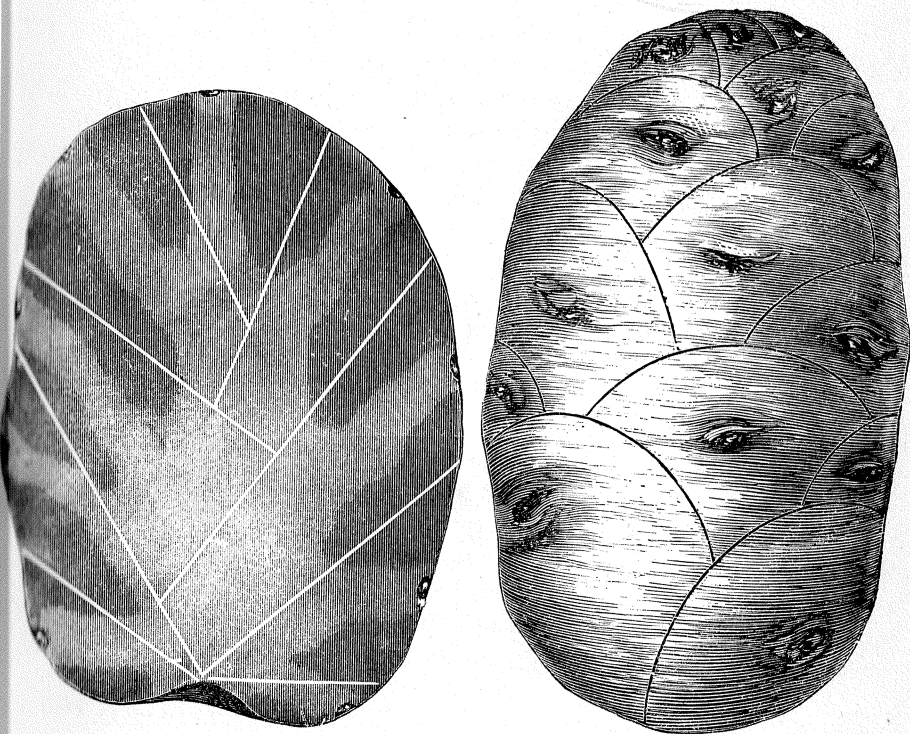


Henry H. King
Genova, Ill.
Feb. 1. 1883

CIRCULAR NO. 1.

NEW YORK AGRICULTURAL EXPERIMENT STATION.



*To the Farmers' Associations,
and Farmers of New York :*

Through the courtesy of Messrs. Hiram Sibley & Co., Rochester, we are able to present a drawing and a diagram showing the method for the best cutting of potato seed according to the result of the Station experiments for 1882.

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The left hand figure is intended to be a diagram of a section of the potato showing that there is an internal structure to the potato tuber, and that the method of cutting to single eyes should take cognizance of this structure. The right-hand figure represents a potato marked for cutting into single eyes. As the potato eyes are arranged in a spiral upon the tuber, it follows that if our cutting is commenced with the stem end at the first eye and then the potato be rotated so as to bring the next eye under the knife, that in this manner we can readily and quickly divide the potato tuber into pieces containing each one eye, and each piece is cut through the centre of the potato in the proper way, provided we take the precaution of holding a knife at the angle indicated by the structure in the section.

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We desire to call the attention of our farmers to this method of cutting the potato, as under equivalent conditions, all kinds of seed being used, even including the whole potato, there were none which showed the same influence on crop in 1882 as those which were cut after the method illustrated above. If our results shall stand the test of verification it follows that by this method of cutting we are not only saving a large quantity of seed per acre, but we are also gaining an increase of crop.

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There are various circumstances which, however, in a trial of this kind, require to be kept in mind. One is that the seed is but one factor of the crop. Poverty-stricken soil, neglect in planting and during growth, and a season extremely unfavorable may offset any advantage which the seed may have to offer. Where all must fail one seed cannot be classed agriculturally as superior to another. On the other hand, fertility in excess, prime condition of soil and treatment, may offset the influence of seed, so much so that the poorer seed may show as the better. Thus, single eyes cut small and shallow on an extremely rich garden soil may produce a crop perfectly satisfactory to the grower, while the same seed planted in the field under field conditions shall fail entirely.

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The experiment that we desire to suggest to those farmers who are willing to co-operate with us in determining the value of our experiment and the verity of our conclusions, is as follows :

1. Select a piece of land of but moderate fertility and of but moderate condition, for the reason that under this condition differences to be ascribed to the seed become more marked than under more favorable conditions.

2. In clay soil plant upon moderate ridges ; in a sandy, open soil use level culture.

3. Use single eyes cut according to the illustration and whole potatoes of the same size from which the eyes were cut, or ordinary cuts, as seed.

4. Plant in drills three feet and a half apart, two seed in a hill every 12 inches apart.

5. Cultivate and hoe in the ordinary manner or as preferred, treating the various trials alike and keeping free from weeds.

6. Report the result of the harvest, together with particulars of treatment to the Station or to the newspapers of the State.

In cutting a potato it seems, so far as we at present know, to be advantageous to prepare the seed a few days in advance of use and to place in such a position that their cut surfaces shall, to a certain extent, become dry.

Those farmers who will co-operate with the Station in testing Station results, by so doing will confer a favor upon themselves as well as upon the public, as thus the Station efforts may become more immediately available as they become more generally tested and verified. Hence, we have prepared this circular for distribution among the farmer associations of the State, and we trust that some effort will be made by parties who are interested in progressive agriculture to test and pronounce upon the validity of our experimental conclusions.

E. LEWIS STURTEVANT,

Director.

GENEVA, N. Y., Feb. 1, 1883.

