



FACT SHEET

Raspberry Cane Management – A Key to Profitable Production

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Every year I hear from growers who are disappointed with their raspberry yields. They relate that, just when berries begin to ripen, canes begin to collapse and die. There are several possible causes to this common problem, but usually it is cane diseases that are responsible. Collectively, there are three cane diseases that are common in our region: spur blight, *Botrytis* cane blight and, to a lesser extent, anthracnose. Each disrupts the plant's ability to move sufficient water from the roots up the canes to the berries as they ripen. Also, at this time, developing primocanes are competing for water and any shortages exacerbate the problem. The end result is fruiting canes that die a slow death of thirst as they try unsuccessfully to meet their water needs. Primocane infections also result in increased susceptibility to winter injury. Spur blight and *Botrytis* cane blight lesions tend to be situated on the lower 1/3 to 1/2 of the canes

What can you do to manage these diseases and translate yield "potential" into harvested pints of raspberries? Control of cane diseases can only be accomplished by combining cultural practices with a vigilant fungicide program. The following cane management program should help:

1. apply lime sulfur at the green tip stage (1 to 2 cm green tip) in early spring
2. apply Ferbam prior to bloom when new canes are 30 cm tall and again as soon as harvest is complete
3. apply 2-3 bloom sprays targeting early bloom (5-10 per cent bloom), mid-bloom (50 per cent bloom), and possibly at late bloom (90 per cent bloom) if wet conditions persist. These sprays are to control fruit rot, which is also the causal agent for cane botrytis so by minimizing fruit rot you will also reduce inoculum for cane infection. There are three fungicides registered for fruit rot control, Captan (Maestro), Rovral, Lance and Elevate, and growers should rotate through these for resistance management

Cultural practices that improve air circulation and drying will be beneficial in terms of minimizing cane infection. Such practices include maintaining narrow rows, primocane thinning, timing of floricane removal, choice of trellis system, nitrogen management, and site location. Careful attention to some or all of these will pay dividends in reducing cane disease.

Ideally, the base of each row should be maintained at 30 cm wide throughout the growing season and primocanes should be thinned in spring to 10-15 canes per linear meter of row, depending on cane height and caliper. Primocanes may also be summer thinned to open up the canopy to air movement and improved drying. Small, diseased or injured canes should be targeted for this operation but care should be taken to maintain adequate cane numbers for spring thinning so as to maintain optimum yields in the coming season. Growers should monitor for cane diseases during the growing season and if present, they should prune out fruiting canes (floricanes) immediately

following harvest so as to reduce inoculum levels and potential for primocane infections later in the growing season.

Also, your trellis system, nitrogen management, and site location can impact disease levels. Trellis systems that divide canopies, such as the V-trellis, improve air flow and thereby minimize infection periods. Excessive nitrogen use leading to excessive vegetative growth will hinder air movement and contribute to longer infection periods and greater disease pressure. Finally, sites that provide a moderate slope will facilitate air movement and more rapid drying, again minimizing infection periods and disease pressure.

A successful cane management program can be the difference between profitable raspberry production and an extremely frustrating experience. Such a program will involve a combination of management practices that include the use of registered fungicides at proper timings and rates as well as valuable cultural practices that improve air circulation and drying so as to minimize inoculum sources and infection periods. The utilization of some or all of the above practices will hopefully move you to a more satisfying and profitable experience growing raspberries.

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