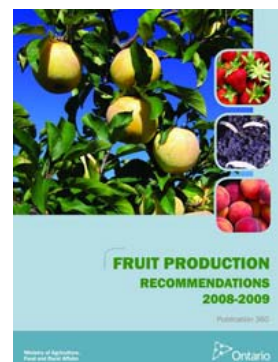


# Fruit Production Recommendations 2008-2009

Ontario Ministry of Agriculture, Food and Rural Affairs

## Chapter 5: Berry Crops



### Currant and Gooseberry Calendar

Always consult the product label for suggested water volumes. Otherwise, use enough water to ensure thorough spray coverage. Where the product rate is listed in amount per 1,000 L and if a water volume is not provided on the label, use enough water to wet the foliage to the near-drip point.

Products are listed according to insecticide and fungicide family groups. Use of products from different family groups helps prevent pest resistance.

Pests controlled	Materials	Amount	Comments
<b>Just before blossoms open</b>			
<b>DO NOT APPLY INSECTICIDES WHILE CURRANTS OR GOOSEBERRIES ARE IN BLOOM. SEE BEE POISONING ON PAGE 192.</b>			
Leaf spot	<ul style="list-style-type: none"> <li>Ferbam 76 WDG</li> <li>Copper 53 W plus hydrated lime</li> </ul>	6.75 kg/ha  5.0 kg/1,000 L plus 4.0 kg lime/1,000 L	Leaf spots develop on susceptible varieties, reducing yield and vigour. Rake or cultivate to bury old infected leaves before bud-break. Apply fungicides to susceptible varieties at weekly intervals if weather is wet. Do not use Ferbam on gooseberries.
Powdery mildew	<ul style="list-style-type: none"> <li>Microscopic Sulphur</li> </ul>	5.00 kg/ha	Resistant varieties are available, see Table 5-12. <i>Disease Ratings on Selected Currant and Gooseberry Varieties</i> , on page 104. Prune out infected twig tips in fall and avoid excessive nitrogen.
Sawfly (imported currant fruitworm)	<ul style="list-style-type: none"> <li>Diazinon 50 W or Diazinon 500 E</li> </ul>	1.00 kg/1,000 L water 1.00 L/1,000 L water	Adults lay eggs in May and June. Green larvae quickly devour foliage at the green fruit stage. Gooseberries are the preferred host; black currants are not attacked. Do not apply Diazinon after the first bloom opens.
Blister aphid	<ul style="list-style-type: none"> <li>Malathion 25 W</li> </ul>	2.50 kg/1,000 L water	Aphids feeding on new growth can cause leaf curl and red blisters. Spray if aphids are abundant. Ensure good coverage of undersides of curled leaves.
Botrytis grey mould	<ul style="list-style-type: none"> <li>Pristine WG</li> <li>Lance WDG</li> <li>Elevate 50 WDG</li> </ul>	1.30 kg/ha 560 g/ha  1.70 kg/ha	Botrytis infection during bloom causes early fruit drop, or "run-off" in currants. Apply fungicides at 7–10 day intervals during bloom. Choose fungicides from different chemical families to reduce the development of resistant strains of <i>Botrytis</i> .

Pests controlled	Materials	Amount	Comments
	<ul style="list-style-type: none"> <li>Serenade Max</li> </ul>	3.00 kg/ha	<p><b>Pristine and Lance:</b> Both include active ingredients in the same fungicide family. Do not alternate Pristine with Lance.</p> <p><b>Serenade Max:</b> Provides suppression, rather than control, of <i>botrytis</i>. Expect best results when used in multiple applications or rotation with other products.</p>
<b>Bloom</b>			
Botrytis grey mould	<ul style="list-style-type: none"> <li>Pristine WG</li> <li>Lance WDG</li> <li>Elevate 50 WDG</li> <li>Serenade Max</li> </ul>	1.30 kg/ha 560 g/ha 1.70 kg/ha 3.00 kg/ha	See comments above.
<b>Postbloom: as soon as bloom is complete</b>			
Leaf spot	<ul style="list-style-type: none"> <li>Ferbam 76 WDG</li> <li>Copper 53 W plus hydrated lime</li> </ul>	6.75 kg/ha 5.0 kg/1,000 L plus 4.0 kg lime/1,000 L	Apply at weekly intervals in the spring if weather is wet, but not within 14 days of harvest. Do not use Ferbam on gooseberries.
Powdery mildew	<ul style="list-style-type: none"> <li>Microscopic Sulphur</li> </ul>	5.00 kg/ha	Resistant varieties are available, see Table 5-12. <i>Disease Ratings on Selected Currant and Gooseberry Varieties</i> , on page 104. Prune out infected twig tips in fall and avoid excessive nitrogen. If warm and humid conditions persist, repeat weekly until fruit begins to colour.
Currant fruit fly	<ul style="list-style-type: none"> <li>Malathion 25 W</li> </ul>	2.50 kg/1,000 L water	Larvae infest fruit, causing it to ripen prematurely. Spray to control adult flies, which lay eggs on green fruit. Spray where this pest has been a problem in the past or use yellow sticky traps to monitor for adult activity. Make two applications, 10 days apart. Malathion is most effective when temperature is above 20°C.
<b>10 days after postbloom spray</b>			
Leaf spot	<ul style="list-style-type: none"> <li>Ferbam 76 WDG</li> <li>Copper 53 W plus hydrated lime</li> </ul>	6.75 kg/ha 5.0 kg/1,000 L plus 4.0 kg lime/1,000 L	Apply at 7–10 day intervals if weather is wet, but not within 14 days of harvest. Do not use Ferbam on gooseberries.
Currant fruit fly	<ul style="list-style-type: none"> <li>Malathion 25 W</li> </ul>	2.50 kg/1,000 L water	<b>Malathion:</b> Is most effective when temperature is above 20°C.
<b>Postharvest</b>			

Pests controlled	Materials	Amount	Comments
Leaf spot	<ul style="list-style-type: none"> <li>Ferbam 76 WDG</li> <li>Copper 53 W plus hydrated lime</li> </ul>	6.75 kg/ha 5.0 kg/1,000 L plus 4.0 kg lime/1,000 L	Do not use Ferbam on gooseberries.
Aphids Leafhoppers	<ul style="list-style-type: none"> <li>Malathion 25 W</li> </ul>	2.50 kg/1,000 L water	Monitor for leaf curling on new growth. If these pests are present, spray red and white currants immediately after fruit is picked.

TABLE 5-11. Products Used on Currants

Use this table as a guide but refer to product label for specific information.

The **preharvest interval** is the number of days between the last spray and first harvest.

The **re-entry period** is the minimum interval that must be observed between the application of the pesticide and work in the treated crop without protective equipment. If no re-entry period is stated on the label, assume the spray solution must be dry before re-entry can occur.

The **maximum number of applications** is the labeled maximum number for the growing season and may be higher than what is recommended for resistance management or for the preservation beneficial insects.

Product name	Common Name	Group	Preharvest interval	Minimum re-entry	Maximum # applications per season
Copper 53 W plus hydrated lime	tribasic copper sulphate	inorganic	1 day		
Diazinon 500 E	diazinon	organophosphate	Do not use after first bloom		
Diazinon 50 W	diazinon	organophosphate	Do not use after first bloom		
Elevate 50 WDG	fenhexamid	hydroxyaniline	1 day	4 hours	4
Ferbam 75 WDG	ferbam	dithiocarbamate	14 days		
Lance WDG	boscalid	anilide	0 day	4 hours	4
Malathion 25 W	malathion	organophosphate	3 days		
Microscopic Sulphur	sulphur	inorganic	1 day	24 hours	8
Pristine WG	boscalid + pyraclostrobin	anilide carboxamide + Qol	0 days	29 days for hand harvest, when dried for other activities	4
Serenade Max	<i>Bacillus subtilis</i>	B.t. microbial	0 days		

TABLE 5-12. Disease Ratings on Selected Currant and Gooseberry Varieties

Type	Variety	Mildew Resistance	Rust Resistance <sup>1</sup>
black currant	Ben Alder	resistant <sup>2</sup>	very susceptible <sup>2</sup>
black currant	Ben Connan	resistant <sup>2</sup>	moderately resistant <sup>2</sup>
black currant	Ben Sarek	resistant <sup>2</sup>	moderately resistant <sup>2</sup>
black currant	Titania	immune	immune
red currant	Red Lake	susceptible <sup>4</sup>	susceptible <sup>3</sup>
red currant	Rovada	resistant <sup>4</sup>	moderately resistant <sup>3</sup>
red currant	Jonkheer van Tets	moderately resistant <sup>3</sup>	resistant <sup>4</sup>
gooseberry	Captivator	moderately resistant <sup>3</sup>	
gooseberry	Invicta	moderately resistant <sup>3</sup>	moderately resistant <sup>3</sup>
gooseberry	Hinnonmaki Red	resistant <sup>4</sup>	moderately resistant <sup>3</sup>

<sup>1</sup> Resistant: Does not show symptoms of rust (only Titania has genetic resistance).  
 Moderately resistant: Shows symptoms at low frequency, yield not affected.  
 Susceptible: Noticeable levels of rust infection, not affecting yield.  
 Very susceptible: Severe infection, affecting yield.

Source:

<sup>2</sup> Adam Dale, *HortTechnology* 10(3) 2000, page 553.

<sup>3</sup> Hummer and Barney, *HortTechnology* 12(3) 2002 page 382–383, or **Currants, Gooseberries, Jostaberries, Guide for Growers**. Food Products Press 2005.

<sup>4</sup> Dick McGinnis, McGinnis Berry Crops, B.C., personal communication.