

# Berry Bulletin 2018

Erica Pate, Fruit Crops Specialist

519-426-2238

 @PateErica

[Erica.pate@ontario.ca](mailto:Erica.pate@ontario.ca)  
[onfruit.wordpress.com/](http://onfruit.wordpress.com/)

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**Strawberries:** Day-neutral harvest is ongoing and June-bearing harvest has begun where row covers were used this spring. Green fruit is present where row covers were not used. Later varieties such as Valley Sunset are in full bloom.

It is important for strawberry fields to receive at least one inch of water per week, especially as the green fruit is forming.

**Cyclamen Mites:** are causing a lot of damage in June-bearing fields this spring. It is **very** important to recognize cyclamen mite damage on your farm. If you are seeing low vigour or stunted plants this could be cyclamen mite damage (Figure 1 and 2). Walk your fields looking for damage and check new, unexpanded leaves for mites.

- Leaves will be wrinkled, distorted, stunted, and roughened.
- Leaves will be compact around the crown and the plant will be stunted.
- Fruit will be small and bronzed in heavy infestations.
- In severe cases cyclamen mites can prevent new growth.

These mites are hard to see with the naked eye but heavy infestations will look like piles of salt in the base of the leaflet (Figure 3). Check older fields as well as first-year fruiting fields, as we have seen cyclamen mites in 1 year old fields this year.

- Populations tend to peak in late spring and early fall.
- Successful application of an insecticide or miticide relies on a high volume spray and thorough coverage; **slow down and use a high water volume.**
- Your options for control are **Vegol Crop Oil** and **Agri-Mek SC**. Do not apply Agri-mek if bloom is present, or Vegol Crop Oil in high temperatures. Make sure to apply Agri-mek with a surfactant.
- Do not use captan, Maestro, Folpan, or sulphur-based products with crop oils or adjuvants. See Publication 360, Fruit Crop Protection Guide, page 221 for a list of available adjuvants and precautions.

- If green fruit is present you may want to wait until late summer to apply a miticide or insecticide. You are limited to 2 applications of Agri-Mek a year and will likely achieve better control later in the season.
- Flag problem areas now for control in August or September.
- Avoid insecticides that can cause mite flare-ups, including pyrethroids (Group 3).
- **Sanitation is very important** throughout the season. Make sure to work in **new, clean fields first** before moving to older, infested fields.



Figure 1 and 2. Cyclamen mite damage on leaves and flowers.



Figure 3. Heavy infestations of cyclamen mites will look like piles of salt.

**Two spotted spider mites (TSSM):** Check both day-neutral and June-bearing fields. Check the lower leaf surface on older leaves for webbing, then check new growth to see if mites have moved there. Avoid using pyrethroids for TPB and clipper weevil to avoid mite flare ups.

- If TSSM are present on 55% of a 60 leaf sample of middle-aged leaves, there are approximately 20 mites per leaf, and it is time for control.

**Strawberry Aphids:** Check weekly for aphids, and prepare to do this throughout the summer. Aphids can transmit viruses all season. Once aphid populations begin to climb after an insecticide it is time to re-apply.

- Check the lower leaf surface of new, folded leaves for strawberry aphids.
- Our survey in 2017 showed that aphid management is having a positive impact on controlling viruses, BUT careful aphid management is still needed. Viruses are still present in most fields and aphid management needs to continue to maintain virus control.

**Tarnished plant bugs (TPB):** Continue to tap for tarnished plant bug once or twice a week. Remember the threshold for TPB is approximately 1 nymph per 4 flower clusters.

- At the green fruit stage your options are Rimon, Assail, Beleaf (at the high rate for suppression) and group 3s.
- Be careful using group 3s as these may lead to a mite outbreak.

**Flea beetles:** flea beetle damage has been seen in newly planted fields.

- There are no products registered for flea beetle control but sprays used for aphid control will also control flea beetles, such as Assail, Admire, Cygon and Lagon.
- If you are spraying Malathion for leafhoppers this will also help control flea beetles.

**Clipper weevil:** will not damage buds after the blossom has opened.

**Anthracoze and botrytis:** Continue to include group M fungicides (captan, Maestro, Granuflo-T) in your disease management program for botrytis and anthracnose. Anthracnose builds up in warm weather and is spread by splashing rain. Make sure to apply a fungicide before rain to protect against anthracnose. Most anthracnose infections take place during bloom and fruit ripening, but controlling anthracnose should start before bloom, especially on day-neutrals.

- Captan, Maestro, and Granuflo-T (Group M) control botrytis but also will help control anthracnose. Switch 62.5 WG (Group 9+12) is registered for control of botrytis and anthracnose.
- **Always alternate fungicide groups.**

**Blueberries:** Crop stage ranges from petal fall to green fruit. The crop is looking promising.

**Insects:** Check for active scale crawlers at this time. Use black sticky tape on bushes that have had scale infestations in the past to find the crawlers. If crawlers are active it is time to spray. New scale damage will be easiest to see on new growth and foliage.

**Cranberry fruitworm and cherry fruitworm:** Apply a spray at petal fall, or use pheromone traps or degree day models to time sprays. Without traps or models spray at petal fall, and again 7-14 days later. Choose bee-friendly products such if bloom and bees are present.

**Raspberries:** are in bloom in Southern Ontario and will soon be in bloom in the rest of the province.

**Insects:** Check primocanes for raspberry cane borer injury. Developing flower buds on summer-fruiting varieties are susceptible to raspberry fruitworm. Scout for raspberry fruitworm by tapping the bud clusters over a paper plate or tray, similar to tarnished plant bug scouting. If you see leaf shredding check for raspberry sawfly larvae; green bristly larvae on the lower leaf surface on newly shredded leaves. If there are no signs of beetles or leaf shredding, an insecticide is not needed until after bloom

Check Pub 360, Fruit Crop Protection Guide, table 3-8 *Activity of Insecticides on Raspberry Pests* for insecticides for these different pests. **Do not apply an insecticide during bloom.**

**Spotted Wing Drosophila (SWD):** We have not found any SWD so far. Stay tuned to the blog and the berry bulletin for updates on what we are finding and different management practices.

- SWD management includes frequent harvests, sanitation, thorough spray coverage and post-harvest cooling.
- Check out this [blog post on managing SWD for the different management tools](#).

**New pest control products are available for berry growers. Check out [this blog post](#) for new products and uses this season. This post includes an update on products from October 2017 to April 2018. Use this in addition to the 2018-2019 version of Publication 360, Fruit Crop Protection Guide.**

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