

**Seed and Seeding.**

[Read at the first regular meeting of the Killarney Farmers' Institute by Adam Dunlop, Killarney, Manitoba.]

At the inaugural meeting for the formation of this Institute the foregoing subject was chosen, and I was requested to read a paper giving my experience on the subject, to be discussed at our next meeting, and as I make no pretensions to figure as a practical or scientific agriculturist, I hope you will not be disappointed at the brevity or shortcomings of this paper, as I will confine myself chiefly to my own individual experience.

Well, gentlemen, it is an old adage that we must catch our fish before we cook them, so, likewise, before we commence seeding we will have to procure our seed, and in doing so let it be of the very best at our command. I do not mean by that that it must be No. 1 hard, but that it should be of the best that our financial circumstances will allow, whether No. 1 hard or any other grade down to badly frozen. Let it be well cleaned and free from smut or any noxious weeds, and if there are any signs of smut I would advise pickling with bluestone, or if your crop is too large to afford the time required I would say by all means pickle as much as will supply your seed for next year, and sow it on new or well summerfallowed land, and, for the benefit of those whom circumstances may compel to sow badly frozen seed, I may say that in all my experience I have never seen wheat so badly frozen but that at least 60 per cent. or more would germinate under favorable circumstances. I will give you the results of an experiment of mine with frozen grain. As the most of you know, the season of '85 was a disastrous one for Southern Manitoba as regards frost, and the crop of myself and family ranged from very slightly frozen (for which we got 68 cts. at Brandon) down to very badly frozen for which we could not get enough to pay expense of hauling to market, and had to keep it at home for pig feed; and as I did not know but what we might be caught in a worse predicament some year and have no money to buy seed, I decided to try an experiment to see how poor a grade of wheat it would be safe to sow. I had 5 acres of new land well back set apart for the experiment. I sowed 2 acres with our best wheat, No. 1, with 1 bushel and 3 pecks to the acre. I likewise sowed two acres with our next grade, about No. 1 frozen, with 2 bushels to the acre. This was the quality we used for our main crop. Then I had 1 acre sown with the badly frozen grade, away down, if possible, below pig feed. This grade I sowed 2½ bushels to the acre. I paid particular attention to the plot at different times and could scarcely tell any difference, and, as you will recollect, that was a dry year and would test any weak plants there might be among them. I have been sorry since that the hurry at harvest time prevented me from having it cut separately to test the different yields. Such, gentlemen, is my experience with frozen grain, that in the event of being caught with my crop badly frozen I would have no hesitation in using it for seed by using from ½ to 1 bushel extra, according to damage done. Before leaving the subject of seed I would advise farmers, whenever practicable and sure of clean seed, to change every few years, as it is the experience of others as well as myself that the grain is vastly improved thereby.

Well, gentlemen, the next subject brings us to seeding, and the most approved way of doing

it. As soon as the ground is in a proper condition to work I would say, get on it and commence operations, as I see by the bulletin just issued by Prof. Saunders, of the Central Experimental Farm, that it is his experience, as well as my own, that the seed cannot be sown too soon after the ground is ready. I would commence by harrowing the ground well, as I believe that the seed bed can not be made too fine, and that in the hurry to get in big crops the crops are only imperfectly put in—in fact I have seen ground left in such a condition that I would have been afraid to run a binder over it for fear of a general smash. As soon as the seed bed is in proper condition, if fit to use a drill on it, I would say use one, as you will be sure to get the seed better covered, and thereby ensure greater evenness in ripening, although I believe the old broadcast, if you could insure a regular covering of the seed, will give as good results, as the roots are not so crowded and therefore stool out and give a better and plumper grain; but as it is impossible to get the grain thoroughly and regularly covered, I would advise, where practicable, to use a drill; but as I am not in the implement business at present I am not going to recommend any particular make, but my advice to you in getting a drill is, all other things being equal, get one as narrow between the drills as possible, as I believe that those at present in the market all sow too wide apart and thereby crowd the roots too much in the event of drought, and prove the Darwinian theory—the survival of the fittest—the weaker plants being killed in the struggle for existence. Of course we can ameliorate the difficulty by sowing half the quantity of seed and crossing the field; but in the rush of spring work there are few farmers who can spare the time to do so, but I would advise all who can to do so, if only on a small piece, and note the result. I remember once reading an article in the FARMER'S ADVOCATE, by the late editor-in-chief, Mr. Weld, in which it was stated that there was a fortune in store for the man who would invent a drill to sow two inches apart, and I thoroughly coincide with him, as thereby the seed would be divided more equally over the ground and give the roots a better chance to provide sustenance for the growing plant. My impression is that of the different principles of seeders in the market that of the press drill is the best, but I have not seen the right one yet; as there is room for, and I have no doubt there will be improvements made on them before long, I would say to those who are not compelled to buy one, do not be in a hurry. After having used one or other of the different styles of seeders, harrow well, both for the purpose of covering the seed and packing the ground. If a broadcast seeder has been used, or if either of the different drills, I would recommend harrowing with a light harrow at least once, for the purpose of packing the soil and thereby ensuring the better growth of the young plants, as experience has proven that it is not always safe to roll till after the plant is up at least three inches, owing to danger of high winds blowing the soil off and exposing the seed. There are one or two other plans that I can recommend under certain circumstances. One is, where the ground is clean, say after backsetting or second crop after good clean summerfallowing, if the land has not been ploughed in the fall, I would, in preference to spring ploughing, sow with press drill on stubble, or in absence of drill sow broadcast and cultivate

diagonally with a disc harrow. This principle I have heard well recommended, and I am so well satisfied as to results that I intend to put it to a practical test this season. Owing to the wet weather during harvest time I have no doubt many, as well as myself, found their farming operations retarded and did not get as much ploughing done as intended. To them I would say, if you have any doubt as to the cleanness of your land from weed seeds sow broadcast and on stubble and plough down after from 2 to 2½ inches deep, so that the small weed seeds will not germinate this season; harrow after each day's ploughing and note the results, and I have no doubt they will be satisfactory.

**Seed and Seeding.**

[Read by J. W. Bartlett at the first regular meeting of the Killarney Farmers' Institute, March 7th, 1891.]

Let every man learn that everything in nature, even motes and feathers, go by law and not by luck, and that what he sows he reaps.—Emerson.

This is open to an extremely wide application. In every operation or investment we must sow well if we expect to reap well. In farming operations this important matter is too often neglected, and if poor seed is sown no amount of cultivation can atone for it; and while under certain circumstances, or peculiarly favorable circumstances, a good crop may have been grown from poor seed, the chances are much too great against it, and we might as well expect to raise fine stock from scrubs as a good crop from inferior seed. I think it is needless to enlarge upon this matter, as I am sure you will all agree with me. Having secured good seed, it is necessary in this country to do a little more, viz., treat it for smut. Of the numerous methods of treatment recommended, I can learn of none better than the following, which has the approval of many good farmers, and gave much the best results of all the tests at the Manitoba Experimental Farm, at Brandon, this season:—

One pound of bluestone dissolved in a pail of hot water (about ten quarts) and applied with a whisk to ten bushels of seed. The wheat should be turned over from time to time as the preparation is being applied, after which it should be allowed to soak for two or three hours, when it will be dry enough to sow with the drill. One of the best wheat growers in Alexander district informs me that if the seed is treated year after year in this manner, that the product becomes smooth and hard, and has an appearance of being polished, as though each grain had been rubbed smooth.

Aside from the treatment for smut or fungus, it is of great importance to use only clean seed. There is great neglect of this in a majority of cases in this province. Sow only clean seed of the best quality, and that thoroughly treated with bluestone.

We now come to seeding, and if the best seed is properly prepared, the result must prove a comparative failure unless it be properly sown. For the best results the land should be loose and friable to the depth at which the seed is to be deposited, beneath that it should be as solid as it is possible to get it. It is a great mistake to tear up the soil to a much greater depth than the seed is to be deposited, as the hot winds penetrate the soil to the roots of the plants and seriously retard plant growth, while if the seed be deposited at the bottom of the loose soil, they