

is no' richt an' ye shouldna' hae done that, but a' ma mistakes are brought tae ma notice in the natural coorse of events an' I hae the chance o' correctin' them wi'oot losin' ma self-respect by bein' called down by some mon wha hae na mair richt tae a place on this airth than masel'.

They tell us that a' men are born free an' equal. I dinna' believe it. But what I dae believe is that there's a middlin' good chance for almaist ony mon in this country tae die free an' independent, gin he gaes aboot it in the richt way. An' that way is tae dae yer ain thinkin' an' tae mak' a habit o' takin' orders frae naebody but yersel'. The Lord made us men, an' we dinna' want tae forget it, nor let ony ither mon forget it either.

Glengarry Co., Ont.

SANDY FRASER.

A Letter Appreciated.

Editor "Farmer's Advocate":

It did one good to read Thos. McMillan's letter in last week's issue. His statements are not one whit too strong. Farmers should have suspected that the "Patriotism and Production" and the "Made in Canada" cries with which our newspapers were filled some time ago were put out for other purposes than on sight appeared. We have been fooled often before and should have been wary. We have been fooled again. The manufacturing interests have won. Using the plea of ultra loyalty in the present distressful need they have secured an increase of duty on most commodities. Seven and a half per cent. extra on the price of their products should be a comfortable addition to profits which have already made millionaires. Canadians can truly boast that their manufacturers for cool, calculating, unscrupulous greed cannot be surpassed anywhere. Their action in contriving to scheme special advantages because of war conditions and war feeling is in essence comparable to that of the ghouls who used to haunt the fields after a battle that they might plunder the dying and the dead.

In order that the tariff increases may swell government income and help pay war expenses we shall have to buy goods made in other countries. If we purchase articles made here the bulk of the enhanced price will find its way into other pockets. Loyalty to our country in her financial need demands that we "Buy goods NOT made in Canada."

Middlesex Co., Ont.

THOS. BATY.

Speaking of Roads.

What is your "beat" or municipality going to do for the local highways this season?

For the year 1915 something more than the old "as usual" program of local road work is wanted.

The automobile man having taken possession of the highways, it is his "right, fit and bounden duty" to maintain them.

One way to lessen the cost of producing cheese and butter is to improve the roads leading to factories and creameries.

It would worry a miracle-worker to preserve in good condition for traffic a road-bed forty feet wide and as flat as a pan-cake.

In the old statute labor days a good many of us thought we were gouging the King or the Pathmaster when we were only gouging ourselves.

In the making of a good road the first thing to be done is to remove the water and the second is to keep it away. First drainage; then a proper crown.

The man who hauls whole milk to town every day in the week has a big interest in the state of the roads. If the highways are bad his expenses are higher every day he travels.

Bear in mind that a road will not maintain itself. What folly to spend thousands of dollars in making a stone-surfaced road and then permit it to fall into ruin for lack of a few timely repairs to the ruts!

At this season of the year the man with the split-log drag or plank road-grader is a public benefactor while he is smoothing his own way over this earthy road. A few well-timed trips with one of these implements drawn by a solid team will work wonders in eliminating moisture, letting off pools of water, filling ruts and making a crown that will save a lot of subsequent trouble.

Nowhere else do we find worse examples of municipal road mismanagement than on the hills approaching rivers and streams. Very frequently there are no drains, or open ditches to carry off the water which rushes in torrents down the road-way washing the gravel back to its original bed. It is the nearest approach we know of to perpetual motion, and the gravel man is the only beneficiary. Everybody else suffers. This sort of folly has been perpetrated in cases not a few, on a long-suffering public for a quarter of a century at a stretch. In fact as a heritage of

waste and discomfort it has descended from father to son, even to the third generation. Stop it now!

Experiments With Farm Crops in 1915.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1915 they are prepared to distribute into every township of Ontario material of high quality for experiments with grain, fodder crops, roots, grasses, clovers and alfalfa, as follows:

No.	Experiments.	Plots.
1	Testing two varieties of oats	2
2a	Testing O.A.C. No. 21 barley and emmer	2
2b	Testing two varieties of two-rowed barley	2
3	Testing two varieties of hulless barley	2
4	Testing two varieties of spring wheat	2
5	Testing two varieties of buckwheat	2
6	Testing two varieties of field peas	2
7	Testing two varieties of spring rye	2
8	Testing two varieties of soy, soja, or Japanese beans	2
9	Testing three varieties of husking corn	3
10	Testing three varieties of mangels	3
11	Testing two varieties of sugar beets for feeding purposes	2
12	Testing three varieties of Swedish turnips	3
13	Testing two varieties of fall turnips	2
14	Testing two varieties of carrots	2
15	Testing three varieties of fodder and silage corn	3
16	Testing three varieties of millet	3
17	Testing two varieties of sorghum	2
18	Testing grass peas and two varieties of vetches	3
19	Testing rape, kale and field cabbage	3
20	Testing three varieties of clover	3
21	Testing two varieties of alfalfa	2
22	Testing four varieties of grasses	4
23	Testing three varieties of field beans	3
24	Testing two varieties of sweet corn	2
25	Testing three grain mixtures for grain production	3
26	Testing three grain mixtures for fodder production	3

Any person in Ontario may choose any one of the experiments for 1915 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. Each applicant should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the county in which he lives.

Ontario Agricultural College, C. A. ZAVITZ, Guelph, Director.

Preparing the Land and Sowing the Crop.

Editor "The Farmer's Advocate":

In commencing operations for the production of all our spring grain crops we have one object in view, viz., the production of as much as possible of the crop for which preparation is being made, from the acreage at our disposal for such crop. Preparation for the accomplishing of this object is not begun with the opening of spring. It has its place in the factors which influence that production through the place the spring crop bears in the rotation. Generally speaking, in our crop rotation we try to make each crop not only an object in itself but a preparation for the crop which follows. To a smaller degree can this be said of the farm crops—wheat, oats and barley, than of any other, and our object is to place these where the preceding crop will serve as much as possible in soil preparation for the grain crop that follows. So we precede our fall wheat with clover sod, and spring grain with corn which has been planted on a hay sod or pasture sod well manured. As far as labor will allow we cultivate the corn field to remove all growth but corn, but have seldom succeeded in getting a corn field so clean that we do not fall plow. Our soil is a variable one, from light sand loam to friable clay loam, with some oak upland clay. On the lighter soils we are troubled with persistent growth of grasses, particularly red top, which we seldom completely eradicate, and if any trace of this is left we always plow our corn ground, even though otherwise clean, that we may enable the spring crop to get sufficient start to check any growth of grass that may be present. Then on the heavier portions we think we get better drainage, and a more easily prepared seed bed by fall plowing the corn ground. On some of the oak upland knolls which are almost white when plowed out of the virgin soil, being very deficient in humus, we have secured good results from an application of air-slaked lime which pulverized them consid-

erably and allowed the incorporation of manure to a degree otherwise impossible. On one piece sown to fall wheat in 1911 we applied a dressing of coal ashes, and the results were very satisfactory in the succeeding crop in growth of straw and weight and sample of grain. The field will be broken next fall for corn in 1916, and we will be able to tell if any results still show in a changed physical condition of the soil. We seldom apply any manure directly to land intended for spring crop, having applied it in preparation for the hoed crops preceding. Of course, a few loads may sometimes be necessary on high and light knolls to insure a better stand of clover, but this is an exception to general practice. We seldom sow spring grain on any soil otherwise prepared unless occasionally through unforeseen and unfavorable conditions wheat or clover may be killed out, or when, as in 1912, wet weather may hinder the sowing of wheat ground prepared and not sown.

As to soil preparation for spring grains we have tried most tillage implements. In even, friable soils the spring-tooth cultivator, followed crosswise by the lance-tooth harrow, then lengthwise by the finishing harrow preceding the drill, may reduce the seed-bed to a fit condition of tilth for the crop. Where the soil is variable, and particularly where the preceding crop is corn, we have found the disk harrow most satisfactory. A double disking, and on any parts that do not yield to that, then a double disking crosswise followed by a straight-toothed iron harrow has given us good results. Of course, we do not stop when we have gone over the ground a given number of times, but when the soil is reduced to a proper tilth. Nor do we recommend some of the disks on the market whose chief virtue is in their ability to go almost straight to the bottom of the plowing, and sometimes deeper, and bring up soil that should not be touched, but one that will give a good surface mulch, not too deep, properly reduced to a seed-bed fine enough to receive grass seeds; a disk too that will leave horses fit to continue their farm work.

Soil conditions for seeding, to produce best results, are not conditions easily described, but are those with which experience acquaints us and which represent a thoroughness that is satisfying as seeding proceeds.

Previous to two years ago we used a hoe drill almost always following it with the finishing harrow. Lately we have used a disk drill, and by getting a fine seed-bed have made drilling the last operation in seeding. There may be conditions in spring plowing which may necessitate after harrowing, but these have not yet appeared in fall-plowed soil. Clover and grass seeds have been mixed and sown in what proportions and quantities desired, with the seeder on the drill.

In preparation of grain for seeding we have used a fanning mill selection, putting on all the wind and a screen in the bottom of the shoe that will remove all small grain; we have found a good sample of seed to result from the second cleaning. In fact with the mill thus set very little grain is removed in the second operation. For large, plump seed of this kind we have found it necessary to sow more heavily per acre, 2½ bushels of oats of such varieties as Banner, Ligowa, etc., per acre by measure gave none too heavy a stand, and in parts of the fields 3 bushels would not be too much, although this quantity might be trying on the young grass and clover plants when ripening began. Of oats of the O. A. C. No. 3 and Daubeney varieties 1½ to 2 bushels per acre gave as heavy a cropping as the larger seeding of the other varieties. In barley 1½ to 1¾ bushels per acre of smaller-grained varieties as the Mandscheuri and O. A. C. No. 21 have proven a good seeding on soils adapted to barley growing. As to varieties in spring grains we have found few oats to excel the Banner oat in this locality. The Siberian has given good results, and though much smaller in the grain is thinner in the hull. O. A. C. No. 72 has yet to prove itself superior to these in this locality. Though a better yielder, as yet it is almost too long in the straw for most of the soil in this locality, and is about a week later than these other varieties, though it may be come earlier by continued growing here. We are inclined to think if ordinary care were given to the selection of a strain of oats of the Banner type and variety, an oat better adapted to this part of the Province than O. A. C. No. 72 might be produced. We are hoping the latter variety, so popular in other parts of the Province may adapt itself here. Of barley O. A. C. No. 21 and its parent Mandscheuri seem to be the only varieties in use, and the use proves the value.

For mixed crops we had sown Mandscheuri barley with Banner or Siberian oats, but the period of ripening was too uneven to avoid some waste in cutting, though a large amount of good feed has been grown by the mixture of these varieties. This spring we have sufficient O. A. C. No. 3 oats to give a trial to a mixture of these with O. A. C. No. 21 barley, from which we expect good results.

We almost invariably seed our spring crops to

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