

COMPARISON OF BACTERICIDES AND CULTURAL METHOD FOR CONTROL OF BACTERIAL BLIGHT OF LILAC, 2000: The objective of the trial was to compare control of copper resistant *Pseudomonas syringae* pv. *syringae* with different bactericides and a cultural disease control method of covering shrubs with plastic. Plastic (6 mil) was used to cover 4 sets of 2 adjacent randomly selected shrubs on 3 Feb. The plastic was supported by 18 foot pvc tubing arched over plants and completely surrounded the top and sides of the shrubs down to 1 - 2 feet from the ground. All shrubs in the block were inoculated on 5 Feb and again on 20 Feb with an equal part mixture of 3 pathogenic, copper resistant, streptomycin sensitive strains of *Pseudomonas syringae* pv. *syringae* isolated in 1993 from diseased lilacs (22A, 11E and 58D). Inoculum was applied using a solo backpack sprayer at a concentration of 1×10^8 cfu/ml and a rate of 0.21 qt/shrub giving a final inoculum dose of 2×10^{10} cfu/shrub. Bactericide and cultural treatments were arranged in a randomized complete block design in a block of 'Ellen Willmott' lilacs planted in 1993 on a 5 x 15 ft spacing. Each bactericide treatment consisted of 4 double shrub replicates (8 shrubs/treatment). Zinc plus Citric Acid and Cit 30 were applied using a separate solo backpack sprayer while all other bactericides were applied using a hydraulic handgun sprayer at about 100 psi. All treatments were applied at a rate of 100 gal water/A with approximately 1 gal of a spray suspension applied to each shrub. Treatments were applied on 12 Feb (dormant) and 27 Feb to 1 Mar when buds were swollen. However, Agri-mycin 17 was applied on 17 Feb rather than 12 Feb. Plastic covers were removed on 4 Apr when bushes were beginning to bloom. Urea fertilizer was broadcast around each shrub on 14 Apr at a rate of 25 lb/A. From 3 Feb through 18 Apr, 10.94 in of rain fell and there were 18 days with low temperatures at or below 32°F; the lowest temperature was 27°F on 9 Feb. Incidence of bacterial blight was evaluated on 14 Mar by examining bushes for dead terminal buds. Incidence of blight infecting > 50% of the entire shoot was assessed on 18 Apr by examining 100 of each floral and vegetative terminal shoots.

The spring growing season was characterized as dry which resulted in low disease pressure. Non-inoculated shrubs showed a very low incidence of disease (data not shown). Plant development under the plastic shelters was accelerated by 1-2 weeks relative to the other treatments during the trial period. The incidence of dead buds on plants treated with Agri-mycin or ManKocide was not significantly different from nontreated plants. All other treatments including plants under plastic shelters had significantly fewer dead buds than nontreated plants. Only plants under plastic shelters had significantly fewer diseased vegetative shoots than nontreated plants. Plants under plastic shelters had the fewest blighted floral shoots but plants treated with Kocide 101 or Kocide 101 plus Manzate 200 were not significantly different. The ManKocide used for this trial was not mixing well during the 2nd spray application and may have been out of date product. No phytotoxicity was observed on any plants in any treatment.

Treatment & Rate/A	Incidence of dead buds (%)*	Incidence of Shoots with >50% Blight*	
		Vegetative Shoots (%)	Floral Shoots (%)
Nontreated	15.0 a	3.8 b	7.3 abc
Plastic Shelters	3.0 c	0.5 c	0.5 d
Zinc 20 oz + Citric Acid 180 oz.....	6.3 bc	4.0 ab	9.0 abc
Cit 30 at 1.5 gal.....	8.3 bc	7.0 a	10.5 ab
Agri-mycin 17 WP 1 lb	10.0 ab	4.3 ab	8.8 abc
Kocide 2000 DF 0.75 lb	7.8 bc	5.0 ab	9.0 abc
Kocide 101 WP 1 lb	8.5 b	4.3 ab	5.8 bcd
Kocide 101 WP 1 lb + Manzate 200 DG 1 lb	8.0 bc	3.8 b	3.0 cd
Manzate 200 DG 1 lb	8.5 b	6.3 ab	11.8 ab
ManKocide DF 1 lb	9.8 ab	6.5 ab	13.0 a

* Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).