

Breaking and Backsetting



*When and How to Break---Is Backsetting Advisable.
Thorough Cultivation Necessary--By Seager Wheeler*

It is to be expected that there will be considerable areas of new lands broken up this season. Labor will be scarce on the farm; therefore, the following suggestions as to the best method to follow in order to put new lands in shape for a crop that will give maximum yield, may be timely at this time.

New breaking or backsetting will give high yields if the soil is properly prepared. In order to get the soil in the best condition one must consider some factors that may control crop yields. It is very important that the sod when turned by the plow should be well rotted as soon as possible after it is plowed. When this is done small grain, wheat, oats, and barley, flax and other crops may be made to produce abundantly.

There is a proper time to do this work and the time is limited to about six weeks, from about the middle or third week in May until the end of June. Many new-comers and those not acquainted with the condition in Western Canada, are under the impression that almost any time will do to break up prairie lands. Often the breaking season is extended too late in the season and the effect is seen; in lighter and unsatisfactory yields not only in the following season, but for several seasons.

Why Seasonable Breaking Pays

The most satisfactory results are got when the work is done early in season, and not later than the first week in July. After that time conditions are not so favorable to the rotting of the sod. There is a big difference between prairie sod broken early in June and that broken in July. When broken up early and throughout the month of June the sod has every possibility of rotting quickly while conditions are favorable. When broken late in July the sod dries out and while, on the surface, there is no great difference to the casual observer, there is a big difference in the yield the following season. By a personal examination of the sod the effect will be seen. When broken at the proper time the under portion of the furrow slice will be found, when lifted, easy to pulverize, the grass and fibre decomposed, while that broken late in season will be dry as when plowed. This may not mean much to the inexperienced at that time but will be obvious the following season, in the difference in crop growth and yield. When the sod is plowed late and dries out the effect is very noticeable for some seasons after. No matter how much work is put on the land it will not yield as freely as when the breaking is done in season.

In the early days we used to break prairie in the spring and sow the wheat or oats. The crop returns were light and the bad effect noted in after crops. When broken up in the spring and sown the growing crop used up the moisture necessary to rot the sod, and it simply dried out. The same effect

applies when breaking is done too late in the season.

Soon after the sod is broken up in proper season, by lifting the under portion of the sod it will be found that the condition is similar to a rotting manure pile, the grass is wet, steamy, and decomposed, the root fibre in time also decays.

How Deep and How Often

Having these points in mind it will also be important to know the best depth to plow, and whether it shall be plowed once only or backset. In some districts backsetting is preferable to breaking where the native grasses are liable to give trouble. If this is the case, breaking done early allows the grasses to get possession of the field, and it may be more advantageous to backset. Advocates of backsetting claim that it will yield better crops than if the land is broken only. This is true in some respects if after the first crop is removed the second plowing is done the following spring, as the plow will reverse the sod. Owing to the open air space the moisture quickly evaporates before it can be put in condition. In the spring drying winds and lack of rainfall can be expected and it may not be possible to provide a suitable seed bed. When the sod is reversed by the plow, it is in almost the same condition as when first broken up, and will require more work and time to fit it properly for the seed than is possible to give it, owing to the drying condition.

The most advantageous time to do the second plowing after the first crop is renewed is in the fall, as at that time conditions are more favorable than in the spring. When this is done the disc harrow should follow the plow, giving a double discing, and then harrowed. The number of harrowings depend on the condition of the soil. Afterwards it should be followed by the plank drag. If a cultivator is used on the farm, the field should be given one stroke with the narrow tooth of about two or three inches wide. It may be left this way to

go into the winter. If the cultivator is not used then a stroke of the harrow will be sufficient. In using the cultivator care is exercised to go only about two inches deep. When the field is treated in this manner, one can expect the best results at the second cropping and in following seasons and will give equally as good results as backsetting.

One advantage of breaking over backsetting is that only one plowing is done. On backsetting one must consider the extra cost of the second plowing. And it is hard work for the teams as conditions may be dry at the time the second plowing ought to be done. While I would not make any claim that breaking is more satisfactory than backsetting, I feel that under the present condition of scarcity of labor, breaking once only will be more economical and profitable, especially where the native grasses do not interfere. If the suggestions for breaking in proper seasons, and the operations in fitting the soil for the seed are followed, there is not the slightest doubt as to its yielding a fine crop and it will stand considerable drought.

Breaking Prairie Sod

Which ever method is practised the following suggestion will apply in order to fit the soil for the seed. We have first to consider the best depth to plow. It is necessary to point out that we must provide a bed for the seed. To do so it will be essential to plow deep enough, at a depth of at least four inches or five inches, to obtain two inches of loose mellow soil at the surface. When the plowing is three or less inches deep it is not possible to do this.

In plowing, the sod should lie over flat, and care taken that no misses are made. If the plow goes wide or is thrown out by stones or roots, it is advisable to turn around and go at it again, so that all the field is plowed as uniformly as possible. It all depends on how the sod is first plowed, whether the succeeding crops will be good and

profitable. If the breaking is done badly or unevenly, or some portion is missed, the bad effect will be seen the following season. When plowing the second time, the plow will again skip and run out and these spots be missed and result in grassy spots in the field. I would emphasize that the first breaking up of the prairie sod has a great influence on the succeeding crops. Plow well and good, and one can expect good crops—plow badly, uneven crops.

Cultivating After the Plow

Whether the field should be packed as soon as turned by the plow can be left to the judgment of the operator. Packing induces quick rotting of the sod, but if the native grasses are liable to give trouble then packing only aggravates conditions. After the plowing is completed, following the first rain or while the sod is moist, the disc harrow should be used, to prepare the seed bed.

In using the disc harrow, care should be taken to avoid reversing the sod. The disc harrow should operate the same way the field was plowed and set at an angle to loosen the top inches of soil. If the edges of the sod are not pressed down by packing the disc the first operation of double discing will slice off the edges of the sod. This is desirable as it will afford soil to make the seed bed. If the edge has been pressed down completely flat it may be necessary to disc more times than if the edge were left lying up.

After the field is double disced the blank drag that I have described in former issues of The Guide should be used by operating at an angle. The operation of the plank drag, drawn at an angle, is to roll the sods along the front edges. By the time they get to the end of the drag they should be completely pulverized and pulled to pieces. The action of the drag also shaves the surface, and cuts down the edges and fills the inequalities and hollows. The work done by the plank drag at this time cannot be duplicated by any other implement that I know of. Only one operation is necessary. In addition to this service it also prepares the way for the final work to be done. After the drag has gone over the surface, it is more uniform and level. If one more discing, either single or double, is given at this time, the disc is able to cut at an even depth over the surface and loosen up the top soil for the seed bed. It will be noted that all these operations are done in line with the plowing.

Keep the Sod Flat

It is a common custom to use the disc harrow at the second or third discing across or diagonally across the field. It is doubtful if there is any advantage in doing so. Cutting the sod in squares or cutting so deep to invert some of the sods should be avoided.

The lower portion of the sod should be completely flat and the top two

Horses have been the Motive Power for most of the Breaking on the Prairies

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