

# Berry Bulletin 2016

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April 28, 2016

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Crops are moving forward slowly. I am interested in hearing your comments on cold weather injury. Hopefully straw has been removed from all strawberries by now. New plantings are going in. Remember that below freezing temperatures after planting can damage young strawberry crowns, especially in dry soil.

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**Resistance management becomes critical for disease control:** Reports from the USA indicate that botrytis, powdery mildew, and anthracnose have developed resistance to some fungicides- it's a concern here too!. It is very important to include fungicides from different groups in your spray program and to tank mix or alternate with compatible fungicides in Group M (which have multiple modes of action).

Start disease control programs early with a group M fungicide –

- Blueberries – Bravo or Echo for early season cane diseases like phomopsis or anthracnose
- Raspberries- Lime sulphur before ¼ inch green, or Ferbam for early season cane disease
- Strawberries- Bravo or Echo (before bloom) for botrytis grey mould .

Read the label and follow all safety precautions.

**Early season weed control –**

Pre-emergent herbicides are often applied in early spring for broadleaved weeds and grasses. This window of opportunity closes quickly.

Post-emergent grass herbicides (such as Venture, or Poast) should be delayed until growing conditions are good and grass is actively growing . Check for the ideal stage of development by counting the leaves of emerged grasses. Apply grass herbicides when annual grasses and volunteer grain are in the 2-5 leaf stage, or perennial quackgrass is in the 2-3 leaf stage.

**Blueberries** are susceptible to mummy berry shoot blight when bud scales separate on flower buds (the bud cluster stage, or bud burst). If you have had a history of mummyberry, control is required from this stage through to early bloom, prior to rain. Infection occurs after wetting periods of 6 or more hours depending on temperature. There are lots of fungicides to choose from in Publication #360 (page 95). For an excellent discussion on controlling shoot blight see this article from Michigan :

[http://msue.anr.msu.edu/news/managing\\_mummy\\_berry\\_shoot\\_strike\\_infections](http://msue.anr.msu.edu/news/managing_mummy_berry_shoot_strike_infections), but use Pub 360 as your guide to what products are available in Canada.

Canker disease control also begins at this time. An early broad-spectrum fungicide such as Bravo or Echo can help manage phomopsis and anthracnose. These diseases produce spores in overwintering cankers in the spring, which can be rain splashed to new growth. Check the label to confirm the formulation and rate of product you apply – there have been some label changes.

Also, on blueberries – white grubs can be a chronic problem, especially in sandy soils. When they feed on blueberry roots, plants fail to thrive. You can easily find white grubs in the root zone now. It is important to get a positive identification of the larvae- are they European chafer, June beetles, or Japanese beetle larvae- all are known as white grubs. Admire or Alias can be applied as a soil drench, but not until after bloom. The ideal timing is shortly after adult beetles or chafers are active, generally at petal fall, green fruit or after harvest.



June beetle larvae –various sizes- feeding on blueberry roots

**Strawberries** - Overwintering aphid eggs are starting to hatch in Simcoe and Vineland. Growers should spray once for overwintering aphids – but wait until all aphids are hatched. Once aphids begin to fly – approx. early – mid June, then plan to spray again, and continue every 7-14 days when aphids are flying.

I've seen some angular leaf spot on overwintering strawberry leaves. This disease can be especially severe on "Wendy", and also where row covers are used. Multiple applications of Tivano can be used to suppress this disease.

**Cyclamen mite:** Once plants start to grow more quickly, you could see variations in growth due to cyclamen mite infestations. Options for this pest are limited.

- **Agri-mek SC** - a new formulation, so check the rates. The label calls for a non-ionic surfactant so be careful about using Captan, Maestro or Bravo in close timing to the Agri-mek spray. Agri-mek works best on cyclamen mite when plants are succulent and actively growing.
- **Thiodan**- registered until Dec 2016. You will need the 4L/ha rate and a very high volume of water for cyclamen mite control. There is a 7-12 day re-entry period depending on the task.
- **Beneficial mites?** – Limited evidence from Scandinavia suggests that mass release of predator mites can help to keep cyclamen mite in check. You could try purchasing predators and releasing them now in areas where cyclamen mite was a problem last year. See pub 360, appendix D, page 340 for a list of predatory mite suppliers, and ask these suppliers for advice on rates and use patterns. Combinations

of *Neoseiulus fallacis* and *Neoseiulus californicus* have been suggested. More recently, there is interest in *Amblyseius andersonii* for cyclamen mite control. More research is needed!

- **Avoid** using pyrethroid (group 3) insecticides such as Decis, Mako, Up-Cyde, Silencer, Matador in strawberries where cyclamen mite is a problem. These are very hard on naturally occurring predators which help keep cyclamen mite in check.

**New Products:** Publication 360 is now available from OMAFA offices and [on line](#). The 2016-2017 edition contains over 30 new products, new uses or new formulations for berry crops. However, after the berry chapter left my desk, six new products were registered for insect and disease control on berry crops (Table 1- Recent new product registrations for berry crops) .

Table 1- Recent new product registrations for berry crops

Product (registrant)	Active ingredient Insecticide/fungicide group	Pest controlled (or suppressed)	Crop or crop group (CG) registrations
<b>Sivanto Prime</b> (Bayer CropScience)	<i>flupyradifurone</i> Group 4D	aphid	strawberry, blueberry, currant, gooseberry, saskatoon berry, haskap and other berry crops in CG 13-07B (bushberries)
		blueberry maggot	blueberry
<b>Luna Tranquility SC</b> (Bayer CropScience)	<i>fluopyram+pyrimethanil</i> Group 7+9	botrytis powdery mildew	strawberry, raspberry and blueberry and other berry crops in CG 13-07A (caneberries), 13-07B (bushberries), and 13-07C (low growing berry sub group except cranberry).
<b>Inspire Super</b> (Syngenta Canada)	<i>difenaconazol+cyprodinil</i> Group 3+9	mummyberry rust (suppression)	blueberry
		anthracnose fruit rot	blueberry, elderberry, huckleberry
		foliar anthracnose	currant, gooseberry
		alternaria botrytis	blueberry, currant, elderberry, gooseberry
<b>Kasumin 2L</b> (Arysta LifeScience)	<i>kasugamycin</i> Group 24	fire blight	raspberry, blackberry, saskatoon berry
<b>Phostrol</b> (Engage Agro)	<i>sodium, potassium and ammonium phosphites</i> Group 33	septoria leaf spot phytophthora root rot (suppression)	highbush blueberry, currants, gooseberries, saskatoon berry, sea buckthorn and other berries in Crop Group 13-07B (bushberries).
<b>Torrent</b> (Engage Agro)	<i>cyazofamid</i> Group 21	phytophthora root rot	blackberry, raspberry

To see details on these new products, try the [pesticide label search](#)

**Pest Management Scouting Workshops:** Pre-register at 1-877-424-1300.

Students will learn how to identify and scout for pests.

- Strawberries and raspberries –8:30 a.m. - 4:00 p.m, May 18, 2016, OMAFRA Simcoe office
- Blueberries – 3:30- 8:30 p.m. June 1, 2016 – Woodstock OMAFRA office.
- Other workshops are also available for fruit and vegetable crops, including “Intro to IPM” .

<https://onfruit.wordpress.com/2016/03/14/omafra-ipm-scout-training-workshops-for-2016/>