

BLUEBERRY (*Vaccinium corymbosum* 'Draper')
Bacterial Canker; *Pseudomonas syringae* pv. *syringae*

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Evaluation of Bactericides and Application Timing for Management of Blueberry Bacterial Canker, 2018.

'Draper' blueberries in 6 inch square, 2 qt pots were obtained 19 Sep 2017 and placed on a gravel pad overlaid with weed cloth at the Botany and Plant Pathology Field Laboratory, Corvallis, OR. Leaves with necrotic spots were sampled for *Pseudomonas* spp. on 25 Sep 2017. *Pseudomonas syringae*-like colonies (colony appearance and blue fluorescence under long UV irradiation) were obtained from 20 of 34 samples processed. A total of 22 isolates of 23 tested were rated as copper-tolerant (grew well on 0.32 mM CuSO₄). Buds were sampled for *Pseudomonas* spp. on 30 Jan 2018 but only 1 *P. syringae*-like colony was obtained from 40 samples processed. Plants were not inoculated with *P. syringae* during the course of this experiment.

Potted plants were arranged into 6 blocks of 16 plants spaced 1.5 feet apart while each plant within a block was spaced 3-4 inches apart. Bactericide treatments were arranged in a (randomized) complete block design with each treatment replicated 6 times. Fungicide treatments were applied using a one gal capacity hand sprayer (Chapin Brand) at a rate of 27 gal water/A. Approximately 6 fl oz of a spray suspension were applied per 12 plants. Treatments were applied on 23 Oct 2017 (25% leaf fall), 14 Nov 17 (75% leaf fall), and 8 Feb 18 (dormant) and 6 Mar 2018 (terminal bud swell). Plants were tagged and placed next to one another in a sawdust bed (heeled in) 4 days after the first application, spaced out just before the second application, heeled in again after the last fall application and spaced out one more time the day before the first spring application. Plants were always exposed to ambient outdoor conditions during the duration of the experiment. No herbicides, insecticides or fertilizers were used during the course of this experiment. Symptoms of bacterial canker (progressive dieback of shoot tips involving at least one bud or leaf spots) were monitored throughout the dormant and spring period.

Although the fall started out wet with above normal rainfall, the dormant season was dry with below normal rainfall from December through March. Overall disease pressure was considered light. After leaf fall, symptoms of bacterial canker were not observed on any plants throughout the dormant and spring seasons. No phytotoxicity was observed on plants treated with any of the various materials used.

Treatment & Rate/A	Time of Application ^x	Necrotic buds or shoots
Non-treated	None.....	0
Badge SC at 2 qt.....	Fall only (A and B)	0
Previsto at 2 qt.....	Fall only (A and B)	0
GWN-10637 at 1 qt...	Fall only (A and B)	0
GWN-10637 at 2 qt...	Fall only (A and B)	0
GWN-10637 at 3 qt...	Fall only (A and B)	0
Badge SC at 2 qt.....	Spring only (C and D)	0
Previsto at 2 qt.....	Spring only (C and D)	0
GWN-10637 at 1 qt...	Spring only (C and D)	0
GWN-10637 at 2 qt...	Spring only (C and D)	0
GWN-10637 at 3 qt...	Spring only (C and D)	0
Badge SC at 2 qt.....	Fall and Spring (A, B, C and D)	0
Previsto at 2 qt.....	Fall and Spring (A, B, C and D)	0
GWN-10637 at 1 qt...	Fall and Spring (A, B, C and D)	0
GWN-10637 at 2 qt...	Fall and Spring (A, B, C and D)	0
GWN-10637 at 3 qt...	Fall and Spring (A, B, C and D)	0

^x Treatments were applied on A = 23 Oct 2017 (25% leaf fall), B = 14 Nov 17 (75% leaf fall), and C = 8 Feb 18 (dormant) and D = 6 Mar 2018 (terminal bud swell).

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