

pounds per acre. It was first thoroughly mixed with fine sand, then scattered in uniform amounts in the furrow and covered to a depth of about 1/3 inch. The seed pieces were planted immediately on top of this, but not in contact with the disinfectant, and covered as usual. The injury, which was extremely severe, took the form of retardation of germination and growth. Frequently the sprouts were extremely short and thick, and in many instances germination was totally inhibited. It is probable that if the material had been thoroughly mixed and applied with the fertilizer the injury might have been less severe, but regardless of the manner of application it is apparently exceedingly dangerous and requires thorough experimentation and modification.

In these plots no sclerotia were observed on the tubers at digging time. In the Hastings plot the diseased untreated sample consistently outyielded those of all the other treatments, while in the La Crosse experiment the diseased controls were outyielded, though not significantly, by hot formaldehyde, and by the clean and diseased corrosive sublimate treated lots.

DISCUSSION OF RESULTS IN FLORIDA

The treatment of seed potatoes as reported herein yielded results which are rather consistent with the amount of rhizoctonosis usually prevalent in this section, and with results obtained in some other sections. Corrosive sublimate is usually considered favorable only for the control of this particular disease and scab and not for stimulating plant growth. With the insignificant amount of rhizoctonosis injury in most of the plots, outstanding results could hardly be expected. Significant increases were demonstrated but once, and these in the very early planted section in the absence of disease.

Clayton(13), Schultz et al.(79), and others occasionally report increases in yield by the use of organic mercury compounds, even where disease is not effectively controlled. Reasoning from their conclusions one could expect good increases in yield from the use of these materials especially where disease was a negligible factor. In the Florida experiments, however, with all of the different forms of these materials used, and throughout the large number of replications, the differences were usually not significant. Several times the yields were significantly less, and in but one or two instances were they significantly more than those from the untreated controls.