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FEB 26 1914

GOVERNMENT OF THE PROVINCE OF SASKATCHEWAN

Department of Agriculture

FIELD HUSBANDRY CIRCULAR No. 7

The Tillage of Stubble Land

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Published by Direction of

The Hon. W. R. MOTHERWELL, Minister of Agriculture.

It has been estimated that nine out of every ten poor crops in Saskatchewan are grown on fields that have produced one or more crops of wheat, oats, barley or flax after having been "broken" or fallowed. Such fields are commonly spoken of as "stubble" fields.

The surplus moisture stored in fallowed land is in semi-arid regions an insurance against failure of the next season's crop as a result of drought. The same is true in less degree of prairie or sod land that has been well "broken" and left unsown till the following year. On land that has produced one or more crops, however, the soil moisture is largely exhausted, and the next succeeding crop is almost wholly dependent upon the amount that falls after harvest time. Because of the fact that equal opportunity to control the factors necessary for growth is not given it is probably true that we shall never on the average get as good returns from the "stubble" crop as from that sown on fallow or "breaking" or after "hoed" crops. Nevertheless, much can be done to increase the productive power of such land.

The control of the yield of crops on our stubble fields is without doubt the most pressing problem in production now facing the Saskatchewan grain grower; and in view of the fact that over two-thirds of our present cropped area is stubble, it would seem that this portion of our farms should receive very much greater consideration than it has ever been given before.

CAUSES OF LOW YIELDS.

The causes of low yields on stubble fields are usually few in number. The most important ones are:

1. The low moisture content of the soil.
2. The presence of grass, shrubs and weeds.
3. A poor seed bed.
4. Insufficient "soluble" plant food.
5. The stubble itself.
6. Unavailable subsoil moisture.

The first is the most general, but any one or all of the others may be contributing factors. Some of these, unfortunately, cannot be controlled absolutely, but all can be materially influenced by man and most are entirely within his control. Each is affected by certain specific tillage operations, hence no fixed procedure can with profit be followed on all fields. The actual causes of low yield on a given field must first be