CONTROL OF VERTICILLIUM WILT IN RUSSET BURBANK POTATO WITH DI-SYSTON

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The field selected for the experiment had grown potatoes each year since 1958, and it was severely infested with the fungus causing Verticillium wilt. Fertilizer was broadcast at the rate of 67, 27, and 106 pounds of N, P and K per acre respectively. The certified Russet Burbank seed was slightly sprouted when cut into seed pieces weighing 1.5 to 2 ounces. It was dusted with Captan immediately after cutting and planted the following day with a 2-row, assisted feed planter which placed the seed 12 inches apart within and 38 inches between the rows.

Verticillium wilt vine symptoms appeared on the check plot the latter part of July 1964, and the plants were dead four weeks later. Symptoms did not appear on the Di-Syston plot until the second week of August and some green foliage remained when the final notes were taken September 18. Since none of the common potato insects were present in appreciable numbers, it was assumed that the increased yield on the Di-Syston plot was due to factors other than insect control.

TABLE 1. Effect of Di-Syston on the weight per acre, total number of tubers, average tuber weight, per cent of the U.S. No. 1's and specific gravity of the Russet Burbank potato.

Treatment	Weight per acre cwt.	Total number tubers[1]	Average tuber weight oz.	U.S. No. 1 tubers pct.	Specific gravity
Di-Syston granules[2]	777	718	12.59	56.2	1.087
Nontreated (check)	536	682	9.15	51.0	1.084

Significant increases in total yield (241 cwt.) and average tuber weight (3.44 oz.) were obtained by applying Di-Syston granules costing about $9 per acre.

1 From totaling the tubers in each of the four 25-hill replicates.
2 Di-Syston was used at the rate of 3 lbs. of active ingredient per acre.