

for meal or seed, and that they will not germinate satisfactorily, the germ having been killed. A seed may have all the qualities mentioned above and yet may not grow simply because the germ is injured or killed. If we wish to make sure that our seed is of any value we must find out what percentage will grow. This can be done by taking a box with about two inches of soil in it and sowing in it one hundred grains. Keep the soil moist and warm. The number of plants that grow will give you the percentage of germination, deciding for you whether the seed is fit for use or not.

#### *Smut in Wheat.*

That this disease is still prevalent means that there are yet some men who do not understand thoroughly the best treatment of the seed for its prevention. The first essential is to have plump, uninjured and clean seed—seed that has no smut balls in it to break in the drill and thus contaminate the treated grain. We next should know that the bluestone is pure or that the formalin is guaranteed to be a 40 per cent. solution of formaldehyde. Then we should be careful to weigh which of these we prefer to use and measure the water accurately. The solutions most generally and successfully used are one pound (sixteen ounces) of formalin to thirty-two gallons of water, and one pound of bluestone to six gallons of water. There are some advantages in using the formalin. First—it is a liquid that does not require time to dissolve. Second—the operator does not need to be so particular as to whether the water is hard or soft, and lastly—it leaves the grain in a better condition to germinate quickly.

In treating seed for smut one thing to remember is that thoroughness counts. See that every grain comes in contact with the solution whether you immerse or sprinkle.

Formalin is the only treatment for smut in oats that gives complete satisfaction.

#### *Suitable Varieties.*

The superior milling qualities of Red Fife continue to keep this wheat to the forefront, especially in those\* districts where the open and lighter lands are favourable to its successful maturity.

The popularity of Marquis is now established beyond doubt, in fact there is no wheat so far suited to the province generally that can excel Marquis, and few can equal it. It has won for the third time in succession the highest award in international competition. It produces very large crops, has unusually good straw, and is more resistant to rust than most of the common varieties. While Red Fife and Marquis are retaining their strong individual characteristics, Preston, Huron and Stanley are not maintaining the popularity they once enjoyed and their continued use is not to be recommended.

#### *Five Years Comparisons of Field Lots at the Experimental Farm, Indian Head, Sask.*

The average yield per acre and the time taken to mature of two varieties of wheat grown in field lots under similar conditions for the past five years are as follows:

\* *Note.*—As a general conception the term "Southern Saskatchewan" may be considered to embrace the open country with lighter land, while "Northern Saskatchewan" includes heavier soils and the treed areas of the province.