

Plowing and Manuring Observations

Alfred Hutchinson, Wellington Co., Ont.

THERE was practically no spring plowing this season, as the long open fall enabled everyone to complete this work before the winter set in. The only exception was where land was intended for corn. We usually find spring-plowed sod gives the best results. This year, however, there is little apparent difference between spring and fall plowing; in fact, I rather think fall plowing has it, or it might be expected to have the advantage owing to the severe and protracted drought through which we have passed this summer. One thing is quite evident, however, it is by no means safe to say this or that is the "best" way. The kind of soil and the climatic conditions of different seasons will often give diametrically different results from the same kind of treatment.

This year I have two opportunities of observing the difference between manuring in the fall and in the spring for corn. My next neighbor hauled and spread several loads in the late fall on stubble land. He commenced plowing it under, but was stopped when about half done. The manure not plowed in, lay exposed to the sun and rain until after seeding was all through. The balance of the field was covered with manure that had been piled in the field during the winter. At time of preparing the land for sowing, all was worked alike. The fall-spread portion is distinctly superior to the rest of the field, but no difference can be noticed between the fall-plowed and the spring-plowed pieces.

In my own corn field about three-quarters of an acre was manured on the first snowfall of the season. The field was sod; all the rest was covered just before plowing in early summer. All was plowed at the same time and treated in every way exactly alike, but the winter-spread piece is tons to the acre ahead of the rest, and fully one week earlier. This is decidedly upsetting to some commonly-accepted theories and ideas. Many farmers object strongly to spreading during the winter, saying it is "no good," while others make a regular practice of it, believing it to be "just as good." This, however, is the first case that I have noticed in which it is distinctly better, with the exception, perhaps, of land intended for mangels, which is always better manured in the fall and turned under if possible.

Cultivation to Kill the Weeds

Jno. Fitzer, Ottawa, Ont.

ONE of the best methods of eradicating weeds—a source of enormous loss to farmers—is as follows: Immediately after the hay or grain harvest, plow the land very shallowly with a gang plow, turning a furrow two or three inches deep. Then put on a heavy land roller which will pack the sod and thereby hasten its decay; next use the disk and follow with the smoothing harrows. Should any weed growth appear, keep the disk and harrows going at short intervals until the soil is well decayed. A cultivator with broad points may then be used. The object is to destroy all weed growth until autumn, when the soil should be plowed thoroughly and well set up to the winter's frost.

On such land it is best to sow some kind of hoed crop, such as roots, corn or potatoes, that

require constant hoeing and cultivating during the growing season. If this method of cultivation is adhered to closely, it will be found to be one of the best means of eradicating noxious weeds and also of preparing the soil for future crops.

Actual experiments have demonstrated that a much greater yield may be expected from land cultivated in the foregoing manner, as compared with that secured from fields which have been left in sod and plowed in late autumn. In one instance, two four-acre plots were cropped with oats, for purposes of comparison, and the plot which had been thoroughly cultivated during the autumn yielded 60 bushels more than was secured

valued both ways very little hoeing is necessary. This corn was never cultivated deeper than two inches. Shallow and flat cultivation, I find, gives the best results. We had very dry and hot weather for six weeks, but the corn kept growing all the time. There can be no success in growing corn unless the ground is thoroughly prepared, early planted, well cultivated, and, above all, good seed.

In the Root Field

Paul A. Boving, Macdonald College, Que.

"YOU have got some splendid roots, John, and they certainly are big for this time of the year. Man, but you must have a mascot to help you, or else you must have been born with all kinds of good luck."

"Oh, I don't know about that. To be sure, Bill, if due allowance is only made for their requirements in regard to cultivation, plant food, and time of seeding, the roots very seldom fail. In fact I count them as being one of my most reliable crops."

"You don't say. As for me I have found them to be just about as unreliable as everything else under the sun. This year, at home, the seed not even germinated, at least not in time. Most of it never came up until after the last rain, and under such conditions neither cultivation nor manure help very much. I got started rather late with the seeding, and, do you believe me—the drills were just as dry as dust a couple of days after seeding, and much of the seed actually blew away in that terrific wind we had the first days of June."

"Say, Bill, but you are a regular old-timey. Now I begin to understand why you call the roots unreliable. You hauled the manure out this spring?"

"Well, yes, I didn't have time in the winter." "And you never harrowed the land, I suppose?" "Of course I did. Do you think I would seed without harrowing, as some farmers do? No, sir, not for me. I don't believe in that method. I plowed down the manure, disked my land twice, and harrowed and rolled it before drilling, and rolled it again before I started to seed."

"Yes, but did you never touch it at all until close upon seeding time? Did you not put on a light harrow as soon as the land could carry the horses?"

"Of course not. You can't jump over the whole farm at once. You have to do everything in turn. But say, John, what are you driving at?"

"It is only this, Bill, and excuse me for saying so, that you have sinned against the first commandment in soil management to wit: 'Thou shalt not dry out thy land.' In the first place you omitted to give your land a stroke with a peg-tooth harrow early in spring, and consequently did not prevent the capillary and evaporative pumps from working at full speed from the very beginning of the season. Secondly, you plowed down manure in the spring which, you may be as careful as you like, always means loss of moisture. And, finally, you laid up the land in drills, increased the soil surface, and consequently gave the evaporative pump an excellent lubrication. I will admit that it is advisable to use drills in exceptional cases, but as a rule the flat land method is better under our dry summer conditions. It at least saved my roots this year. By

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A Result of Good Seed and Thorough, but Shallow, Cultivation

This corn will yield well over 30 tons to the acre. The variety is Wisconsin No. 7. It was grown on the farm of Geo. A. Bean, Oxford Co., Ont., this year. In an adjoining article Mr. Bean tells of the cultural methods that gave him such an excellent crop.

from the land not so cultivated. The net increase in revenue, after making due allowance for cost of cultivation, amounted to \$14.

A similar experiment was conducted with sugar beets on two plots—one cultivated after harvest, the other spring-plowed. In this case the difference in yield was even more noticeable than with oats. It was found that the land cultivated occasionally during the autumn produced beets at the rate of 11½ tons an acre, while the yield from spring-plowed land was only 8.45 tons per acre. Stated in dollars and cents, this difference is very convincing; figured at the prevailing price for beets, it showed a greater revenue from cultivated land of \$16.03 an acre.

How the Corn Was Grown

Geo. A. Bean, Oxford Co., Ont.

I AM sending you a photo of my corn field. This photo was taken 70 days after planting, when the corn measured 13 feet. The man seen is six feet high. The land is sand loam, with clay subsoil. The rankness of the growth is due to good cultivation and good seed. The variety is Wisconsin No. 7 and the seed was kiln-dried, costing \$3 a bushel, bought from J. A. Duke, of Ruthven. I would rather give \$5 a bushel for kiln-dried seed than \$1 for the ordinary kind. Every kernel grew and had the vitality to make it go after being up.

The crop is planted in hills three feet eight inches apart, with three and four stalks in a hill. The cultivator was started the next day after planting, following the planter marks, and kept going every week until the horse began breaking off ears. If the cultivator is set right and culti-

THE box paid in favor of few years because package only.

that it will cost percentage of are marketed in competition with the best fruit are grown package it is cost, or continue.

It would seem that the most attractive season at the already going up many people who considerable fruit. Fruit must be ready while the must go down in the home in mind that many is a large. If this market is lively, there will be of on the home conditions, it is to make every effort clean, honest, or barrels.

Of the three straight, the diagonal has much the used far more than the straight pack, one below it, and a ger of bruising. Apple rests directly between the apples any chance of blends itself to a number variety of shapes of apples. easier to make a commercial pack with more weight is so the box as the more into the making less waste.

The third system—the off-set—is considered inferior to the diagonal. However, it is sometimes desired use it with inexperienced and unscrupulous as any defect in the easily detected. A disposal system it is easier to vary the fruit in the box centre layers with partially spoiling the once on top. Again, off-set pack the space at the sides giving an unfilled space whereas in the only small spaces these at the ends of. Another point against off-set is that it is from four to twelve less than the di-