

CHERRY (*Prunus avium* 'Corum')
Brown Rot; *Monilinia* spp.

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

Comparison of fungicides for management of cherry brown rot blossom blight, 2018.

Treatments were arranged in a randomized complete block design in a 'Corum' 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 4 single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 100 psi and at a rate of 54 gal water/A. Approximately 4 gal of a spray suspension were applied per 4 trees. Fungicide treatments were applied on 4 Apr (popcorn), 9 Apr (full bloom), and 23 Apr (petal fall). Fungal infection periods were monitored using an Adcon weather station equipped with standard sensors. According to a brown rot blossom blight risk model there were 3 infection risk periods detected on 5, 7 and 14 Apr. Plots were pruned 6 to 12 Dec 2017. Omni Supreme oil (1.5 gal/A) was applied to the entire block on 21 Feb, for Aphid management. Assail 70 WP (3 oz/A) was applied on 24 May to manage western cherry fruit fly and aphids. Insecticides were applied using a Rear's air blast speed sprayer. Weedbar 64 (64 fl oz/A) was applied on 5 Mar, Casaron CS (2.25 gal/A) was applied on 16 Mar and Rely 280 (57 fl oz/A) was applied on 6 Jun for weed control. No fertilizer was applied during the growing season. Four commercial honey bee hives arrived on 12 Apr. Incidence of brown rot blossom blight was evaluated on 26 Apr by examining 250 blossoms on the east and west side of trees for a total of 500 blossoms arbitrarily selected from the lower portion of each tree. Due to poor fruit set and rain cracking near harvest, brown rot fruit rot was not evaluated on fruit.

Spring weather conditions were considered normal until early May when frequent rainfall tapered off quickly. Symptoms of brown rot blossom blight was first observed on 9 Apr but signs were not observed until 23 Apr. All treated trees had significantly fewer blossoms with brown rot than on non-treated trees. Lowest brown rot blossom blight was on trees treated with the Luna Sensation/CaptEvate/Merivon alternation but the amount found on trees treated with rotations using GWN 10320 was not significantly different. Trees treated with only GWN 10320 plus Nu-film-P had significantly less brown rot blossom blight than non-treated trees but significantly more than other fungicide treated trees. No phytotoxicity was observed in trees treated with any of the various materials used.

Treatment & Rate/A or /100 gal as indicated below	Time of Application*	Brown Rot Blossom Blight (%)**
Non-treated	None.....	17.3 a
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal then CaptEvate 68 WDG at 3.75 lb plus Nu-Film-P at 16 fl oz/100 gal then Merivon at 4 fl oz plus Nu-Film-P at 16 fl oz/100 gal then.....	A B C.....	0.1 c
GWN 10320 SC at 2 pt plus Nu-Film-P at 16 fl oz/100 gal.....	All.....	7.5 b
GWN 10320 SC at 2 pt plus Nu-Film-P at 16 fl oz/100 gal then CaptEvate 68 WDG at 3.75 lb plus Nu-Film-P at 16 fl oz/100 gal then GWN 10320 SC at 2 pt plus Nu-Film-P at 16 fl oz/100 gal then.....	A B C.....	0.8 c
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal then GWN 10320 SC at 2 pt plus Nu-Film-P at 16 fl oz/100 gal then Merivon at 4 fl oz plus Nu-Film-P at 16 fl oz/100 gal then.....	A B C.....	0.9 c

* Treatments were applied on A = 4 Apr (popcorn), B = 9 Apr (full bloom), and C = 23 Apr (petal fall).

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