

the parties now striving for power or the relationships of certain organizations to the policies of either party.

### Summerfallow Treatment

Contributions on methods of handling the summerfallow show that a wide difference of opinion is held. Generally speaking, however, the preference is for keeping the soil absolutely black if it is deemed wise to devote an area to summerfallow. Some do not object to allowing weeds to develop to a considerable height before turning them under with the plow, while others again favor early plowing with oats sown as pasture for stock in late summer. When it is considered that the main objects of summerfallowing in the Canadian West are the conservation of moisture and the killing of weeds the preference easily is early plowing to a moderate depth, depending on the nature of the soil, and sufficiently frequent cultivation throughout the summer to kill all weed growth and preserve a loose mulch on top to avoid excessive loss of soil moisture by evaporation.

Our cash awards of \$3.00 and \$2.00 have been made in the order in which the letters appear.

### Plow Deep and Cultivate Often

EDITOR FARMER'S ADVOCATE:

The main object in summerfallowing is to conserve moisture and kill weeds, so that all operations should have either of these objects in view just as soon as possible after seeding the work of summerfallowing should begin. The disc harrow should have followed the binder the fall before, or failing that the ground should have been disced early in the spring to break the crust and thus stop excessive evaporation and to cover any weed seeds on the surface and induce them to germinate early. This will have been accomplished by the end of seeding and then the plow should be started before the weeds get any size, for a crop of weeds will pump a soil dry much more quickly than a crop of wheat.

The proper depth to plow will vary with different soils, a deep rich soil standing deeper cultivation than a light sandy one. Personally I always plow at least six inches and find this satisfactory. The deep plowing brings up fresh soil and breaks up any "hard pan" bottom that may have formed from former shallow plowing. The very important feature of this plowing is to do it thoroughly, so that all weeds will be turned completely under and roots of grasses turned up to the sun. All stones should at this time be removed, for apart from the damage done to implements by them it is generally around stones that such weeds as quack grass, get a start and it is impossible to get rid of them until the stone is removed and proper plowing made possible.

The ground should be harrowed as plowed. A good scheme is to have a horse attached to a section of harrow and made to walk on the fresh-turned land beside the horses attached to the plow. If this is not done it is necessary to harrow down well twice a day—before quitting at noon and at night.

Now for the after treatment. A new batch of weed seeds will likely have been turned up, and as these germinate at different times the disc harrow or cultivator will have to be run over the field at short intervals throughout the summer. Double discing is very satisfactory, but the cultivator is a little quicker and exposes the roots of grasses to the sun a little better. The harrow should always follow either implement as well as shortly after a rain to level the ground or break the crust as the case may be.

To insure the following crop standing up well it is necessary to have the land well packed. I have never used a packer, but find the generous use of the harrow very efficient. It is a good plan to allow cattle to range over it and to sow rape seed is recommended, but the whole contract of keeping down the weeds should not be left entirely to them.

To sum up then: Plow thoroughly and deeply early in the season; follow immediately with harrow, cultivate frequently throughout the summer to keep down weeds and pack.

Sask.

CHAS. N. LINTOTT.

### Believes in Plowing Twice

EDITOR FARMER'S ADVOCATE:

A great deal of work is done each year under the name of summerfallowing, which is of little use; much of it perhaps is worse than useless. How many fields are to be seen every season which are left unworked till the weeds are so far advanced that many of the seeds will germinate as soon as the proper conditions are present! These fields are then plowed and harrowed and the "summer fallowing" is completed. What wonder that, under such circumstances, the weed problem should have become one of the most difficult the farmer has to face!

The greater part of the land we have been working up to the present is rather light and perhaps our method of summerfallowing would not be suitable on some soils. However, since the great considerations in summerfallowing are the conserving of moisture and the killing of weeds, perhaps the means to be employed should not differ greatly with the different kinds of soil. The first stage in the killing of weeds is to cause their seeds to germinate, so that any work done towards the conserving of moisture is a great aid in the killing of the weeds.

Soon after seeding or when as many as possible of the weed seeds have had an opportunity of germinating, we plow the land, regulating the depth of plowing to suit the nature of the soil.



HOW ROOTS ARE SOWN QUICKLY

On our lighter land we find it best not to plow too deeply, as it is apt to loosen the soil too much. As each land is plowed, or preferably each day's work as it is finished, it is thoroughly harrowed and the whole field, when done, is packed. This packing serves the purpose of conserving the moisture for the benefit of the future crop, the further germination of seeds and as well, the thorough firming of the soil in preparation for the second plowing, which we believe to be essential to securing the best results. When the second crop of weeds have attained a stage of growth not far enough advanced to cause a great drain on the soil moisture and before harvest, this second plowing is done and is followed by the harrow and packer as in the first case. We have tried discing in place of the second plowing, but having had a good deal of couch grass to contend with, find the plowing better, as it kills out this grass where discing will not. The plowing may take somewhat longer than a double stroke of the disc, but the extra time required is paid for in better results. In this way we manage to grow and kill, three successive crops of weeds during the season, as any growth appearing after the second working of the land is effectively taken care of by the frosts of winter.

We find that we cannot get our soil too hard. For this reason we avoid working the land up too much the following spring, so long as a good seed bed is obtained and the seed can be readily put

in the proper depth, the harder the land the better. This system may be improved by the use of special machinery, or under special circumstances, but as a general method of summerfallowing we believe it will give the best results on soil such as ours.

Man.

DOW BROS.

### Oat Pasture on Summerfallow

EDITOR FARMER'S ADVOCATE:

The time to begin summerfallowing, in my opinion, is in the fall. As soon as the stooks are off the ground run the disc harrow over the field, giving it a single stroke; a double stroke will make the ground too loose and cause trouble in getting the plows to clean. As soon as the crops are sown in the spring give the field a good cross-harrowing, as by this time the weeds have had a good chance to start and they are not far enough ahead for the harrow to run over without killing them. The land is left level for the plows.

Some men seed in the spring until it gets too late to seed and then summerfallow what is left, no matter if it takes all summer up to harvest to do the plowing. However, plowing should be done in June and first half of July so as to give time to get it well worked down again. This is the time for doing a thorough job, not forgetting to "root it up," as the saying is. We generally try to plow from five to eight inches deep. Of course conditions vary in different localities.

Try to have the land harrowed as you go along. A good plan is to have a horse tied along side hitched to a section of harrow. One application of the harrow the day the plowing is done is worth three applications a week later, as it pulverizes just as much and also conserves the moisture that would otherwise in a great measure be lost.

I have never used a land packer (so-called). The only packer I have is a good bunch of cattle and young horses, which I turn onto the summerfallow as soon as the weeds and grain start. A good plan, if the land is moist enough to start them, is to sow oats on the field. Close up the holes in the seeder, leaving only every third or fourth one open and set the machine to sow about two bushels per acre. This gives you about half or three parts of a bushel per acre. After these begin to grow, if you have enough stock to keep them eaten down no one need worry about harrowing, packing, cultivating, weeds or anything else, and if you give them choice between good prairie pasture and grain and weeds on a summerfallow I will bet dollars to marbles they will stay on the plowed field at least two-thirds of their time.

SASKATCHEWAN FARMER.

### Growing Field Roots

EDITOR FARMER'S ADVOCATE:

In preparing the soil for roots you want to have it worked as fine and smooth as possible. If the land is old it should be manured well and then plowed fairly deep. Harrow it thoroughly to get all the bumps and sticks out of it. When it is worked up fine give it one stroke with the harrow, the opposite way from which you intend to sow the seed. We use a hand drill with a marker on it, which marks for the next row from that which you are sowing. This makes a good mark across the harrow marks. It is well to sow the rows about 20 or 24 inches apart. This gives plenty of room between the rows to cultivate and keep the weeds down.

As soon as the plants are high enough to be seen in the rows start to cultivate. We use a horse cultivator between the rows, thinning the plants out to about 15 inches apart as we hoe. As the plants grow keep the weeds well hoed from them. When the tops die, or if it gets so late in the fall that they are liable to freeze, it is time they were taken up, as if turnips are frozen they do not keep when put in cellar or other storage. We cut the turnip tops off with the hoe and gather them with the horse rake. Then we take the drag harrow and go over the patch three or four times and most of them are pulled out without hurting the turnips any. They are stored in the barn for winter feed.

Sask.

W. POTTER.