

A great deal of carelessness seems to have been displayed in the pickling of seed owing to comparative freedom from smut for some years previously. Some have been under the impression that treating grain once in two or three years was sufficient.

A fault in many cases was the use of too little of the bluestone solution to thoroughly wet the seed although made quite strong enough. Others erred by using too weak a solution, probably sometimes the result of using alkali water. The bluestone, however, from the samples analysed, appears to have been of good quality but there was more fault to be found with the formalin as will be seen by the subjoined data:

THE ANALYSIS OF BLUESTONE AND FORMALIN.

On account of the increased amount of smut in last season's wheat crop, even though in many instances the seed had been treated with bluestone, a suspicion arose, that perhaps the bluestone that had been used was of inferior quality. The Department of Agriculture, therefore, issued the following circular letter, which was inserted in the leading newspapers and the agricultural journals:

"FREE TESTS OF BLUESTONE."

The Editor,

Sir,—Owing to the uncertainty and unensiness which at present exists among the farmers of the Province as to the purity of bluestone and formalin put upon the market as smut preventatives, the Department of Agriculture for Saskatchewan has completed arrangements whereby any samples of the foregoing fungicides will be tested free at the Bacteriological Laboratory of the Department.

Samples for testing should not be less than one ounce, and the formalin sample should be put in an ounce bottle and well secured in a wooden or tin box to prevent breaking, and should not be mailed till nearer spring, when the chance of freezing in transit will be lessened. All such samples addressed to Dr. Charlton, Bacteriologist, Regina, will be subjected to a complete analysis and the findings at once reported to the sender of the sample.

Yours obediently,

Regina, January 19, 1906.

J. R. C. HONEYMAN,
Deputy Commissioner.

The facilities afforded by the Bacteriological Laboratory for the analysis of these fungicides were taken advantage of by a large number of farmers throughout the Province and by a number of merchants dealing in these articles. These samples are still being received daily. Up to the present time 203 samples of bluestone have been analysed. No adulterated sample has, so far, been encountered. The percentage of copper contained in the copper sulphate, estimated as copper oxid, was in the majority of the samples quite up to the standard (32.27%). The poorest sample contained 30.00% of copper oxid. This decrease could be accounted for by the presence of an excess of moisture in these samples. They were not adulterated with iron sulphate, the usual adulterant of bluestone. Bluestone which has been exposed to dry air for a length of time loses a portion of the water of crystallization and becomes encrusted with a greenish white powder. This has been thought to be some foreign