A TEST OF THE VITALITY OF SEED CORN.

The quality of seed corn to be used for planting the coming season’s corn crop in Illinois is unknown. The unfavorable condition of the past season, the extreme low temperature of this winter and other circumstances may have affected the vitality of the seed corn to be used the coming season.

The Experiment Station of the University of Illinois desires the coöperation of the Illinois corn growers. Will you make a test of the vitality of your seed corn according to the following directions, fill out the accompanying blanks, detach the last leaf and mail it to A. D. Shamel, Agricultural Experiment Station, Urbana, Illinois?

Our desire is to reach many farmers in the state, therefore we send this circular of inquiry, to all names on our mailing list, hoping those interested in seed corn will coöperate.

METHOD OF TESTING VITALITY OF SEED CORN.

Select from different parts of the supply of seed corn 100 ears of average size and appearance. Take out one kernel for testing from near the middle of each ear, making 100 kernels in all. If the seed corn is shelled pick out from different parts of the bin 100 kernels. Fill an ordinary China dinner plate with sand and pour water on the sand until it runs off the plate. Shake the sand down firm and level in the plate and run off the extra water not retained by the sand. Stick the kernels selected for testing point down in the sand 100 kernels to the plate. Sprinkle a little dry sand over the wet sand, turn a second smaller plate over the first to prevent the too rapid evaporation of moisture and set in
a warm place, under the stove or in a warm room. The temperature of the ordinary living room is warm enough to sprout the seed. Keep a record of the number that sprout in the following form, and copy in on the similar form on the last page, which is to be returned to the Experiment Station as above directed.

<table>
<thead>
<tr>
<th>Examination, After 1 day.</th>
<th>Number of seeds sprouted.</th>
<th>Number of seeds not sprouted.</th>
<th>Per cent. of seeds sprouted.</th>
<th>Temperature of air where plate stands.</th>
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</thead>
<tbody>
<tr>
<td>Examination, After 2 days.</td>
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<td>Examination, After 4 days.</td>
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<td>Examination, After 6 days.</td>
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<td>Examination, After 8 days.</td>
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<td>Examination, After 10 days.</td>
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</table>

**Precautions.**

1. If the sand becomes dry sprinkle warm water (not too hot to hold the hand in) over it until the sand is thoroughly moistened.
2. Wait until the kernels are pushed out of the sand by the young plants. Do not dig them up until the end of ten days.
3. Use as fine sand as can be procured. It will hold the moisture longer than coarse sand, hence will furnish more favorable conditions for germination.

**Suggestion.**

By pinning little pieces of paper numbered from 1 to 100 on the ears and then placing the kernels from the respective ears in regular order in the plate of sand, as 10 rows across the plate with 10 kernels in each row, one can easily tell to which ears the kernels belong which do not germinate. Remember that it requires only 10 good ears to plant an acre of corn, and that one bad ear out of 10 may mean 6 or 8 bushels loss at harvest time. All ears whose kernels do not germinate should either be discarded immediately as
unfit for seed, or they should be given a more thorough trial by testing ten kernels from each of such ears and unless each one of the 10 kernels germinates, the ear should be discarded.

If possible test every ear of seed corn; if this is not possible then select the ears so that they will represent as nearly as may be the average of the seed corn.

At the end of five days 95 per cent. out of the tested kernels should have sprouted. If five per cent of the kernels fail to sprout it indicates poor vitality. Such seed should not be planted as the result will be weak plants, an uneven stand and a poor yield.

**INFORMATION TO BE RETURNED TO THE AGRICULTURAL EXPERIMENT STATION, URBANA, ILL.**

Please fill out carefully and give any additional data about the seed corn in the space for Remarks. If you do not know the name of the corn give all the information at hand, as to its origin and past history.

Name of variety of seed corn ..................................................
Approximate yield per acre last season ....................................
Source where seed was secured ................................................
When was seed selected? ....................................................... 
Was seed stored in crib house, barn, or special storehouse?

Was there a stove, furnace, flue, or other source of heat in the building where the seed corn was kept during the winter? 
Was the seed grown in 1901? ................................................
Color of corn—(White, yellow, red or mixed kernels)  
White or red cob ........................................................................
What is the average number of rows of kernels on ears tested? 
What is the average number of kernels in the row? 
What is the average length of ear? ............................................
What is the average circumference of ear? .................................
**TEST OF VITALITY.**

Date. .................................................................

Number of kernels tested. ........................................

Kind of seed .........................................................

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<td>10 days.</td>
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Remarks.

Name...........................................................................

Postoffice..................................................................

County ......................................................................

A. D. SHAMEL,
Instructor in Farm Crops, University of Illinois.