EFFECT OF IMMATURE ON SHRINKAGE, SHELLING PERCENTAGE, AND GERMINATION OF SEED CORN

H. W. ALBERTS

Where the corn crop is used for silage in the northern part of the corn belt, it is often necessary to harvest seed corn before the kernels are fully developed. If the plants are allowed to mature, the stalks and leaves become too dry for good silage. In some years the crop is attacked by frost before the end of the growing period. In either instance, the ears of corn which are to be used for seed are harvested before they are fully mature.

Under such conditions the moisture content is high and the development of the kernels is not completed so that their value for seed may be impaired. A study was made to determine the effect of harvesting corn at different stages of maturity on shrinkage, shelling percentage, and germination.

MATERIALS AND METHODS

Two varieties of corn were used: Golden Glow in 1919 and Murdock in 1920. The dates for harvesting Murdock corn were over two weeks later than the dates for the corresponding stages of Golden Glow. This difference was due partly to varietal characteristics, and also may have been due partly to seasonal differences because the tests were made in different years. Corn was harvested at intervals beginning with the milk stage and the last ears were harvested after the kernels were fully dent. Since there was a wide variation in the stage of maturity of plants in the field at a given time, only those ears which were developed farthest in a given area were selected. The husks were removed soon after the ears had been harvested. The ears were then weighed and dried in a well-ventilated room.

EFFECT OF IMMATURE ON SHRINKAGE

Reduction in weight was determined by taking the difference between the weight of ears at the time of harvesting and the beginning of the germination test. The percentage of shrinkage was calculated, using the weight of ears at the time of harvesting as a basis. In the early milk stage moisture comprised over four-fifths of the weight of the ears and consequently the shrinkage was high. Shrinkage was lowest in corn that was harvested after it was fully dent. Shrinkage at this stage was 36% for Golden Glow and 50% for Murdock, as shown in Table 1.

1Contribution from the Department of Agronomy, University of Wisconsin. Published with the approval of the director of the Wisconsin Agricultural Experiment Station. Received for publication April 26, 1926.
2Formerly Instructor in Agronomy.