Berry Bulletin 2016

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Crop development: Crops have been slowly but steadily advancing and the pace picked up this week. Day neutral strawberries are in bloom and growers have already been protecting against frost. Buds are emerging from the crown in June bearing strawberries, with open bloom on early varieties in the Simcoe area. Raspberries are leafing out. Early blueberries are in full bloom in southern Ontario and various stages of bud burst in later regions. Growers have been busy planting these past few weeks. Hopefully everything gets adequate rain this weekend.

Frost is always a concern at this time: Here is the link on irrigation for frost protection.
http://www.omafra.gov.on.ca/english/crops/facts/frosprot_straw.htm

Captan survey – The Ontario Berry Growers Association is asking growers to respond to a survey about use of Captan and Maestro in blueberries, raspberries and strawberries. This survey will help the OBGA back up their response to a recent re-evaluation of captan by the Pest Management Regulatory Agency . Captan is a group M fungicide and is an important tool for resistance management.
https://www.surveymonkey.com/r/ontarioberrycrops . Please respond to this survey by May 22.

Blueberry growers- Use fungicides from different groups to control cane diseases like phomopsis and anthracnose twig blight. Bravo can be used until petal fall. During bloom, choose fungicides that control anthracnose and botrytis.

Check branches for signs of scale insects (Figure 1). It's possible that natural enemies of scale insects are affected by SWD sprays, and scale insects are building up. Check 1-2 year old wood for signs of active scale. There are several different species of scale insets. Control includes a dormant application of oil, followed by post-bloom applications of Movento, when crawlers are present. Call me for help with timing for scale crawlers.

Figure 1: Scale insects on blueberries

Cranberry fruitworm and cherry fruitworm begin to fly at bloom. Petal fall applications of an insecticide can be timed by using pheromone traps or degree day models. In the absence of this information, make two applications of an insecticide beginning at petal fall. Your choices are listed in publication #360 and you can compare the efficacy of products in table 4-11.

A pest management workshop for blueberries is scheduled in Simcoe June 1, 4 -8 p.m. Included on the agenda is guest speaker Dr Rufus Isaacs, from Michigan State University, who will join us by webinar to discuss important blueberry pests. Please register for this workshop by calling 1-877-424-1300.

Raspberries: It is important to protect growing primocanes and developing laterals from cane diseases with several fungicide applications before and during bloom. Ferbam (before bloom only) and Tanos are registered for cane diseases, but Pristine and Switch also do a great job on cane diseases when they are used to control Botrytis grey mould. Good coverage is important.

June-bearing strawberries: Clipper weevil could become active as weather warms up – especially if nights are warm (16C+) . However, clipper weevil is not your biggest problem, and you can minimize damage by spraying outer rows of older fields.

Cyclamen mite. Where there is a history of cyclamen mite damage, it is important to apply a high-volume insecticide as buds emerge from the crown. Your choices are

- **Thionex** (use the high rate, note the 12 day re-entry period.) Thionex hasn't been as effective in recent years for cyclamen mite but still works well for plant bugs. Thionex is not systemic, you need excellent coverage including new leaves at the growing point spray in lots of water 2000 L/ha or more.
- **Agrimek SC**- (new formulation, note rate change, very toxic to bees) The SC formulation of Agri-mek calls for addition of a non-ionic surfactant at 0.1-0.5% volume to volume. This is a big range, so choose the low-middle range. We don't have a lot of experience with surfactants on strawberries, and phytotoxicity is could be a concern. Surfactants, which increase pesticide uptake so avoid using them with or in close sequence with applications Bravo, Echo, Captan, Maestro, Folpan or copper, or Sinbar.

Another interesting possibility for cyclamen mite is the use of predator mites for control. 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!

Strawberry aphids and tarnished plant bug: Aphids are hatching now, and will need to be controlled before or during early bloom. Tarnished plant bug nymphs will require control if the threshold is reached in bloom or green fruit stages. Weekly scouting for both these pests is important during the prebloom through green fruit period.

See "What's your plan for aphid control in strawberries for option on aphid control"

- **Cygon, Lagon** – good for aphids, helps with plant bug by controlling adults, very toxic to bees and should not be used after first bloom in fruiting fields.
- **Beleaf –** Great for aphids suppresses tarnished plant bug. Use when tarnished plant bugs are small. Safe to bees and can be used during bloom. Stops insect feeding, may take a few days for insects to die.
- **Sivanto**: New, group 4C insecticide, and much safer to bees than other neonicotinoid insecticides. Should provide good control of aphids and whiteflies, but does not have a wide spectrum of activity.
- **Assail –** provides some control of aphids and plant bugs. Use the high rate for plant bugs. Avoid spraying during full bloom or when bees are working. Check up on efficacy within a week.
- **Thionex-** provides good control of plant bug. Has been disappointing for aphids, although it should have some effect. Check up on efficacy a week after application and spray something else for aphids if necessary.

Angular leaf spot – I have seen plenty of this on overwintering leaves, Rain and irrigation will spread this disease around. Tivano is registered for this disease, you need several sprays

Day neutral strawberries: Harvest is not far off for a few early sites. Frost damage from April 5-6 occurred even though buds were deep in the crown. More recently growers have been irrigating for frost protection.

Anthracnose and botrytis control: Anthracnose fruit rot is a big concern for day neutral strawberry growers each year. Although it typically shows up in warmer weather, it is important to think about control all season long. The disease can build up on plant foliage without causing visible symptoms until conditions are ideal. Avoid working in fields when they are wet.

Pristine is registered for anthracnose control, but when you use Captan, Thiram or Switch for botrytis control you can also help to reduce disease pressure from anthracnose. Use group M fungicides such as Captan, Maestro, Thiram. Granuflo early in your fungicide program to keep disease levels low. Save Switch for times when disease pressure from botrytis and anthracnose are the highest (ie a warm rainy weather during bloom). Always tank-mx Pristine with a compatible group M fungicide.

Some growers are using to tunnels (low, or high) to keep rain off the plants and reduce the spread of anthracnose .

Site needed for Fleabane Research: The University of Guelph is conducting research on the management of glyphosate resistant Canada fleabane. There is a need to access sites which have had problems with resistant fleabane and currently have a high population of the weed. Trials would cover a small area and would be as little disruptive as possible. Compensation will be given. Please contact Peter Smith at the University of Guelph, 519-835-2569 or smith@uoguelph.ca Thanks