The clover seed was separated from the clover head chaff by pouring the entire mixture slowly into the “Bates Laboratory Aspirator” which is commonly used for cleaning grain samples. This aspirator proved to be a very satisfactory piece of equipment for cleaning the clover seed. A 500-head collection of medium red clover heads can be put through both the huller and the Bates aspirator in about 3 minutes.

This huller was also used to hull ladino clover and alfalfa. By using larger screens and making a few minor adjustments it could also be used to hull head samples of wheat and barley.—Howard Wm. Higbee, Department of Agronomy, Pennsylvania State College, State College, Pa.

POLYPLOIDY IN SUGAR BEETS INDUCED BY STORAGE OF TREATED SEED

The induction of polyploidy in sugar beets by the application of a seed treating dust containing 5% ethyl mercury phosphate to the seed and to the soil was reported by Lynes and Harris in 1942.¹ This work suggested the possible induction of polyploidy through storage of sugar beet seed treated with small amounts of this material. The commercial acceptance of sheared seed in 1942 revived the interest in seed treatments and subsequent storage problems. Storage tests were begun at this time at all Holly Sugar Corporation factories to determine the keeping qualities of sugar beet seed under the respective warehouse conditions. Untreated seed and seed treated with Improved Ceresan for both sheared and whole beet seed were used. The author recently obtained samples of these stored bags to determine the presence and extent of induced polyploidy.² Table 1 shows the results obtained from the stored treated samples. Samples of stored bags of untreated seed for all conditions shown in Table 1 were also examined and no indication of polyploidy was observed.

The number of polyploids induced per 100 sprouts was determined by examination of the sprouts produced by duplicate samples of 100 seed balls each on paper toweling in a Minnesota germinator. Thickened radicles and hypocotyls were used as evidence of induced polyploidy.³ Studies of the survival of the induced polyploids were made by planting seed in greenhouse soil to a depth of 3/4 inch. Many of the induced polyploids did not emerge from the soil. Death losses and reversion to diploids accounted for the majority of the polyploids which did emerge. The data show the relatively small number of polyploids surviving at the end of 21 days.

A number of comparisons may be made from the data in Table 1.

²Credit is due C. E. Cormany, Chief Agronomist, Holly Sugar Corporation, for supplying the samples of seed from the storage tests.