

CHERRY (*Prunus avium* 'Royal Anne')  
Brown Rot Blossom Blight; *Monilinia laxa*  
Brown Rot Fruit rot; *Monilinia fruticola*  
Cherry Leaf Spot; *Blumeriella jaapii*

J. W. Pscheidt, G. Kenyon and J. P. Bassinette  
Dept. of Botany and Plant Pathology  
Oregon State University  
Corvallis, OR 97331-2903

#### **Comparison of fungicides for control of cherry brown rot, 2004.**

Treatments were arranged in a randomized complete block design in a 'Royal Anne' sweet cherry orchard on Mazzard F 12-1 rootstock planted in 1964 on 20 x 40 ft spacing and grafted in 1967. Each treatment consisted of 5 single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 300 psi and at a rate of 240 to 305 gal water/A. Approximately 22 to 28 gal of a spray suspension were applied per 5 trees. Fungicide treatments were applied on 23 Mar (popcorn), 29 Mar (82% full bloom), 9 Apr (petal fall), 31 May (11 days pre-harvest) and 11 Jun (0 days pre-harvest). Treatment protocols including Pristine had 3 additional applications on 24 Apr (shuck split), 9 and 20 May. Fungal infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. According to a brown rot blossom blight risk model there were 2 infection risk periods detected during bloom on 25 Mar (popcorn) and 18 Apr (late petal fall). According to a cherry leaf spot model a total of 9 infection periods were detected from bloom through early Jun: 1 high infection period (18 Apr); 1 moderate infection period (25 Mar); and 7 light infection periods (13 Apr, 6, 17, 27 and 28 May, 5 and 8 Jun). Supreme Oil (4.5 gal/A) was used on 12 Feb for insect egg control. No herbicides were applied for weed control. Urea (46-0-0) fertilizer was broadcast around each tree on 6 Apr at 100 lb/A. Rejexit (4 gal/A) was applied on 21 May and BirdShield (2.5 gal/A) was applied on 3 Jun as a bird repellent in addition to forcefully propelled metallic pellets and scarecrows. Incidence of brown rot blossom blight was evaluated on 8 Apr by examining 500 blossoms randomly selected from the lower portion of each tree. Fruit was harvested on 11 Jun by hand picking 100 healthy-appearing fruit per tree. A total of 50 fruit were placed side to side in a plastic gutter to evaluate fruit width. All fruit were then placed into plastic boxes lined with moist paper towels and incubated in the laboratory at ambient temperature (65 to 79°F). Incidence of fruit with brown rot, *Botrytis* sp., *Rhizopus* sp. and other rots were monitored daily for a total of 13 days (24 Jun). Cherry leaf spot was evaluated on 16 Jul by examining all the leaves on 20 shoots from the lower half of the tree for symptoms of the disease.

Spring weather conditions in Western Oregon were considered warm and dry with plant growth about 10 days ahead of last year. Although very little brown rot blossom blight developed this year, all fungicide treated trees had significantly less blossom blight than nontreated trees. There were no significant differences in brown rot blossom blight among the various fungicide treated trees. All fungicide treated trees had significantly less post harvest brown rot or total rot than nontreated trees. There were no significant differences in brown rot among the various fungicide treated trees, however, Procure treated trees had significantly more total rot than other fungicide treated trees. Unlike last year, there were no significant differences among any trees, fungicide treated or not, with respect to fruit size. All fungicide treated trees had significantly fewer leaves with cherry leaf spot than nontreated trees. There were no significant differences in cherry leaf spot among the various fungicide treated trees. There were no significant differences in disease measures among the various experimental V 10116 formulations or rates. All trees treated with the combination of V 10116 plus Latron CS-7 had extensive fruit marking in the form of red to necrotic rings on the lower side of the fruit. This ring pattern is typical of chemical injury. Treatment of an additional set of trees with each product alone and in combination clearly indicated that the injury was due to the Latron CS-7 and not the experimental material.

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| Treatment & Rate/A   | Time of Application**                     | Brown Rot Blossom Blight (%)* | Post-harvest Brown Rot (%)* | Post-harvest Total Rots (%)* | Average Fruit Size (cm) | Cherry Leaf Spot (%)* |
|--|---|-------------------------------|-----------------------------|------------------------------|-------------------------|-----------------------|
| Nontreated .....   | None                                      | 2.4 a                         | 29.0 a                      | 38.0 a                       | 2.47                    | 37.2 a                |
| V10116 FL at 5.7 fl oz +<br>Latron CS-7 at 24.2 oz.....  | A, B, C, G<br>and H.....                  | 0.0 b                         | 0.0 b                       | 5.8 c                        | 2.45                    | 4.3 b                 |
| V10116 WD at 2.6 oz +<br>Latron CS-7 at 24.2 oz.....   | A, B, C, G<br>and H.....                  | 0.0 b                         | 0.2 b                       | 6.4 c                        | 2.45                    | 5.7 b                 |
| V10116 WD at 3.4 oz +<br>Latron CS-7 at 24.2 oz.....   | A, B, C, G<br>and H.....                  | 0.0 b                         | 0.0 b                       | 6.0 c                        | 2.47                    | 4.2 b                 |
| Procure 50 WS at 12 oz.....  | A, B, C, G<br>and H.....                  | 0.2 b                         | 1.0 b                       | 19.8 b                       | 2.46                    | 6.4 b                 |
| Procure 50 WS at 16 oz.....  | A, B, C, G<br>and H.....                  | 0.4 b                         | 0.4 b                       | 19.4 b                       | 2.49                    | 4.9 b                 |
| Rally 40 W at 5 oz then<br>Pristine 38 WG at 14.5 oz<br>+ Superior Spray Oil<br>at 1.5 gal.....  | A, B, & E<br><br>C, D, F, G<br>and H..... | 0.4 b                         | 0.8 b                       | 3.8 c                        | 2.51                    | 5.1 b                 |
| Pristine 38 WG at 14.5 oz +<br>Superior Spray Oil<br>at 1.5 gal then<br>Rally 40 W at 5 oz ..... | A, B, D, G, &<br>H<br><br>C and E.....    | 0.0 b                         | 1.0 b                       | 6.0 c                        | 2.50                    | 7.3 b                 |

\* Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05). Means without letters were not significantly different.

\*\* Treatments were applied on A = 23 Mar (popcorn), B = 29 Mar (82% full bloom), C = 9 Apr (petal fall), D = 24 Apr (shuck split), E = 9 May, F = 20 May, G = 31 May and H = 11 Jun (pre-harvest).