soil by lessening evaporation. Soil well drained holds more moisture than if undrained. Drainage prevents the baking of the surface soil, promotes plant-growth by allowing the air to enter the soil, and deepens the root system by lowering the water level. It promotes fermentation of manures and prevents heaving of plants by frosts; and, by quick removal of the surface water, it lengthens the season for cultivation, and gives plants longer time to mature. Increased crops are, therefore, sure to follow.

JOHN FIXTER.

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Are We Ready for Spring?

Editor "The Farmer's Advocate":

The preparation for spring grain should begin in the previous fall. We generally skim-plow the stubble as soon as the crop is taken off. We then use the harrows pretty freely, and get the ground thoroughly pulverized. Sometimes we sow rape seed after fall wheat, and if we have a few nice showers, it will sometimes grow up to be a nice bite for the pigs and young cattle before winter. We always endeavor to plow again before it freezes up. This leaves the ground in good shape, so that the frost will finish up the pulverizing process, and thus have the ground in nice condition in the spring. We like to go over all the ground intended for spring grain with the cultivator as early as possible, just as soon as it will work without packing. Then, when we have gone over all the ground intended for spring grain, we come back to what we did first. If there is any manure to spare, we have it in a large pile in the field, and we then take the manure spreader and put on about three loads to the acre. Then we cultivate again, going across the way we did it the first time. The ground is now ready to sow, if it is dry enough, but we never approve of mudding it in.

We always see that our seed grain is well cleaned up, generally putting it twice through the fanning mill. The quantity of seed per acre will vary, according to the condition of the soil. If it is moderately rich in humus, and has been brought to a fine tilth, then, perhaps, 1½ bushels of barley will be thick enough; or, 2 bushels of oats will be better than 2½. But, if the ground is not in good condition, more seed will be required. I have seen a 13½-acre field of oats headed out beautifully, and quite thick enough, on which there was only sown 16 bushels of seed. But the ground was rich, and in perfect condition. We have sown barley 1½ bushels to the acre, and it was quite thick enough at harvest time; and we have sown 2½ bushels, and it was too thin. It all depends on the state and condition of the soil, and, of course, not a little on the season.

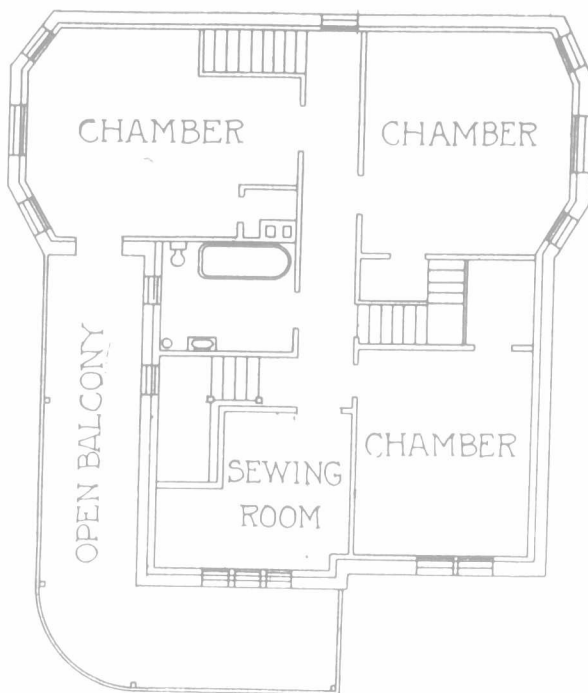
We are to plow a field of sod this spring. If the weather is dry when we plow, we will roll immediately, then go over it with the disk harrow; then, on part of it we will put about three loads of manure per acre with the manure spreader. We will then cultivate or disk, and then sow to oats. We will not plow the headland until most of the work is done, or, at least, not until the manure has been put out, which will make the work much easier for the horses. We believe in plowing the corn-stubble land in the fall.

We prefer seeding down to clover after corn or roots, and endeavor to have the soil as fine and loose as possible. When the ground is dry enough, we generally harrow and roll immediately after the grain drill, and, as a rule, we have good success.

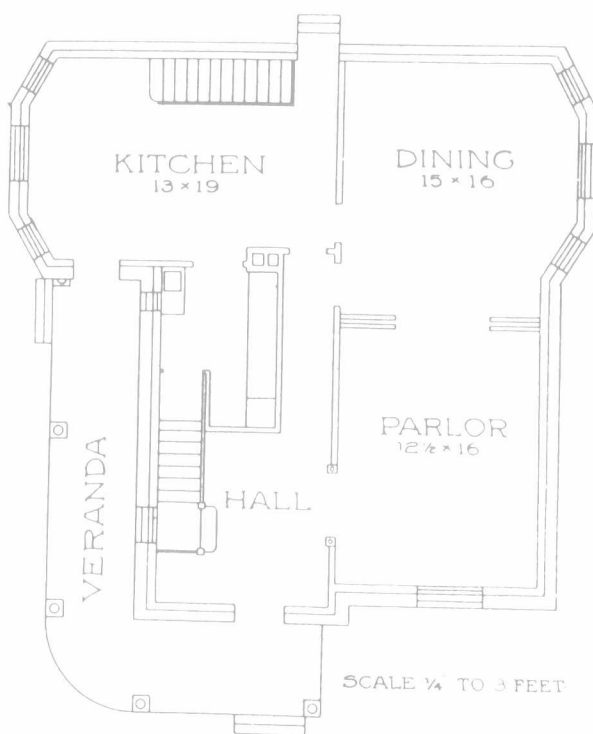
Disk grain drills are not much used here. We use a hoe drill, with rubber tubes. Our drill has also spring teeth, and we occasionally put these on, and broadcast the seed, but, in ordinary seasons I think that it is best to drill it in. It is then all covered up.

We have a large steel roller that covers about nine feet. It is in two sections, each moving independently of the other, and we think it is the best kind of a roller. On land that is not seeded down it is a good plan to go over the field with the harrows a day or two before the grain comes through the ground, if the land is dry enough.

We have often noticed that, everything else being equal, the earlier that grain is sown, it is so much the better a crop. Quite a number of years ago there was a nice spell of weather in March, and, as there was no frost in the ground,



First-floor Plan of Mr. Jamieson's House.



Ground-floor House Plan.

Submitted without description, in Building-plan Competition, by J. Jamieson, Simcoe Co., Ont.

will also break the crust, and help to retain the moisture in the soil.

Having charge of experiments with early, medium and late sowing, carried on for ten years, the following are the results: Do not sow until the soil is warm and dry enough to germinate the seed quickly, and do not lose a minute after it is dry.

The loss in crop of oats by delay of one week in sowing was over 15 per cent.; two weeks, 22 per cent.; and three weeks, 32 per cent. Loss in barley by delay of one week in sowing, 23 per cent.; two weeks, 27 per cent.; and three weeks, 40 per cent. Loss by delay in sowing wheat: one week, 30 per cent.; two weeks, 40 per cent.; and three weeks, 50 per cent. Loss by delay in sowing peas: one week, 4 per cent.; two weeks, 12 per cent.; and three weeks, 22 per cent. From

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