

various treatments were repeated several times as indicated below. The individual rows were 55 hills long (1 hill per foot) and 42 inches apart. At digging time, as the stands were virtually perfect, enough hills were discarded at each end of the row to leave 50 hills for comparison.

In the Federal Point plots no clean checks were planted, but only those tubers were used which were sprinkled with sclerotia. The differently treated samples were planted according to Fig. 3, where each figure corresponds to the treatment as indicated in Tables IV and V.

1	3	1	4	5	1	2	1
1	1	4	5	1	2	3	1
1	4	5	1	2	3	1	1
1	5	1	2	3	1	4	1
1	1	2	3	1	4	5	1
1	2	3	1	4	5	1	1

Fig. 3.—The planting plan for the seed-potato treatment plots in Federal Point, Florida, in 1926.

The stems from 75 hills in each lot under comparison were examined for rhizoctonosis when the plants were about three inches above the surface of the ground, and only occasional, very slight lesions were observed in any lot. No seed-piece decay inspection was made at this time, but most of the seed pieces were intact at digging. All of the plants were small and the yields were poor. This was probably due to the wet, cold weather in the early part of the growing season. No differences were observed in germination, size, stand, or plant vigor between the plants of the different treatments. At harvest all of the tubers in each grade were weighed and counted in order to have a double check on the efficiency of the treatment. However, these and later experiments confirm Gilman and Melhus' statement that "In potato seed treatment experiments the efficiency of the treatment can be measured with approximately the same accuracy either by weight or count of the percentage of diseased progeny resulting from that treatment" (31). Tables IV and V show the yields in weight and number of tubers respectively. All of the treated lots were outyielded by the untreated sample both in weight and in number of tubers except where whole tubers were treated with Bayer compounds. Semesan caused decided decreases where both whole and cut tubers were treated.