



Preparing the Seed Bed

More suggestions for increasing the 1918 crop---Cultivating new breaking, etc.

By Seager Wheeler

The season is too far advanced to offer any suggestions regarding new breaking except in the surface treatment of the soil in preparation for the crop. As soon as the breaking is finished it should be rolled or packed to hasten the rotting of the soil. This is applicable to all districts except those where the soil gives trouble. In such cases the packing will only aggravate the trouble. Discing may commence at any time after the breaking is done, care being taken to conserve any rain that falls. The first operation should be to double disc the land lengthwise of the plowing. After the first double stroke of the disc the plank drag that I have referred to in many of my former articles will be found an excellent implement to use. There is no other tool that will do just as good work at this stage. It is drawn at an angle and shaves down any edges or ridges that have been left by the disc. Besides, any large pieces of soil that are lying on the surface will be rolled along in front of the drag and thoroughly pulverized.

Ideal Soil Conditions

The condition of the soil that is wanted is as follows: The inverted soil should lie closely at the bottom and should not be disturbed. The top two inches should be loose, pulverized mellow soil of uniform depth. This constitutes the seed bed. The lower portion of the seed bed will be the root bed. No matter what steps are taken to get this condition it should be the object of all summer cultivation. After the plank dragging the surface of the ground will be smooth and uniform. This leaves it in splendid shape for discing the second time as the disc will then cut to a uniform depth over the field.

For the second discing the disc should be set so as not to turn up any soil. I would recommend going with the furrow again rather than at an angle or across the breaking. The second discing may be done at any time providing it is done before the freeze-up in the fall. It should never be left till the spring because then much moisture that is badly needed for the coming crop will be lost. In the fall the soil will be found to work nicely and if time permits the plank drag can be used again to advantage after the second time of discing. The harrows should be used after the second discing or planking. Should it be found convenient to do so the cultivator may be run over the field previous to the freeze-up. A cultivator with diamond points is preferable. After this the soil can be left until the next spring when it can be harrowed down previous to seeding. On no account should the disc or cultivator turn up the soil or go deeper than the seed bed of two or two and a half inches. Breaking should be the first land seeded in the spring.

The main point to observe is to have the top soil mellow and loose for the seed. Unless the surface is too wet the surface packer should follow the seeder. Breaking prepared in this manner will give excellent results.

Treatment of Summerfallow

The summerfallow should be well advanced by this time of the year. Only surface cultivation will be dealt with unless there is couch or twitch grass to be considered. The packer should follow the plow but not if there are any grasses showing up, as in that case it is best to leave the land alone to dry out so that they will be disposed of. The land may be harrowed. The elimination of the grasses can only be carried on at the expense of moisture conservation. Where weed control is the object of summerfallow the land should be packed, harrowed and dragged to make the surface uniform. The planking should be done after the packing and not on the loose plowing. After it is plank dragged the field should be harrowed to encourage the growth of weeds. Any rain that falls will be conserved as the soil is in a receptive condition.

There are two objects to be kept in mind, weed control and moisture conservation. Of these we will first consider weed control, as by taking effective measures to attain that end we take care of the moisture in the soil. After the plowing is finished and the land is packed, harrowed, and planked then comes the most important operation. As soon as any weeds or volunteer grain begin to show up they should be

looked after. This is one of the opportunities for increasing the 1918 crop that I made frequent references to in my last article. There is no time so opportune for destroying weeds as when they are at this stage. If they are taken before they get to the second leaf stage a double stroke of the harrows will work wonders. Even volunteer grain may be destroyed at this stage if it is not allowed to get into the leaf. Let the weeds get up two or three inches high and then it will require something more than the harrows to destroy them. The heavy iron harrow is one of the best implements to use at this time and also the most economical. If the weeds get too high for the harrows they will require more efficient treatment with the cultivator, the disc harrow or even the plow. They grow rapidly and soon get so firmly rooted that they require more work to tear them out. If you are compelled to use a duckfoot cultivator or similar implement it will be found an excellent preparation to have had the soil leveled off with the plank drag so that the knives may work at a uniform depth under the surface and therefore get all the weeds. Do not allow any of them to get past as the cultivator will make them grow more rapidly than ever. It is far better to depend on the harrow and to never let the weeds get so far ahead that they require more drastic treatment.

If there are weed seeds in the soil and they are not coming up it will be found advantageous to go over the field with a tooth or point cultivator at a depth of two or three inches. This will aerate the soil and encourage weed growth so that when they show up above the surface they may be attended to.

The Last Operation for the Season

At the end of the season, before the final freeze-up, it is well to go over the field with a cultivator equipped with points about two inches wide and to slightly ridge or corrugate the field and to leave it in that condition as it goes into the winter. If no cultivator is at hand one of the large sized disc harrows will do if care is taken not to go too deeply nor to throw up too large ridges. What is wanted is to stir the soil about two and a half inches deep and to leave it at that. There is a reason for this and an important one. Should there be any perennial, biennial or winter annual weeds just coming through the soil and they are not interfered with they will go through the winter and are so insignificant that if one has not had experience with them so as to know how to destroy them before the seeding they will take toll of the crop. By having the land in the corrugated condition and then harrowing it down in the spring previous to seeding, these weeds are destroyed and put out of business as far as that crop is concerned. This is another opportunity to get in a lick for the 1918 crop that should not be neglected.

The summerfallow should never be allowed to go into the winter in the compacted condition as in the case when stock has been allowed to have the run of it. Where this is done it will be necessary to

keep tab on the field and if the stock are not keeping down all the weeds the cultivator should be used to do so. While it is sometimes very convenient to have stock running on the fallow there is a temptation to let them do the weeding and they do not usually do the job in a satisfactory fashion. Stock will leave many kinds of weeds untouched and these soon gain a foothold. There is also the temptation to leave the field to the stock with little or no cultivation, whereas cultivation of the soil is very necessary. Stock tramps the field into a compacted condition which is not advisable except in the lower layers of the cultivated soil. Two or three inches of the top should always be kept loose for aeration and conservation



The Indispensable Disc Harrow. It should be preceded by the Packer and followed by the Plank Drag

of moisture. Whatever is done do not neglect to give the land cultivation with some point cultivator some time during harvest or afterwards, leaving it in that condition to go into the winter and taking care to have it thoroughly stirred previous to seeding in the spring.

LOCATION AND SIZE OF SILO

The silo should be located with a view to making it convenient to feed the silage. If possible it should be at the end of the feeding alley so that a truck can be run up to the silo for filling and then moved along in front of mangers in distributing the silage. Twelve cows fed 40 pounds a day will need a quarter of a ton of silage. It is best to have the silo outside of the barn but connected to it with an alley way or place it so that the chute will just reach the barn. The silo inside the barn takes up valuable space and there will be a silage odor from it. The silo outside the barn will freeze some but this can be reduced to a minimum by having a good roof on the silo, and by taking out the silage right.

The size of the silo should be such that at least an inch layer is used each day. If less is used molding and spoiling may result. The warmer the weather the greater the depth of silage that should be removed. In the winter 500 pounds should be removed daily from a 14 foot silo, which would make 40 pounds for 16 dairy cows or 30 pounds for 17 beef cattle. In summer half as much more should be removed. It will require 18 cows fed 40 pounds a day to consume this amount. Silage is a valuable summer feed. Many are using it for this purpose and especially to help out when the pasture is short. Some build a summer silo and make it smaller in diameter than the winter silo, so that a deeper layer can be removed daily. If more capacity is desired it is secured by increasing the depth. In winter at least 350 pounds should be removed from the 12 foot silo and 700 pounds from a 16 foot silo. —N. D. A. C.



40 Summer Cultivation should be confined with the Object of Producing a Fine Seed Bed Free from Weeds

An inexpensive and handy evener can be made from the cutting bar of an old mower. This is done by bolting a piece of two by four firmly on top of the bar to keep it from turning on edge. The holes that were used for bolting on the guards can be utilized so as to make a good three-horse evener or a strong doubletree. Any ordinary clevis will fit.