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EC 127 rev. 1933 Seed Corn Testing

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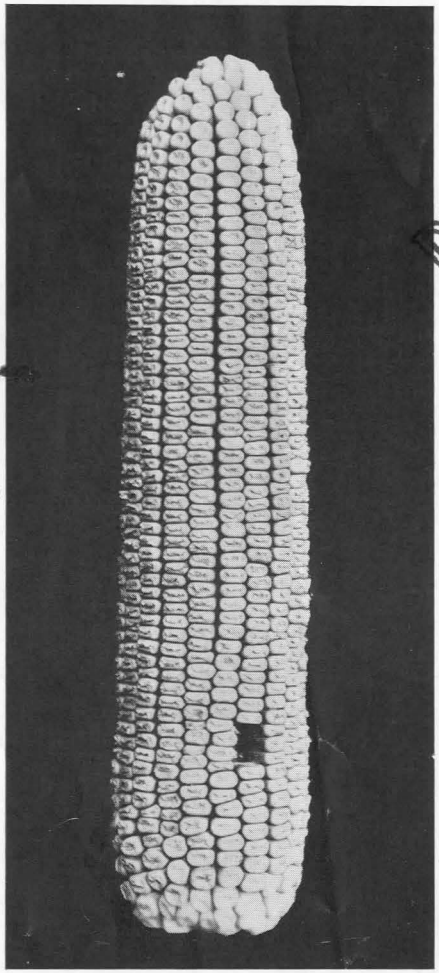
SEED CORN TESTING



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Seed Corn Testing

Good seed corn is the first requirement of a good corn crop. The only certain way to determine how well seed corn will grow is to test it. One may be able to get a fair idea as to its germination by a careful examination of the ears, but a carefully conducted germination test will tell definitely what per cent will grow. It is always wise to run a general test on seed corn before planting.

In most years it will be necessary to run only this general or preliminary test. If this is satisfactory, there is no need of testing individual ears. In seasons when seed has been severely injured and good seed is scarce, it may be necessary to run individual ear tests. It would seem that if the general test of kernels picked from 100 representative seed ears shows that 85 per cent or more germinates strong, an individual ear test would not be necessary.

MAKING THE GENERAL TEST

An easy, simple way to make the preliminary germination test is to use 2 ordinary dinner plates. Cut a piece of blotter paper or thick cloth to fit the bottom of one plate. Moisten this well and scatter a certain number of kernels over this dampened material. Invert a second plate over the first and set this away in a warm place. The blotter or cloth should be kept moist. The test should be ready to read in from 5 to 7 days. This sort of a germinator is also suitable for other grains and for small grass and legume seed.

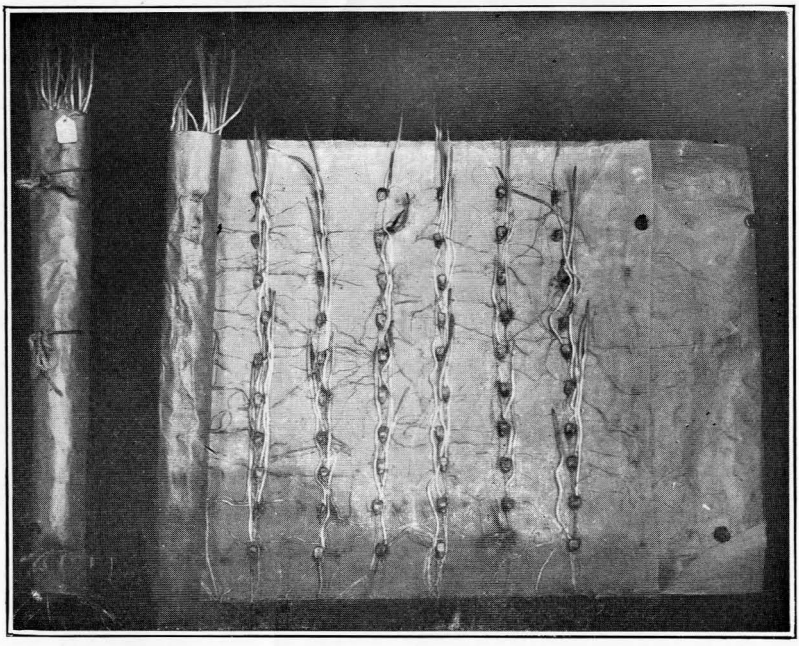

Fig. 1.—The rag-doll tester is very satisfactory for a general test, and if marked off in numbered squares, can also be used for an individual ear test.

The rag-doll tester is very satisfactory for the general test, and if marked off in numbered squares, can also be used for an individual ear test. The cheapest material which has given entire satisfaction is muslin. This should be cut in strips 12 to 16 inches wide and from 3 to 5 feet long. This may be marked in squares and numbered if it is to be used for an individual ear test. When filled with kernels, roll up the rag-doll, using a cob or other cylindrical object as a core, and tie at both ends.

After being filled, the rag-doll should be immersed in luke warm water. Soaking for from 2 to 4 hours will speed up the germination. Then place it where the temperature will range between 50° and 100° F. A temperature between 80° and 90° F. during the day, and from 50° to 60° during the night will give satisfactory results. The rag-doll should be kept moist but well drained thruout the test. The rag-doll tester may be wrapped in a damp gunny sack, or put in a pail covered with a cloth to prevent excessive evaporation. The test should be ready to read in from 5 to 7 days. A general test may also be made by putting kernels in moist soil.

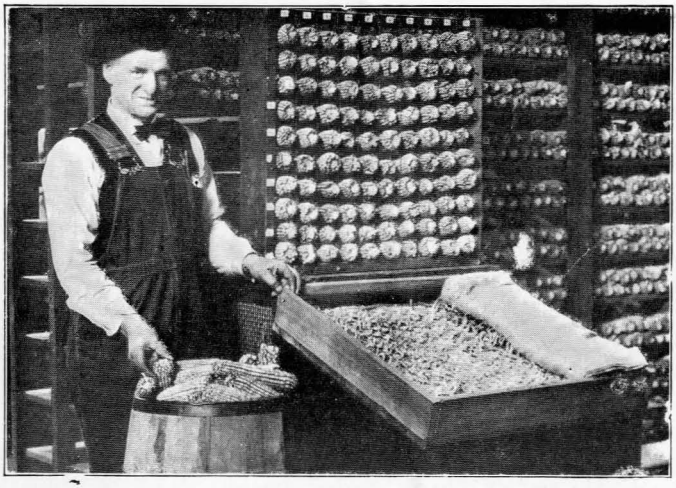

Fig. 2.—A shallow box filled with sand or sawdust covered with a cloth makes a satisfactory germinator.

TESTING INDIVIDUAL EARS

In seasons when seed corn is scarce, it is often necessary to select the best germinating ears by means of an individual ear test. The rag-doll, marked off into numbered squares, is very convenient for use where individual ears must be identified. Racks or frames to hold the ears in definite order for identification are also necessary.

Another kind of simple home-made tester can be made by filling a shallow box with sawdust or sand over which is laid a cloth. If this is to be used for an individual ear test, the cloth should be marked in squares and numbered, with correspondingly numbered ears kept in racks.

GENERAL TYPE OF SEED EARS

In years of freezing injury, it will be found that the rather shallow kerneled, dimple dented ears will germinate better than rough, deep kerneled types. Such ears are somewhat earlier maturing, and are therefore less likely to be frost injured. In addition to such smooth ears being superior in germination, they have also been found to yield better than the rough, pinch dent types.

SHIPPING IN SEED CORN

When local seed is poor, there is always an inclination to ship in seed corn from some distance. This often results in planting corn which is not adapted to local conditions, being too early, or, more often, too late for best results. It will usually be more profitable to secure local seed by the individual ear test, if necessary, than to buy seed from a distance. If new seed is bought, it should come from a region having similar climatic conditions. If new seed or a new variety is wanted, it is advisable to grow only a small acreage at first until its local value has been established.

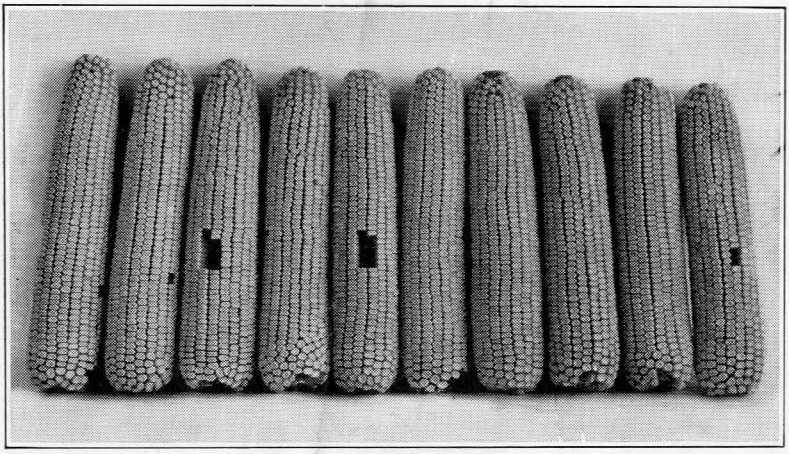

Fig. 3.—Fairly smooth dimple dented ears usually germinate best in years of freezing injury, and also yield better than rough, deep kerneled ears.

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