tively. Yield data, shown in Tables VIII and IX, were obtained and calculated on a basis of 50 hills for both the number and weight of the tubers. These calculations indicate that although decreases in yield occurred in both treated samples, they were about 3 times as great by weight in prime tubers where semesan bel was used as in the sample treated with corrosive sublimate. It is to be emphasized that these results, obtained under extreme conditions, and here reported are given only because of their interest with reference to the conflicting factors involved. They refer to the trials of one year only and it is not known what the possibilities are of duplicating them.

Tables X and XI show the results of another plot in the Federal Point section planted later than the one discussed above. In this plot corrosive sublimate, two strengths of dipdust, and semesan bel were paired in 3 direct comparisons with untreated controls. All of the tubers treated were unsorted "bag run" stock, on about half of which was found a medium number of small sclerotia. No disease was observed in any part of these plots, and the seed pieces were sound at digging time. The yield, both in weight (Table X) and number of tubers (Table XI), indicate fairly significant increases for primes and marketable tubers where corrosive sublimate was used; insignificant decreases, for dipdust 1:16 and semesan bel, and significant decreases for dipdust 1:24. There might have been less inconsistency in the results if more than 3 replications had been planted per treatment, but viewing these results in the light of previous and later experiments this seems rather questionable.

The plot in the Hastings sections consisted of six direct comparisons with the untreated controls. The treatments used were dipdust 1:20, dip; dipdust (Bayer special) 181, 1:40 dip; and semesan bel 1:20 dip. Each lot was planted in alternate rows 50 feet long. This experiment was conducted exactly as a commercial grower would conduct it. The different unsorted, "bag run" lots, showing only a trace of sclerotia were treated a half day after cutting and immediately before planting with an automatic picker planter. Observations were made as before. No rhizoctonosis symptoms were observed at any time and the stands were as perfect as they could be with this type of planting. There was no difference in rate of germination or relative vigor of the plants. At digging, representative sample plots 50 feet long were dug by hand, graded and weighed. Treatments with dipdust, Bayer special 181, and semesan bel produced significant increases in yield