

Russet on Bartlett Pears

neither sprays nor dusts applied during the cluster-bud and bloom period increased russeting in tests during 1956 season

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Russet of Bartlett pears was not increased by the cluster-bud spray or bloom period dusts applied in test orchards during the spring of 1956.

Even though the cause of russetting has not been determined, earlier experiments have shown that protecting branches with large cloth bags during the bloom greatly reduced the amount of fruit russet. During this period Bartletts normally receive a cluster-bud spray for the control of mite eggs and scab as well as sprays or dusts during bloom for fire-blight control.

During the 1956 season the materials recommended for the cluster-bud spray were tested to determine their effect on pear russetting. The standard copper dust blight-control program and the experimental streptomycin-pyrophyllite dust were compared with no blight-control treatment.

The standard cluster-bud spray consists of a mixture of lime-sulfur, wettable sulfur, and a miticide such as Genite 923. These materials were applied singly and

in all possible combinations to two-acre blocks of a Sacramento County Bartlett orchard.

Just before harvest, samples of pears were collected from the trees receiving the cluster-bud sprays and evaluated as to the extent of fruit russet. None of these materials used singly or in combination caused a significant increase in the amount of russet.

To compare the effects of copper and streptomycin dusts on russetting, fruit samples were collected from plots in seven orchards in five counties. As in the tests of the previous three years, neither the copper nor the streptomycin dusts caused significantly more russet than was obtained under no blight-control treatment. A difference of 10% of the lenticels russeted would be difficult to observe between different lots of fruit. The sample pears from Sacramento, Yuba, and Mendocino counties were only lightly russeted; those from the Lake and San Joaquin county orchards were more severely russeted.

Effect of the Materials Used in the Cluster Bud Spray Applied Alone and in Combination on the Russetting of Bartlett Pears, Sacramento County, 1956

Treatment*	Lenticels russeted %
Check	29
Lime sulfur	32
Wettable sulfur	35
Genite 923	32
Lime sulfur—wettable sulfur	28
Lime sulfur—Genite 923	28
Wettable sulfur—Genite 923	36
Lime sulfur—wettable sulfur—Genite 923	32

Amount per 100 gallons

* Lime sulfur	2 gal.
Wettable sulfur	4 lbs.
Genite 923	1½ pints of 50% emulsion

The effect of Copper and Streptomycin Blight-Control Dusts on the Russetting of Bartlett Pears, 1956

County	Lenticels Russeted		
	Check	Copper*	Streptomycin**
Sacramento	%	%	%
Orchard No. 1	23	32	24
Orchard No. 2	22	28	28
Orchard No. 3	26	32	26
Yuba	21	21	30
Mendocino	30	32	30
Lake		56	49
San Joaquin		46	52

* Copper dust was applied from 6 to 12 times, as 10-90 or 20-80 copper-lime or a fixed copper at 15-35 lbs. per acre each time.

** Streptomycin-pyrophyllite dust, 1,000 parts per million, was applied from 6 to 9 times, using various amounts from 15 to 50 lbs. per acre at each application.

In one of the Sacramento County orchards, copper-lime dust treatments were varied in concentration, rate and number of applications. The amount of metallic copper applied per acre during the season was 3.15 pounds in the block receiving the least amount of copper which was dusted six times with 10-90 copper-lime at the rate of 15 pounds per acre. The block receiving the most copper was dusted 12 times at the rate of 30 pounds per acre of 20-80 copper-lime. The trees were dusted with 25.2 pounds of metallic copper per acre during the season.

Fruit russet was essentially the same whether the fruit came from trees not dusted with copper or those dusted with up to 25.2 pounds of metallic copper per acre during the blight-control season.

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The studies concerning the comparison of streptomycin, copper, and no blight-control treatment were made in plots in which Peter Ark, Professor of Plant Pathology, University of California, Berkeley, conducted blight-control experiments with streptomycin-pyrophyllite.

The Effect of Different Concentrations, Rates, and Number of Applications of Copper-Lime Dusts on the Russetting of Bartlett Pears, Sacramento County, 1956

Treatment	No. of applications	Total lbs. metallic copper / acre during season	% of lenticels russeted
Check		0	23
Copper-lime 10-90			
15 lbs./acre	6	3.15	28
15 lbs./acre	12	6.30	32
Copper-lime 20-80			
15 lbs./acre	12	12.60	21
30 lbs./acre	12	25.20	28

GRAPE LEAF FOLDER

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In general, the results indicate that vines treated during the first brood showed fewer leaf rolls at the end of the second brood than did nearby untreated vines. This carryover effect was more evident where the infestations were not heavy. The carryover effect on moderately infested vines was as great for parathion dust as for cryolite dust. In the

vineyard showing the second highest infestation—at Exeter—the more persistent insecticides—standard lead arsenate and cryolite—gave better carryover effect. In the vineyard showing the highest infestation—at Woodlake—the differences between treatments were greater. In this case standard lead arsenate spray gave the greatest carryover effect while cryolite dust showed little such effect. Plots treated with parathion dust showed greater infestation than vines not dusted

with parathion until the second brood, that is, the check plots.

A number of dusts were tested in a second brood plot. The timing was a little late, so that the counts did not show differences as great as desired. The greatest reductions were obtained with 2% parathion, 2% methyl parathion, 4% Diazinon and 2% Phosdrin. Poorer controls were secured with 5% Guthion, 2% Niagara 1240, 3% Hercules 528, 1%

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