

Working the Summerfallow

Look After the weeds and the Moisture will take care of itself—By Seager Wheeler

To get the best results from the summerfallow, the preliminary work must be done the previous fall, by shallow plowing, discing or cultivating the field after the crop is removed. Summerfallowing is done with two objects in view—control of weeds and conservation of moisture. It is generally understood that conservation of moisture by fallowing, to grow a sure crop, is the most important, but the control of weeds is more important, as no matter how well we have plowed the fallow the crop will suffer accordingly if the weeds are not controlled. By intelligent cultivation for the control of weeds the object of conservation of moisture is gained. The best time to plow the fallow is as early in June as possible. I have known many fields of fallow that were apparently good to look at, but which gave crops on portions of the field where weeds got control that would not pay for the time to bind them. A nice black summerfallow is not a sure indication of good work done or promise of a good crop the following season.

Weeds are the important factor to have in mind when summerfallowing, excepting on clean, new lands. The most satisfactory method to control weeds is to encourage them to grow and then destroy them. To do this we must consider the kind of weeds that may be on the field. There are different kinds of weeds to be considered and every grain grower should be acquainted with their habits of growth and character and the effect they may have on the growing crop. Many promising fields of grain have been ruined by neglect to control weeds at the proper time, when it was a simple matter to do. This has not altogether been owing to carelessness. No one would wilfully neglect his crop. It has been for want of knowledge of the nature of the weeds, their habit and growth and their harmful effect on the crop, especially of the small weeds of the winter annual class that may have been in the field at the time the crop was sown. Once the opportunity to destroy them just previous to seeding has passed there is no remedy, and the crop yield is reduced according to the amount of weeds in the field at that time.

Three Main Classes of Weeds
There are different kinds of weeds to be considered, and the treatment for one kind will not apply to some others. We have the annuals, perennials and winter annuals. The most common in the annual class are lambs quarter, wild buckwheat, mustard, wild oats, volunteer grain. Of winter annuals there are stinkweed or French weed, shepherd's purse, peppergrass, whitlow grass (not very common), crowfoot and blue bur. These weeds germinate in the fall and live over through the winter. Perennials include such weeds as couch and sweet grass and some native weeds. Of the annuals, lambs quarter, wild buckwheat and others are easily controlled. Wild oats, however, are difficult. The winter annuals are easily controlled if attended to at the right time. The grasses are more difficult as well as the thistles. I would consider the wild oats, native grasses, couch and sweet grass and perennial thistles hard to control and needing special treatment. I have no experience



The Summerfallow Should be Plowed as Early in June as Possible and as Deep as Feasible

with the thistles, so cannot give any advice except that of keeping them from getting into the last stage.

The wild oat is of the same character as the grain crop. Practically all of the other weeds are small seeded and if buried deeply by the plow will remain at the bottom of the furrow until turned up again. But the wild oats, if buried anywhere from six to eight inches deep, lie dormant until the following season when they may push their way up and appear in the crop.

To control them the best plan is to plow shallow in the fall, about two inches deep, pack and harrow. Encourage germination. Some will germinate in the fall, although not noticed, and will be destroyed by hard frosts. The greater portion will germinate freely in the spring, but not all of them. This growth in the spring may be destroyed when the fallow is plowed, but the plowing should not be delayed as the wild oat will use up the moisture, and if they are thick on the ground will dry the soil so hard that good plowing is not possible for the other weeds. Either plowing or surface cultivation by the disc, harrow or cultivator should be given in the fall.

Plow Summerfallow in June
The plowing of the fallow should be done as early in June as possible and as deep as possible to provide a reservoir for all the rain that fall. The depth to plow is regulated by local conditions, but from six to eight inches deep is practical no matter if an inch or two of raw soil is brought up by the plow as the weather influence throughout the season will release some fresh plant food and will not interfere with the growing crop. It will also provide an ideal mulch. What we want is depth of soil to provide a root and seed bed. Where shallow plowing is done (and there is a lot of it done) there will be some loss of humus and fire and drifting may result. The fine particles of dust that we see in the air at the time of high winds is the most valuable of the soil humus. When this humus is lifted

and adds depth of soil and when brought up again by the plow may be utilized by a growing crop.

Cultivation After Plowing

After the field is thus plowed deeply it should be packed, followed by the plant drag to level the surface, which is very essential to a good fallow. The leveling of the surface prepares the way for the cultivation to follow. The cultivator, the duckfoot especially, can go at an even depth over the field, whereas if there are any ridges or hollows they ride on the ridges and miss the hollows and do not get all the weeds. The harrows also work at a uniform depth, as well as other implements that may be used, and last but not least the seeder. The seed is also planted at a uniform depth, resulting in even growth of the crop. After the field is dragged the harrows should follow.

The next work will be cultivation and control of weeds. These will appear later on, and the annual and winter annual weeds should be taken in hand while they are small. They should be destroyed before they get into the rough leaf.

This can be easily done by the harrows and considerable work can be saved if this implement is used. The harrowing also establishes the mulch. Where wild oats and volunteer grain shows up, then a duckfoot cultivator or similar tool is necessary. The growth should be allowed to get into the early seedling stage, and in operation the duckfoot should pull the weeds out rather than cut them off below the surface. When they are cut off they will continue to grow, so they must be uprooted. I would not recommend the disc harrow for this work, and it should not be used if it can be avoided, as it loosens up the soil too deeply. It does not get all the weeds unless it is set to cut too deep to be advisable. Many a good fallow has been spoiled by using the disc harrow late in the season and spoiling the good work done throughout the season. What we want is the lower portion firm and the top loosened to a depth of about two or two and one half inches. The disc harrow when used late in the season may bring up a fresh lot of seeds that will not germinate until the following summer in the crop. What we want is to encourage a weed growth throughout the season and destroy it.

Fall and Spring Cultivation

To encourage growth, the cultivator, equipped with teeth about two inches wide, is an excellent implement to use, as it scrapes the soil and encourages weed growth, especially wild oats and volunteer grain that may not germinate unless this is done. Cultivation should be given up to the time of harvest and after threshing. At this time watch should be kept to note if any of the winter annuals have started. As they germinate freely in the fall they should not be overlooked. At this time the plants may be very small, ranging in size from a pinhead to a button or larger. They are so insignificant at this time and early in the spring before seeding that they are often overlooked. They should be destroyed in the fall. The implement to use depends on the condition of the surface soil. If loose on top the harrows may be used; if firm, then the duckfoot

Continued on Page 27



This is not a Summerfallowing, but a Seeding Season. These Oats, however, will be kept busy on the Fallow this Season