

FACTS

in discussing the situation with the Saskatchewan government finally that it could not do it. This is not a government has expected to meet the United States out some scheme of the province. Matters somewhat in a state of doubt but that will be taken care of by telegram minimizes the Grain Growers in Saskatchewan. The elevator is not recommending here may be that mistake the temper of Saskatchewan if they does not take the hands of the far, Manitoba is in the province and it will be in the province for public and right at the

market the grain suffer as they do the softer wheat

rious commissions of public utilities, it is seen brought to bear. It is only human cabinet ministers such a way as to themselves in power. It is not fair either government, nor owners are capable hampered in the. If they are not placed by men who

ring to prove that take the responsibility the elevator it has introduced the Grain Growers offered something where any responsibility the present juncture

has been attached to a government to commissioners from the Grain Growers. This is not a would be little factory men. The commissioners might be if they were not control.

WS

Legislature 15, towards mid-Bill passed the expropriation the 60 per cent. only when the old new elevators. don, together with the bill as it had an amendment commission clause. This news threshold discussion

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Tillage Processes

By D. W. Warner in an Address before an Institute Meeting
At Vermilion, Alta.



I believe that the ability of the people ranks higher in this new country in proportion to the number of people, than in an old settled country, simply because the ones that are dissatisfied with crowded conditions in older countries have to come to the west and to the Alberta prairies to better their condition. If they were indolent and thriftless they would not have the desire to do this. We have few people coming here who are rich in dollars, as we would express it, but we have people coming here who are rich in ambition, energy and ability. So I repeat, we expect great things from the people in Alberta. And we are making good. Now, as we are in a new country, I will deal first with the breaking of the prairie. We have very little breaking done compared with what there is yet to break. So we will commence at the beginning. There is a time to do all things, and there certainly is a time to break. Nature has provided that for us. If we investigate and learn the right time, we will find that we have been rewarded better by taking advantage of the right time to do our breaking. We have three conditions to consider in the breaking of the new land. That is, the tenderness of the roots and growth, the moisture and the heat. We know if we break too early in the spring, nature has not yet softened the roots of last year's growth, and when the time comes for them to grow, they will start, though the plowing has been done, and we will have a growth of grass on our breaking, that will interfere with cultivation for sometime thereafter. So we wait until growth has begun, because we do not want the moisture exhausted by this growth of grass, instead of it being used for the rotting of the sod, and the creation of plant food for the following crop. It is also easy to see that if we leave the breaking until the growth is matured, then it is too late to rot the sod properly, simply because it is harder to rot, and we have less favorable conditions to rot it in. We have less moisture, and less heat. There is a difference of opinion as to the depth the breaking should be done. Different conditions will bring about different results, even in the same locality. One year we may have moisture enough to rot a depth of six inches. Another year we may not have sufficient moisture to rot that depth thoroughly. As a rule, I think we have enough moisture to rot four and-a-half to five inches depth of breaking. So I would recommend a good deep furrow, of at least four and-a-half to five inches. I think I have good reasons for that.

The Seed Bed

We will say that when we have a five inch furrow that we can make a seed bed on top of that furrow without disturbing the lower part of it. We make our seed bed on top of that, and that is our reason for a deeper furrow. When we are breaking, we should follow our breaking plow with some instrument to pack the furrow slice at once while it is easy to do. I would say the best thing is a packer of some kind—some surface packer will do very well on breaking, but I will tell you later the difference between subsurface and surface packers in older lands.

It is important to plow the right width all the time and to have your plow big enough that you can plow a depth of five inches and turn it well. It is also particular to have the furrow slice the same width as the furrow where the slice has been taken out before, so it will fit in nicely and the connection can be made between that and the strata below the furrow slice, for by so doing we provide a good soil mulch in the breaking. On the other hand, if the furrow is broken and thrown on top or set on edge as is sometimes done, the furrow will dry on both sides instead of decomposing and creating plant food.

It has been demonstrated beyond the experimental stage that moisture can be stored in this way to bring about the decomposition of the sod, and lay in a store of moisture for the following season's crop. So when that can be done,

and when discing to prepare the seed bed, the disc will cut clear through the furrow and it is impossible to get the lower part of our seed bed compact and connected with the strata below, as well as the five inch deep furrow will be if left to lay as it was layed by the plow in the first place.

On Shallow Breaking

We now come to the preparation of the seed bed on the sod. It should serve three purposes—that is, the conducting of the moisture down into the soil, and aid in holding it there, by preventing the evaporation, and also serve as the seed bed. The storing of the moisture in the soil for the use of the growing crop, is similar to your bank account, if you have one, to draw on to meet your expenses during the year. By having the moisture ahead, we can tide over the dry period between showers, much as the bank

as of the disc to get enough of the loose soil for a proper seed bed, but if it does take one more stroke of the disc to do so we feel that this is important in order that we may get the loose dirt at the top rather than break the connection with our furrow and the strata below. After sufficient loose dirt is stirred up with the disc, use a slant tooth harrow in preference to any stiff or straight tooth. It will not jerk and toss the sod out of shape as a stiff tooth harrow will do, but at the same time will do just as good work in the smoothing of the surface. If you do not have time to prepare your oat or barley seed bed in the fall you can do that nicely the next spring.

Plenty Of Sunshine

We want to sow spring wheat in this country as soon as possible in order to be sure of a good crop. The shortness of the season in this country makes it possible to produce the very best grain, as we are doing. If we had a long season, we should not be able to raise as good grain as we do. The further north we go, the better grain we can raise, provided the season is long enough to mature it. Conditions have been provided by nature so that we have as much sunshine here during the time it takes the wheat and oats to mature as is the case 1,000 miles south of this, and the cooler atmosphere which is necessary to produce the good hard wheat is offset by the long days and short-nights. The night being so short lessens the danger of frost. The air being so cool, aids in the production of the best of wheat for us which is not equalled in any southern climate, and we have been enabled through our peculiar climatic conditions to produce oats that have taken world's prizes in almost every case where they have been shown, so that it is easy to see that our short season is a benefit to us provided we do our part to the best of our ability, when quality of the grain we can produce is considered, and we arrange our work and crops to the best advantage.

That arrangement is as follows:—First in the spring is our wheat. Then the discing of the oat and barley land immediately after. Then the putting in of our oats. Then the discing of the barley land again, then the plowing for sowing of the barley, then the discing of the green feed land again, then the sowing of the green feed. This arrangement will permit of handling much more crop than if we had wheat and oats alone, and through which it becomes much easier to keep our land clean, which is one of the most important features connected with mixed farming. When the time comes to harvest your crop, you will find it will be to your advantage to follow the binder with a disc, commencing as it were the preparation for the next year's crop. As the land grows older, this becomes more necessary each year, and even if it requires an extra effort to do this work, it will pay you well to make the effort.

I have mentioned before the absolute necessity of the preparation of the seed bed for wheat being made in the fall of the year, so as soon as the grain can be stacked after harvest, turn in and plow

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Strawberries grown on the Farm of C. A. Partridge, Edmonton, Sask.

we want to do it, but in order to complete this mulch, I will say that we need to fill in the crevice between the furrows with some instrument such as a brush harrow or a disc run nearly straight, then a very slant tooth harrow put on after it will fill in these crevices with loose soil and complete the mulch, then let lie for from four to six weeks or until such time arrives to complete the seed bed for the crop that is to follow.

We will now consider the shallow breaking, as there are some who think it best. I will say that it may be a little easier to break three inches on the start, but when we come to consider that the back setting if plowed to the depth of five inches is as hard or harder than the deeper breaking when done at the proper time, I fail to see the benefit in the shallow breaking, for it is impossible to make as good and smooth job of breaking, for the furrow will be thrown up on top and be much more broken up than the deeper furrow.

account will tide us over between the marketing period, for the plant will have sufficient moisture to meet its demands at all time; thus promoting a better growth and earlier development. If the breaking is done at the proper time we can get the seed bed for the next year's crop of wheat at least prepared before we go to harvest. It is absolutely necessary to prepare the seed bed for wheat at least, the summer or fall before, and the summer is a better time than in the fall after harvest. I do not think winter wheat is raised to any extent here, and so I do not think it necessary to talk of the sowing of that on the sod. We want to talk about the main crops you do raise.

I will say, however, in the preparation of the seed bed, we should disc a moderate depth, say half way through or possibly three inches into the sod. I am talking now of the preparation on top of the five inch furrow. It may require more strokes