NOTES

A USEFUL SEED BLOWER FOR THE GRASS BREEDER

SINCE the glumes of many grasses fail to free the caryopses upon threshing, the distinction in such cases between empty florets and those containing caryopses often is difficult.

Chewing a few florets from each plant can hardly be considered a satisfactory method of estimating the plant's ability to produce seed. Crushing 100 or more florets from each plant with tweezers is too laborious and costly a method of determining the percentage of caryopses in several thousand plants.

A recent paper describing the merits of a Leendertz blower for making purity determinations of commercial lots of Kentucky bluegrass seed suggested a means by which this problem may be met satisfactorily. Later correspondence with several official seed analysts disclosed the fact that blowers of various types were being used in seed laboratories to assist with purity determinations. Borrowing from and adding to the ideas thus obtained, the author constructed the blower shown in Fig. 1.

Accumulating evidence indicates that climatic variations influence the percentage of florets which develop caryopses. Therefore, if a comparison of the ability of individual plants to produce seed is desired, all samples of seed to be tested should have been produced during the same set of weather conditions.

To reduce the effect of the climatic factor all grass seed harvested for caryopses determinations at Tifton, Georgia, was taken from heads possessing ripe florets and green peduncles. An effort was made to harvest all samples from any one species in the shortest time possible. By labeling tags and seed packets in advance and by keeping them in order, four men were able to collect from 1,000 to 1,500 samples per day. To facilitate separation and to make all results comparable, the seed samples for caryopses determination were oven dried at 80° C for a period of 4 or 5 days prior to making the determinations.

In the cleaning procedure from 0.5 to 1.0 gram of threshed seed from each plant is weighed and placed in the seed tubes. The empty florets are then removed by subjecting each sample to a uniform blast of air in the blower and the percentage of caryopses is determined by


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