LILAC (*Syringa vulgaris* 'Ellen Willmott')
Bacterial Blight; *Pseudomonas syringae* pv. *syringae*

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**Bactericides for control of bacterial blight of lilac, 2005.**

Bactericide 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 single shrub replicates. Nontreated bushes were on either side of treated bushes. All bactericides were applied using a pump-style 'Solo' backpack sprayer at a rate of 73 to 146 gal water/A. Approximately 0.5 to 1 gal of a spray suspension was applied per 4 bushes depending on the amount of foliage present on bushes. Treatments were applied on 14 Feb 05 (buds swollen), 1 Mar 05 (early shoot growth), 15 Mar 05 (leaves out), and 30 Mar 05 (early bloom). All bushes were severely pruned (50% old wood removed) and hedged in mid Aug 04 to encourage new growth. Lilacs were irrigated on 11 Mar 05 for 2 hrs using perforated pipe to encourage bacterial disease. Lilacs were fertilized with Triple 16 (16-16-16-8) on 31 Mar 05 at a rate of 87 lb/A. Incidence of bacterial blight was evaluated on 11 and 28 Apr by examining 100 arbitrarily selected shoots per bush.

Early spring conditions during bud break and early shoot growth was characterized as extremely dry with below average rainfall. Three frost events occurred on 3, 14 and 15 Mar. Above average rainfall occurred during the remainder of the spring growing season. Small, necrotic leaf spots that resemble initial blight symptoms were first observed on widely scattered plants on 15 Mar while typical bacterial blight symptoms were observed 21 Mar. Light hail damage occurred to plants on 13 and 17 Apr. On 11Apr, all bactericide treated bushes had significantly fewer shoots with bacterial blight than nontreated bushes. On 28 Apr, only bushes treated with Kocide or Phyton 27 had significantly fewer shoots with bacterial blight than nontreated bushes. There was no significant difference in the number of shoots with bacterial blight on bushes treated with Phyton 27 or STBX. Although both Phyton and STBX were sticky and difficult to clean from measuring devices they were easy to apply and did not cause any clogging or plugging of nozzles. No phytotoxicity was observed on any fungicide treated bushes.

| Treatment and rate/100 gal | Time of application* | Bacterial Blight (% Shoots) | | | |
|---|---|---|---|---|---|
| | | 11 Apr | | 28 Apr | |
| Nontreated ..... | none ..... | 37.8 | a | 24.5 | a |
| Kocide 2000 at 1.5 lb ..... | All ..... | 14.0 | b | 4.5 | b |
| Junction DF at 3.0 lb ..... | All ..... | 12.8 | b | 14.3 | ab |
| Phyton 27 at 25 fl oz ..... | All ..... | 7.8 | b | 10.5 | b |
| STBX-304 at 25 fl oz..... | All ..... | 20.3 | b | 13.0 | ab |

*Treatments were applied on 14 Feb 05 (buds swollen), 1 Mar 05 (early shoot growth), 15 Mar 05 (leaves out), and 30 Mar 05 (early bloom).
** Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).