EFFECT OF SOME SEED POTATO TREATMENTS ON GERMINATION AND YIELD

J. H. STALLINGS

Much has been said from time to time about the proper method of handling seed potatoes before planting in order to obtain maximum yields of good quality potatoes. Some experimental work has been conducted to determine the effect of various seed treatments upon the germination of the seed piece, but little effort has been made to follow through to harvest the influence of the various seed treatments used upon the yield and quality of the potatoes produced from such treatments. The aim of most investigators thus far has been to discover those practices which lead to high germination of the seed piece which in turn result in good stands. Apparently, they have assumed that the best yields would naturally follow the best stands.

Observations made during the spring of 1927 indicated very clearly that better stands were obtained from planting seed pieces which had been allowed to stand from 24 to 48 hours after being cut before planting than from planting freshly cut seed pieces. It was also clearly evident that seed pieces which had been dusted with sulfur did not produce good stands, while, on the other hand, dusting with lime seemed to have a neutral or slightly beneficial effect upon germination.

It is generally conceded that one of the first essentials for successful potato growing is the getting of a good stand of potatoes. However, certain observations made in connection with the 1927 potato crop led the writer to question whether or not the treatments which resulted in low or high stands would necessarily result in low or high yields of quality potatoes.

With these points in mind an experiment was planned for the spring of 1928 for the purpose of determining not only the effects of different treatments of the seed piece on the resulting stand of potatoes but upon the yield and quality of potatoes as well. Because of the fact that it is more difficult to obtain satisfactory stands of potatoes on the lighter, drier soils than on heavier, wetter ones, the experiment was carried out on Norfolk fine sand.

An area of Norfolk fine sand, 70 feet by 210 feet, was divided into 10 blocks equal in size and planted to potatoes. The potatoes of each

1Contribution from the J. C. Penney-Gwinn Corp., Penney Farms, Florida. Received for publication October 26, 1928.
2Head, Agronomy Department.