

MICHIGAN AGRICULTURAL COLLEGE.

EXPERIMENT STATION.

Press Bulletin No. 20.—Formalin Treatment of Oats for the Prevention of Smut.

Enormous losses occur annually from the reduction of oat yields by the ravages of smut. This loss can be largely if not entirely avoided by treating the seed with a formalin solution.

Formalin is a 40% solution of formaldehyde; it can be procured from or by local druggists; the standard strength should be guaranteed. The solution most commonly used is made by adding one pound or pint of formalin to from forty to fifty gallons of water.

The treatment may be applied in one of two ways, viz:

(1). Clean carefully a large area of the granary or barn floor and saturate with solution; upon this spread a layer of grain several or more inches in depth. Apply formaldehyde solution to grain with a garden sprinkler and stir well with shovel. Repeat the sprinkling and stirring until the grain is thoroughly moistened and then shovel into the smallest sized pile possible, where it should remain for not less than two hours. Then spread the grain and dry it sufficiently to pass through the drill if to be sown at once, or dry perfectly if seeding is delayed.

(2). Put the grain in gunny sacks, about $1\frac{1}{2}$ bushels to each, and immerse from five to ten minutes in a barrel, tank, trough, tub or other receptacle containing the formalin solution. A draining board can be used to return the drip, thus saving both time and material. Dry as heretofore described under 1. Drying may be hastened, in both cases, by spreading the grain on canvas sheets out in the air and sunlight. Bags or sacks other than those used for dipping should be treated, including the grain drill.

In adjusting the seeder, allowance must be made for the swelling of the grain. Formalin should not be added to the water until ready for use. The results secured will depend largely on thoroughness of application.

The same methods will apply in the case of barley.

R. S. SHAW,
Director.

To the Editor:

Dear Sir:—This bulletin is not issued to the Experiment Station mailing list. You can aid the people of your community by publishing the above and urging its use.

R. S. S.