Ohio Agricultural Experiment Station.

CIRCULAR 74.

WOOSTER, OHIO, MARCH 5, 1908

SEED CORN FOR THE SEASON OF 1908.

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In all probability high grade seed corn is scarcer in Ohio this season than for many years. The principal cause for this is, of course, the cold wet growing season of last year, together with the cool, cloudy fall. Had we had a different October and November, even, corn which did mature, or came close to maturity, would now be in very different seed condition. As matters stand great care must needs be exercised or 1908 will find Ohio with one of the poorest corn crops in years.

Very many growers, particularly in the northern half of the state, will have to buy seed. There are two considerations of especial importance to which the Ohio Experiment Station would call your attention. First, the *adaptability* of the proposed seed corn to the locality where it is to be grown. In other words,

WILL IT MATURE?

The Station hardly needs to discuss the importance of this matter. The thousands of cribs of moldy corn in this state bear witness to its importance. While we all know the value of maturity, we do not all act in the light of our knowledge. Better choose corn that will mature a few days before frosts are to be expected, even if we lose a little some long season, than be caught too badly of a short and cold season.

The Experiment Station wishes it could tell every grower in search of seed corn just where he can find the seed adapted to his needs, but this is an impossibility. It feels warranted in saying, however, that the chances are that a thorough canvass of one's own neighborhood (a radius of 10 or 15 miles) will result in the discovery of safer, and upon the whole, better seed for his main crop than can be secured by importation from a considerable distance. If one desires to try new varieties from a distance, let it first be upon a small scale.

It is probable that much seed corn will have to be selected from the crib. In this event, it will be well to take ears from the top and sides rather than from the center of the crib as it will likely germinate better because of better ventilation.

Intimately associated with maturity is what is termed *seed condition.* Not all corn which matured fairly well is in good seed condition now. Corn that has been handled so carelessly that it will not grow is of no value from the standpoint of seed corn, and can only result in serious loss to the one who plants it. Accordingly, the second question every corn grower must set himself to answer is,

WILL IT GROW?

Happily this question can be answered more easily than the first. There is nothing to hinder any farmer from testing each ear of corn he proposes to use for seed. If this germination test is to have any great value it will be necessary to determine the seed condition of each individual ear and reject the few or many, as the case may be, which show low germination. In this way only can the germinating qualities of a given lot of corn be improved.

METHOD OF CONDUCTING GERMINATION TEST.

Make a box 20 x 30 x 2 inches, inside measure, Lay it off in two-inch squares (marking the edges of the box) thus having 15 rows of 10 squares each. Number the squares from 1 to 10 across the ends of the box and from 0 to 14 along the sides, so that it will be possible to tell at a glance the number of any particular square. Drive tacks in the sides and ends (outside) in line with the division marks.

Fill the box half full of fine, moist soil, level off, firm and, for convenience in planting, mark out the soil in two-inch squares corresponding to the division marks on edges of box. The box is then ready for planting.

Number each ear using a half-inch square of paste-board and fastening it to butt of ear with a small wire nail. Take three kernels from the opposite sides of each ear (butt, middle and tip) six kernels in all, and place them in the square corresponding to the number given the ear. When the kernels from 150 ears have been placed, cover them with soil carefully and to a uniform depth.

For convenience in locating ears at the completion of the test, take a strong cord and draw tightly from tack to tack both ways of the box, thus dividing the box into 150 two-inch squares. If there is danger from rats or mice, the box should be covered with wire screen.

Keep the soil moist during the test and not under too favorable conditions as regards temperature, else very many candidates will pass the box test only to fail later in the field, to the serious loss of the grower. If the temperature drops to 40° or 50° Fahr. where the box is kept at night, the test will be the more valuable.

Make counts when plants are about two inches high. For best results no ear of which all six kernels do not show vigorous growth should be used. (It should, perhaps, be stated that mere *rapidity* of germination is not of moment.) If, for good reasons, it seems necessary, ears of which five of the six kernels are all right may be used providing care is taken in shelling them to reject the portion showing poor condition.

A blank form accompanies this circular upon which records may be kept. More blanks will be supplied upon request. When the test is completed the Station will be pleased to receive the report, or a copy of the same.

OTHER POINTS IN THE SPRING SELECTION OF SEED CORN.

While the two questions propounded above are of first importance for all corn growers at all times, and about all that many can consider this season, there are those who have the usual amount of good seed from the standpoint of maturity and seed condition who may well consider other points of value; among them:

SHAPE OF KERNELS.

Kernels should broaden slightly from tip to crown, with edges comparatively straight so that there is no waste space between the rows. Observed from the edge they should be as thick at the tip as at the crown and should be so closely set that no space is lost between the kernels in the row. Good length is, of course, desirable although it has not been shown that extreme length is essential to highest yield.

UNIFORMITY.

It is desirable that seed corn be reasonably uniform as to size, shape, color and indentation of kernels. Some of these points have great practical value in machine planting and some a cash value when it comes to marketing. Many other points are of interest for exhibition purposes, but it is a little early in the history of corn breeding to be very insistant upon what constitutes the ideal type.

WEIGHT OF EAR.

Weight of ear is of no little significance when conditions of growth are known to be normal, that is, when ears are selected from the standing plant and conditions are studied. Apart from this knowledge or when ears are selected from the wagon or crib, weight is of little moment. In a vast majority of cases it results simply from extra food supply due to thin stand of plants. It is not infrequently accompanied by an excessively large cob and immaturity and as such should be shunned.

COLOR.

Purity in color is one evidence of purity in breeding. Pure breeding has a commercial value in the plant world today as it has long had in the animal world. Mixed breeding is shown by variation in color of ears as a whole and by off-colored kernels and cobs. Yellow corn should have red cobs and white corn should have white cobs.

THE PROPER TIME TO SELECT SEED CORN.

After all is said, and the best possible is done, the corn grower should get well in mind the fact that the only really satisfactory time to select seed corn is in the fall and from the standing corn. In advance of the time for doing this work the Station will be glad to send anyone interested, circulars giving best methods to be pursued.