

Fireblight in Raspberries: Control Strategies for Commercial Raspberry Growers



Fireblight infecting raspberry shoot tip showing Shepard's crook symptom.



Fireblight infecting raspberry leaves, note black infection in the leaf grooves and curled leaves.

Photos credit: A.Mintenko

Fireblight was a widespread issue for raspberry growers in 2015, especially in the Boyne cultivar. There have been reports again this year of fireblight in raspberries again in 2018.

Fire blight bacteria (*Erwinia amylovora*) overwinters in the bark at the edge of cankers formed during previous growing seasons. Primary inoculum sources can be reduced by pruning out cankered limbs and branches during the dormant season (late fall, Feb./March).

In spring, as weather warms up, the bacteria multiply, ooze to the surface in sticky droplets the bacteria multiply rapidly at temperatures greater than 18°C.

Fire blight is best controlled by an integrated approach:

- a. horticultural practices designed to minimize plant susceptibility and disease spread (i.e.) Blight is most common on young succulent growth therefore, **excessive nitrogen fertilization** practices can cause excessive and prolonged growth and are to be avoided.
- b. efforts to reduce the amount of inoculum in the orchard;
- c. and well-timed sprays of bactericides to protect against infection under specific sets of conditions (i.e. Serenade, etc.).

If you had Fireblight in your raspberries in the past:

1. Apply Serenade as soon as budding initiates, this will put beneficial bacteria right where they will be useful.
2. Scouting early and often, examining...
 - a. Leaves and tender new branches
 - b. Flowering in mid-late June
3. If Fireblight does appear...
 - a. Prune out blighted shoots as soon as they appear in the early spring .
 - b. Cuts should be made at least 5-6 inches below the margin of visible infection.
 - c. Sterilizing pruning shears with alcohol (70% solution) or household bleach (diluted to 10% solution) between a few cuts recommended.
 - d. Pruning out new shoot blight infections as they appear can also help limit disease spread, but will be most effective if practiced rigorously during the first few weeks after bloom.
 - e. Pruning will do little to slow disease spread if delayed until a large number of infections are visible.
4. If pruning not successful or too wide-spread, apply Kasumin and rotate with Copper fungicide (i.e. trade names Cueva and Copper Spray Fungicide)
 - Kasumin- up to 4 applications/year, rotate chemicals, PHI 1 day
 - Cueva (Copper octonate) or Copper oxychloride fungicide- up to 4 applications/year, rotate chemicals, PHI 2 day
 - Serenade- apply before fall rains.
5. After fruiting ends – prune out the old floricanes in Summer-bearing raspberries or cut down entire row when dormant in the late fall or early spring if practicing biennial raspberry production system.

Product labels for Kasumin, Copper Spray, Cueva and Serenade can be searched for on the Health Canada PMRA site: <http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php>

More info and pictures on fireblight see References:

http://umanitoba.ca/faculties/afs/hort_inquiries/736.html

https://www.gov.mb.ca/agriculture/crops/production/fruit-crops/print_raspberry-production-information.html

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