SEED CORN DRYING EXPERIMENTS

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Rarely, if ever, is seed corn when harvested in Wisconsin sufficiently dry to keep until planting time. Drying seed corn, consequently, is an important matter. Various methods are used. Many of these are unsatisfactory because they are either very expensive or produce poor quality of seed. To reduce cost and avoid poor quality, the bin method of drying seed corn has been introduced. This method dries by forcing heated air through ear corn in bins. The bins have a capacity of 25 to 50 bushels each. The depth of the corn is 5 to 7 feet. The direction of the air is alternated each 12 hours.

Because the bin method is rapidly replacing all other commercial methods of curing seed corn in Wisconsin, it has become very important to know the range of temperatures which can be used for drying, the rapidity of drying, and the degree of dryness which may be reached without damaging the seed.

An experimental bin drier was constructed and the heated air forced through ear corn with an electrically driven blower. An oven for heating the air was devised so that temperatures could be maintained without varying more than 3°C. The temperature readings were made of the air as it entered the bin.

Control samples were obtained by selecting random ears from each lot of corn. These were dried on hangers in a warm, well-ventilated room where they were allowed to remain until they contained approximately 12% moisture.

TEMPERATURE EXPERIMENTS

The first or preliminary experiments were begun late in the season and the corn used had been injured to some extent by freezing weather. This caused uneven germination in all of the lots used, but because these preliminary experiments included details not contained in the later work the results are thought to be useful.

In the first series of experiments, six lots of freshly harvested corn were used. Each lot was tested for moisture content before drying began, and random ears for the control sample were reserved. Immediately afterward, the corn was subjected to rapid drying at desired temperatures. The total time of drying for each of the six lots was 120 hours. At the end of the drying period samples were

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