

**Early season fungicide use for management of hazelnut kernel mold in Lewis, 2017.**

The objective of this trial was to determine if early spring applications of fungicide could result in less kernel mold at harvest. Treatments were arranged in a randomized complete block design in a commercial block of EFB infected Lewis hazelnuts located near Amity, OR. Each treatment (non-treated, Merivon or Pristine) consisted of 8 single-trees replicates. Fungicide treatments were applied using a Stihl SR 450 backpack mist blower such that 0.5 to 1 gal of a spray suspension was applied per tree. Treatments were applied on 13 Feb (70% bloom), 25 Feb (past full bloom), 10 Mar (40% bud break), 28 Mar (full bud break), 11 Apr (2 leaves out), and 25 Apr (shoot elongation). The grower’s standard fungicide, herbicide, insecticide and fertility program was implemented during the course of this trial. Several fungicides were flown on during the 8-week period from bud break through shoot elongation to manage EFB. These fungicides included Cabrio (9.5 oz/A) applied on 10 and 23 Mar, Gem (3 fl oz/A) on 7 Apr and Stratego (12 fl oz/A) on 29 Apr, all applied at a rate of 10 gal solution/A. Nuts were allowed to fall naturally onto bare soil and collected just prior to first commercial harvest. Over 400 nuts were collected from under each tree on 4 Oct and then stored in a greenhouse on open trays. (Some drying was likely to have occurred during this time but nut moisture levels were not monitored.) A set of 200 nuts from each tree was cracked open and evaluated for kernel defects on 12 to 13 Oct. The rest of the nuts were placed on the ground under harvested Ennis trees on 17 Oct at the B&PP farm, Corvallis, OR. Nuts from different treatments and replicates in the Lewis orchard were kept separated while on the ground in the Ennis orchard. Nuts were allowed to lie on the ground until 13 Nov. Another set of 200 nuts from each replicate was cracked open and evaluated for kernel defects on 14 to 15 Nov. Scoreable “mold” included any kernel with visible mycelial growth.

Spring weather conditions for 2017 were considered cool and wet but with more normal plant growth and disease pressure relative to time of year. Fall rains had returned by 21 Oct. There were no significant differences among the various treatments with regard to kernel mold on either harvest date. The additional applications of fungicides containing FRAC group 7 materials did not seem to have an effect on kernel mold. No phytotoxicity was observed in trees treated with any of the various materials used.

Treatment & Rate/100 gal	Mold (% kernels)**	
	Nuts Collected	Nuts Collected
	12 Oct	13 Nov
Non-treated*.....	3.2	6.1
Merivon at 6.5 fl oz/100 gal.....	3.2	8.8
Pristine at 14.5 oz/100 gal.....	4.0	6.9

\* Trees were sprayed with Cabrio on 10 and 23 Mar, Gem on 7 Apr and Stratego on 29 Apr by the grower to manage EFB.

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

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