

Why I Cultivate

Jas. McDougald, Huron Co., Ont.

"That man McDougald is the greatest fellow to ride a cultivator I ever saw. Sometimes I almost wonder if he doesn't cultivate just to escape the other work. I can't see that so much cultivation is necessary."

I wasn't supposed to hear this sentiment expressed, but as I came into the store just as the words left the lips of my neighbor I couldn't very well help it. Neither could I help hearing the reply.

"Well, he gets the best crops of any of us, so I guess there must be something in it."

That little conversation sums up exactly why I cultivate. I cultivate to get greater crops.

The very first essential to a large crop is a good supply of moisture. I can't emphasize too strongly that according to careful experiments, the amount of rain that falls during the growing season is only one-quarter to one-half enough to supply the needs of the average crop. The balance must come from the moisture that is stored in the soil during the fall, winter and early spring rains. Hence I believe that the success of my crop depends not so much on the rainfall of the season as on the effect that I make to hold in the soil for the use of the plants the moisture that is already there.

MULCHES AND MOISTURE

The best way to keep moisture in the soil that I know of is to maintain a fine soil mulch. Did you ever drop a trowel into water and notice the moisture creep up on the trowel until the whole is wet, although only a part is actually in the water? They tell me that that is the way moisture creeps up into the soil—by capillary attraction. When the moisture reaches the surface it evaporates.

Here is where the soil mulch comes in. It breaks up those little capillary tubes in the soil and the moisture stays right beneath the broken-up soil mulch. I can go out to my corn field to-day and kick aside the mulch on the top and there is a nice moist soil right within two inches of the surface. And we haven't had any rain to speak of for a couple of weeks.

CULTIVATE AFTER EACH RAIN

Of course I believe in conserving carefully the moisture that falls during the summer. I aim to cultivate within at least 48 hours of every rain during the season, and if the rain is light so as not to puddle our heavy soils I make a great effort to cultivate within 24 hours. If we do not do this the falling rain compacts our nice mulch on the surface and we lose again by evaporation not only the moisture that has fallen, but an additional supply from the soil as well.

I regard air too as food. I have often noticed how much better a crop will grow even if there are no weeds around and lots of moisture in the soil, if the earth is stirred around the plants. This allows the air to get down around the roots; another very good reason for cultivating.

WEEDS LEAST IMPORTANT

Another reason for cultivating is to keep down weeds. Notice that I put this reason last, not first. I believe that weeds first taught people to cultivate, and that may have been our kind Creator's plan when he caused weeds to grow in cultivated crops. I can imagine those barbarian ancestors of ours sowing some corn intending to give it no more attention. Then the weeds commenced to grow. They had to pull those weeds, and in pulling the weeds they stirred up the soil letting in the air, improving its mechanical condi-

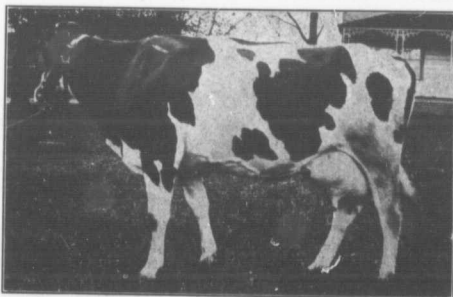
tion and thus improving the crop. I do not wait for the weeds before I start to cultivate. I believe that the loss from weeds in an uncultivated field is small compared with the loss sustained through moisture evaporation and the lack of air.

My method of cultivation is to harrow across the rows once or twice until the corn is up and then to cultivate continuously once a week until the corn is too high for the double row riding cultivator. I then get busy with the single walking cultivator and keep going right up to corn harvest.

SHALLOW CULTIVATION ADVISED

A point that I must emphasize particularly is the necessity of shallow cultivation in the latter stages of the growth of the corn crop. The feeding roots that the corn is constantly throwing out are very near the surface, and if one allows the teeth of the cultivator to penetrate more than one or two inches, these feeding roots are cut off and the growth checked.

Also instead of using the ordinary shovel cultivator with four or five teeth that leaves the soil in rough ridges and thus admirably laid out for a maximum evaporation of water, I have adopted a 12-tooth strawberry cultivator with a pulverizer



First Canadian Cow to Make 37.73 lbs. Butter in 7 Days

We here introduce to Farm and Dairy readers Brookdale Kerdysie Netherland, owned by W. C. Stevens, Phillipsville, Ont. In seven days she produced 37.73 lbs. butter, in 30 days 159.57 lbs. of butter. If color fancies had any relation to production one would expect her to be white all over. Should her color detract from her value?

attached behind. This works the soil up nicely and leaves it perfectly smooth behind. Such a crank I am getting to be on this cultivating problem that it grieves me to see those compact spots on the field made by my feet as I follow the cultivator.

With grain and grass crops it is impossible to maintain the soil mulch. If, however, the fields are well manured and the humus maintained and the hoed crops well cultivated, I find that I have a condition of soil just right to maintain moisture. In the grain crop I never follow the common practice of rolling last thing. I invariably attach to the back of my roller a light weeder harrow. Hence I have a level surface and a soil mulch as well. I am not afraid of pulling out grain. I have rolled and harrowed when the oats were two or three inches high with the very best of results.

We produce corn to-day much more cheaply than we did 10 years ago when labor was much cheaper. Practical and efficient machinery explains this.—J. H. Grisdale.

The greatest thing to use in the winter time for hauling out manure to be spread on the fields direct is a flat rack such as is often used as a flat hay rack. One can load three tons or more on to it if need be and it occasions no more lifting than is necessary. It is very nice to spread from.—A. E. Hulet, Oxford Co., Ont.

Ashamed of His Seed

T. G. Raynor, Seed Division, Ottawa

Recently I was collecting some samples of oats, wheat and barley. They were samples of just such grain as the farmers are sowing in different parts of Ontario. My purpose was to find how much attention farmers as a whole are paying to seed improvement.

The farmer in question lived in Lanark county. He was working another man's place on shares. He was seeding with oats a piece of meadow he had spring plowed. It had enough quack grass in it to make it very interesting for the oats. It was nearing six o'clock and he was trying to finish a none too well prepared seed bed of two acres or more that night; it looked like rain. The farmers of that vicinity eat about four p.m.; then they pull out their teams for another day's work by sundown, while the women do the milking.

I told this farmer my mission and that I would like his cooperation in letting me have a sample of the oats he was sowing, which he did. I then proceeded to get some information about the seed and asked him his name.

He said he wouldn't let his name "go along with those oats." He said "It was such a bad year last year to save oats," etc. I informed him there were many farmers who were laboring under similar conditions; but his name I couldn't get to be associated with those oats. I said I could get his name, and that he might as well tell me.

"No, sir," he said, "I won't."

I proceeded to get the rest of the information about the oats, which he gave, perhaps to get rid of me, when I came back at him for his name. I couldn't corkscrew his name out of him. I afterwards got it from some of his children playing around the house. He was ashamed of his oats, but not enough to get better oats to sow.

GRASS SEED NO BETTER

I asked to see his grass seed which he had been using on another field. I saw at once that there were plenty of weed seeds in it. On asking where he got it, he said the clover came from the store near by, but the timothy his boy had got for him from a neighbor. I suppose 25 per cent of it was false flax seed. I asked him if he knew the false flax weed. He said he did. "Well," I said, "you will get a dose of it sowing that seed."

"Oh," he said, "the neighbor told my boy that the machine had knocked the hull off the timothy and it showed up red."

I presume he bought the timothy seed of his neighbor because it was cheaper than the six or seven cents a pound timothy seed at the store. He probably was paying 10 cents a pound for the timothy seed of that sample and didn't know it. He seemed to know what good oats were and other seed, but was willing to take his chances. He was not the only farmer who apologized for his seed he was using. It was a common occurrence.

AN EXPENSIVE PRACTICE

Another thing the collecting of the seed revealed and that was the number of farmers who changed their seed grain every three or four years and believed in it most religiously. In every locality there is to be found a farmer or two who has a reputation for keeping his farm clean and taking pains with his seed. These farmers sell their seed quite readily to their neighbors, and to some extent keep up the quality of the seed.

It is rather astonishing the quantity of seed (Continued on page 6.)

IN the history of the cattle breeders must have been a far from the usefulness of crisis has now been the history of the Holstein breed made "Utility" In a supreme effort to gain a great er of human food, not been laid on and conformation. mation of this con has given the breed the populari

Having brought high degree of efficiency (although there for improvement is now the part of some characteristic into color. Already many prefer to see the largely on the white them would go down into their pockets they could get a sire to the white.

COLOR ON RED And yet white o to do with the effici as a producer, and i preference for white only a fad. Our would do well to re the words of Mr. dimer, "Adherence to only detrimental to also has a tendency market for stock in

It is a universally of breeding that the has in view the more attain those objects success is invariably one purpose breeder. almost every breed is stories of disaster due portance being placed lar laid in vogue at Holstein men go wro date it is because they from the abundant breeders of other kind

A CARE IN Take the Hereford Hereford is probably of cattle on the Brit the "white faces" d compare in numbers o with the Shorthorn. necessarily indicate breeders have not been have Shorthorn breeder cattle are naturally i aren't.

The difference is t Shorthorn breeders m cattle their object, wh ford breeders were divi camps, each camp ha different color and each that the standard color must be the color of