HASTENING THE GERMINATION OF BERMUDA GRASS SEED
BY THE SULFURIC ACID TREATMENT.¹

W. E. BRYAN.

Bermuda grass seed is one of the most difficult of all agricultural seeds to germinate. The ordinary blotter method used for germinating such seeds as alfalfa, corn, beans, wheat, etc., gives no results whatever in most cases. Samples sent to the Arizona station from time to time for germination have given rise to the necessity of ascertaining a reliable method for their germination which would give conclusive results in a shorter period than 21 days, the time usually allowed for the germination of these seeds.

The use of sulfuric acid in hastening the germination of seeds having hard and impervious seed coats is well known. The possibility that the slowness of the germination of Bermuda grass seed was likewise due to an impervious seed coat has suggested that a similar treatment with sulfuric acid might also hasten their germination. To test this suggestion the following experiment was carried out.

A sample of Bermuda grass seed from one of the local seed houses was obtained and 12 lots were counted out, each containing 200 seeds. Each lot was treated with sulfuric acid for periods varying from 5 minutes for the shortest time to 60 minutes for the longest time. In treating the seeds each counted lot was placed in a small glass dish and enough sulfuric acid poured over to cover them. A glass rod was used to stir the acid so that all seeds would be quickly immersed. At the end of each treatment the dish containing the seeds and the acid was dipped into a large beaker of water, and the seeds washed into a cambric bag so that the acid was quickly drained away. The bag was then placed under a faucet and allowed to wash for at least 5 minutes so that all trace of the acid was removed. The bag was then turned wrong side out and the treated seeds were spread on an open blotter for germination. This is conveniently arranged by tying a piece of blotting paper over the top of a small circular glass dish about 2½ inches in diameter, the edge of the paper being pressed down the vertical side of the glass dish so that it reaches almost to the bottom and securely tied with a string. This provides a flat surface on top of the circular dish where the seeds are spread.

¹ Contribution from the Arizona Agricultural Experiment Station, Tucson, Ariz. Received for publication April 8, 1918.