

mildew control obtained by treating plants with chloranil dust is shown in Figure 1.

Zineb spray, which was tested three years, and nabam spray, one year, gave good control of downy mildew. Zineb spray was as effective as chloranil spray in 1944. In 1946 nabam and zineb sprays gave better control than manzate spray, and 4 percent zineb and 12 percent chloranil plus 10 percent ferbam dusts.

#### 1948-1952 TESTS

Chloranil, nabam, phygon XL-N and manzate sprays; and 12 percent chloranil, 5 percent chloranil and 6.5 percent zineb dusts were tested for control of downy mildew in the 1948-1952 period.

Plants were grown in the same area during the five years. Each plot consisted of three two-drill-row plant beds 40 feet in length. Treatments were made with a tractor-operated sprayer and duster equipped with enough nozzles to cover the plants with fungicides. A 30-foot turnrow between the ends and a 10-foot unplanted space between the sides of plots minimized drift of the fungicides from one treatment to the next. The materials were applied on the same schedule as that used in the 1944-1946 tests, but minimum quantities of spray and dust used at the first application were larger, as shown in Table 4. It was impossible to adjust the sprayer and duster to apply less than the amounts shown. As the plants grew larger, more spray and dust were used in the 1948-1952 tests than were used on similar size plants in previous tests. Maximum quantities used per acre on the largest plants were 150 gallons spray and 35 pounds dust. Percentages of the foliage killed by downy mildew in each plot and the number and weight of plants in samples drawn from the plots were used in determining effectiveness of the different fungicides (see Table 5).

TABLE 4.—QUANTITIES OF SPRAY AND DUST USED AT EACH APPLICATION IN PLANT BEDS FROM 1948 TO 1952.

Plant Height	Narrow Two-Drill-Row Plant Beds 40 Inches Apart	
	Spray Gals. per Acre	Dust Lbs. per Acre
Less than 2 inches..	80 to 100	15 to 20
2 to 4 inches .....	100 to 120	20 to 25
4 to 8 inches .....	120 to 150	25 to 35