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importance that soils should be properly supplied with humus, in order to secure the ability to hold moisture, and when the humus has been worked out of soils steps should at once be taken to replace it. The failure of many clay soils, that have had long and hard grain cropping, to give a catch of clover, is probably in a great measure due to this lack of humus. For want of it the soil soon dries out, and the little plants perish. The best way to secure a catch on such soils will be to work in a light dressing of manure before seeding. This will help to restore proper conditions.

In conclusion, the proper condition of moisture in soils is that in the well-drained soil, free from dead, stagnant water, and with its physical condition kept right by good cultivation and the presence of humus.

Encourage the Boys to be Farmers.

I think this is a duty that a great many farmers are neglectful of. The majority of farmers are inclined to disregard the necessity of encouraging their sons to follow up and improve on the industry that their ancestors have so effectively and permanently laid the foundation of. This, I think, is a mistake that should, and could to a considerable extent, be remedied. There perhaps has never in the history of this fair country been such a demand for energetic, intelligent young farmers as there is at present. True there is a great emigration to Canada each year, from England especially, but it is a well-known fact that the great majority of these men will not make a success of farming in this country like our own young Canadians could, if they would only take a more universal interest in agriculture.

There is in Canada a rather strong tendency on the part of young men who are the sons of farmers to enter the professions. The fact remains that agriculture is the representative occupation of the Dominion, and therefore should not be neglected.

It is a common feeling among men of all sorts and conditions that the other fellow has the best of it. Certainly there is a deadening effect in all routine work, which, coupled with ill-health or over-work, leaves a man discouraged and depressed at times. Here the farmer has the advantage. He does not lack for fresh air and sunshine, and a good quality of food, and I see no reason why he should envy the man who never has to take off his coat to his work.

The great uncertainty of a commercial life is well known. Take notice in your own locality—is it the farmers that are continually failing in business and having bankrupt sales? No, not one for every twenty-five you can find in the towns and cities. Does this not prove which is more profitable? True the country requires some professional men, but I am inclined to think that professional pursuits are at the present day being encouraged beyond the requirements of the country, and beyond the capacity of the people to support them even adequately.

Now, I think the improvement of live stock is a more favorable field for men of wealth to apply their surplus money to than speculation or investment in commercial transactions. This improvement, however, will not be carried out unless the indulgence of a taste for live animals becomes more general. Farmers are of very little use unless they are enthusiastic in their work and have a tenacity to work for the realization of an ideal. It is then a matter of vital importance to encourage this enthusiasm in the rising generation. It should be cultivated from earliest youth; not the kind of encouragement that I fear has predominated in the past, which consists in giving the boy a pig which afterwards becomes his father's hog. Give him something that he may claim for his own. By doing this you may encourage him in whatever branch of farming you would wish him to follow, and the kind of farming he is best adapted to, considering the surrounding circumstances. Let every farmer who has a son make an effort in this direction, and I am confident the results can be but for the best in this progressive country of ours.

Peel Co., Ont.

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Will Fall Wheat Crop Come Through?

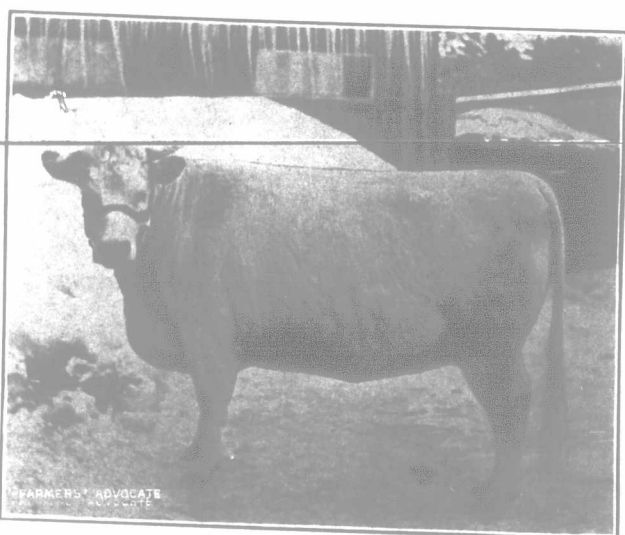
Should the fall wheat crop be winter-killed, such fall wheat ground as was fallowed and manured last summer will be in excellent condition for sugar beets this year. It will only require a thorough cultivating to reduce the surface to a fine tilth, when moderate drills may be made, the beet seed sown with mangold drill, dropping practically ten seeds per foot, and roll with heavy land roller lengthwise of drills, even twice till the surface is firm and smooth. After thinning, horse cultivate thoroughly between the drills. Sugar beets, if thinned in time, may be done nearly as easily as mangolds, and if well horse-cultivated in June, particularly after rains, to keep the surface open, little hand-hoeing is necessary. Any of the sugar factories will no doubt promptly mail contract forms upon application. Try two acres, which should produce you from \$60 to \$80 per acre.

A. E. S.

Testing Farm Seeds.

Of the various factors affecting the yield of farm crops, probably no other is as much under the control of the farmer as the seed of the crop he sows, and in spite of this fact there is nothing else that is more commonly overlooked or neglected. Far too frequently it is not thought of until the land is almost prepared, and in the necessary hurry of spring anything in the line of seed is used.

The value of a sample of seed depends very largely upon its purity and vitality. By purity of seed is meant its freedom from the seeds of weeds and of other foreign but not noxious plants,

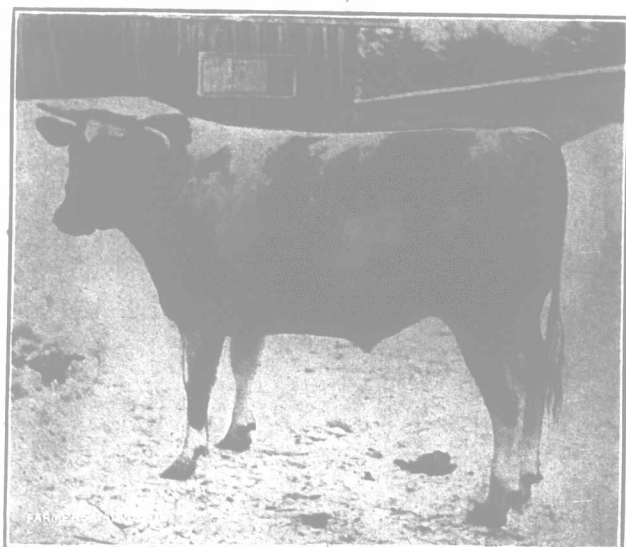


White Flower 3rd.

First-prize Shorthorn heifer, two years old and under three, Eastern Ontario Live-stock Show, Ottawa, March, 1904. Bred and exhibited by W.C. Edwards & Co., Rockland, Ontario.

and useless chaff, dirt, etc. Freedom from weed seeds is, of course, the most important, as weeds unwittingly introduced in seed often gain a strong foothold before their presence is noticed. With the farm crops having large seed there is seldom any trouble in this regard, as the majority of weed seeds are small and can be screened out, while the others may readily be seen. It is with the grass and clover seeds that the greatest trouble is encountered, as the weed seeds are very similar to them in appearance and size. It is good practice, therefore, before spending ten or twelve dollars on clover seed, to get samples of those offered for sale and have them tested for purity and vitality by an expert. Seed can then be bought intelligently.

With some seeds, such as those of root crops and corn, nearly the whole trouble is with poor vitality. It is a peculiar fact that, although this is known to be the case, and that nearly everyone has at some time or another suffered from seed being lacking in vitality, a greater effort has not been made to test it before sowing. In making a



Moss-Side Lad.

First-prize Shorthorn steer, two years and under three, Ottawa, March, 1904. Exhibited by James Rennie & Son, Blackwater, Ontario.

test very little trouble is involved, and the satisfaction of knowing what one is sowing more than compensates for it. All that is necessary is to put fifty or one hundred seeds between folds of damp flannel or blotting paper in a dipper plate, and to cover over with inverted plate, leaving room for the circulation of air. Keep the flannel damp, and at the temperature of an ordinary living room. The germinated seeds may be counted out in five or six days, when most of those that are vital will have sprouted. Sand may be used in place of flannel or blotters, but it is not always available in early spring.

B.

Potato Blight and Spraying.

To the Editor "Farmer's Advocate":

In answer to Mr. C. M. Richardson, you will permit me to say that in this locality blight and rot last season were confined almost entirely to wet and poorly cultivated patches of potatoes. As to his statement re the first-prize potatoes at Toronto, I may say that they were affected before placed on exhibition, and he does not say anything about their treatment while growing. It does not pay a grower to dig potatoes in that condition to sell to wholesale customers, as it will surely bring prices down, but it may do to sell retail in small lots. I have not had the pleasure of examining a potato patch in York County, but have seen a good many in Oxford and Waterloo, some of which were in a shameful condition with bugs, and later so weedy that it was almost impossible to find the potatoes.

As to my statement in regard to wet weather being the cause of rot, I can say that we have not had any trouble with rot except in very wet seasons, and it must be remembered that a few miles one way or the other may make a difference of three or four inches in the rainfall at a critical time.

I have never used the non-arsenical preparation, so can not say from personal experience as to its qualities, but it has been pronounced by some U. S. experts as not being all that was claimed for it. However, as the makers in their directions for its use advise using Bordeaux mixture with it, it is evident that the preparation alone is not enough to prevent rot.

In closing, I will mention the fact, it may only be a coincidence, that in three out of four bad years for potato rot we had a patch of fodder corn on either the south or west side of the potato patch, and I concluded that the heavy growth of corn prevented the potato tops from drying after rain or heavy dews, and so predisposing them to the attack of the blight. Of course, this would not affect a large patch, but it does not take a wide strip for an acre in a long field. I have not found tubers from a badly-affected patch to be injurious for seed if sound at planting time, and it may be possible to breed up an immune variety by selecting such.

GEO. A. SMITH.

Waterloo Co., Ont.

The Pea Weevil.

A Bruce County, Ont., reader asks us if we think that if all the farmers in Ontario grew corn instead of peas for two seasons, it would be the death of the pea weevil? We think so, and perhaps two-thirds of the rest of the population in the pea-growing belt think so, but the trouble is there are always some objectionists to any reform, no matter what the nature of it may be, and in this case the people grow sufficient peas to furnish a habitat and food for enough bugs to infest the whole Province.

A year or two ago Prof. Zavitz, seized with the idea of exterminating the weevil by starvation, issued circulars to as many farmers as he could locate, and many of them co-operated with him and discarded the pea crop from their rotations. Just at this time, however, some shrewd individuals conceived the idea that it would be a good time to grow peas, and so proceeded to undo all the good that their more-progressive neighbors were trying to accomplish.

Another hindrance to the successful working-out of this scheme is that the weevil is not yet known in all parts of the pea-growing districts. Gradually it is working northward, and in its advance there is always a strip of territory that is but partially infested between that which knows him not and that which knows him too well, and in these districts the people do not realize their position or their responsibility in relation to the pest; consequently, there is always territory in which the weevil is flourishing. In time, of course, the weevil will exterminate itself by destroying the possibility of growing peas. This condition will not arrive, however, until pea-growing is completely suspended sufficiently long to insure the extinction of the bug. In the meantime, every grower of peas should be careful to treat his grain with bisulphide of carbon, according to instructions so often given. This precaution particularly applies to those parts where the weevil is just making its appearance. This treatment can scarcely be expected to insure against the bug, for reasons enumerated above; the most that can be hoped of it is that it will retard the invasion of Bruchus pisi for a season or two.

An Ever-present Help.

J. W. Suddard, Frontenac Co., writes as follows: "The 'Farmer's Advocate' was a great help as a semi-monthly, and its value is greatly enhanced by its more frequent visits. To the careful reader, it is 'an ever-present help in the time of need.' We wish you long life and prosperity."