Berry Bulletin 2019

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Strawberries: Day-neutral harvest is under way in Southern Ontario on over-wintered plants. In new day-neutral plantings continue to remove flower buds and bloom until there are 4-6 leaves present to help the young plants establish. Green fruit is present in June bearing strawberries that were row-covered and harvest is not far off in early areas. Non-covered strawberries are in bloom, and planting continues for June-bearing strawberries. Although it will be a late season the crop is looking promising.

Insect activity has increased quite a bit this week. Tarnished plant bug, clipper weevil, aphid and cyclamen mite pressure is increasing.

Tarnished plant bugs (TPB): nymphs are present in fields with bloom (Day-neutral and June bearing), and insecticides have been applied. Tap flower clusters every week to monitor TPB. The threshold is approximately 1 nymph in 4 clusters. Options for control are group 3 insecticides (Mako, Matador, Decis), Rimon, or Beleaf for suppression only. If there is a high population of TPB suppression products will not provide adequate control. Rimon and Beleaf work best on early-instar nymphs. Do not spray when bees are active.

Clipper weevil: check older fields and field edges for clipper weevil. Some group 3 insecticides provide control of TPB and clipper weevil, but can be toxic to beneficial insects and cause mite flare-ups. Border sprays may provide enough control.

Strawberry Aphids: Aphids can be found in fields that haven't had any aphicides applied yet. If you haven't applied anything to control aphids plan to do so soon. If you have applied an insecticide prepare to spray again once the population begins to build up. Check the newest leaves every week for aphids.

Flea beetles: flea beetle damage has been found in new strawberry fields. Some of the insecticides applied for aphids will also provide some control of flea beetles, including Assail, Admire, Cygon, or Lagon. Malathion may also provide some efficacy when applied for leafhoppers.

Cyclamen mites: mites and damage have been found in fields both with and without a history of cyclamen mite damage. Monitor all fields for damage and prepare to apply Agri-mek post-bloom. Make sure to include a non-ionic surfactant (0.1%-0.5% v/v) with Agri-mek SC. Avoid using surfactants in close sequence with Bravo, Echo, Captan, Maestro, Folpan or copper fungicides. Cyclamen mites can be protected in the crown so a high-volume spray is necessary to ensure thorough coverage. Do not spray during bloom.

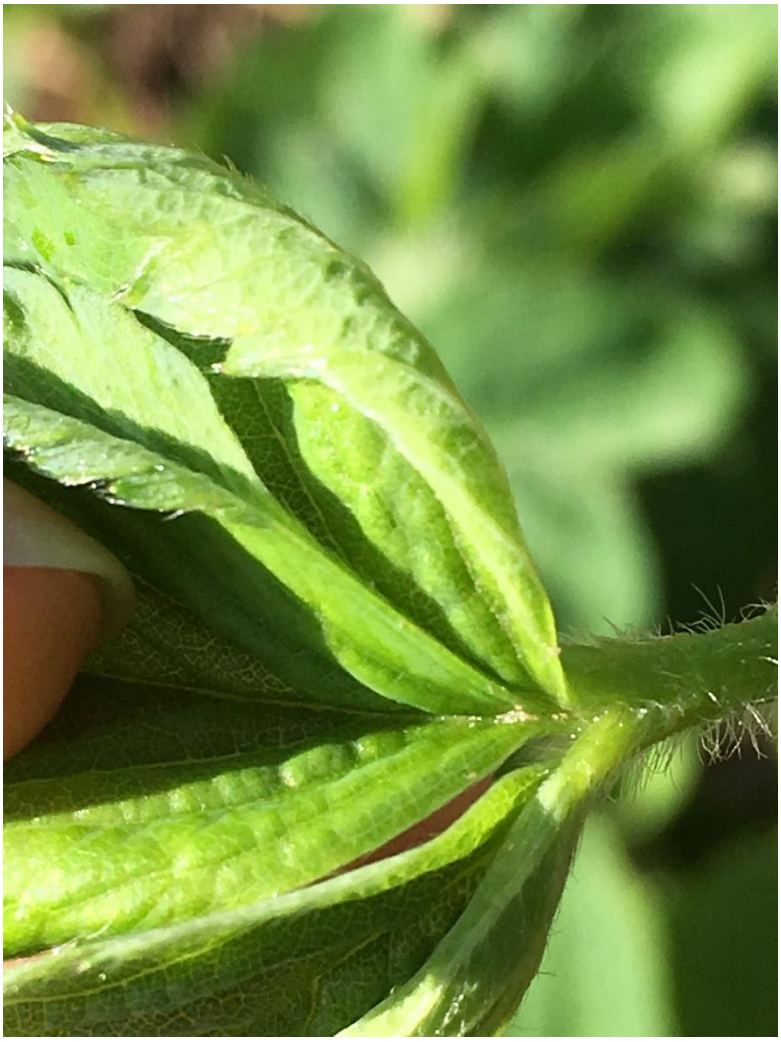

Figure 1. Cyclamen mite found in the newest leaves. Use a hand lens. Mites and eggs will look like piles of salt.

Disease: These continuing wet conditions can lead to higher disease pressure, including botrytis, angular leaf spot, common leaf spot, and leather rot. Hopefully the dry weather this weekend will help.

Common leaf spot and angular leaf spot have been found in strawberry fields. Common leaf spot spores and angular leaf spot bacteria are spread by splashing rain. Check for angular leaf spot by holding leaves up to light and looking for translucent, angular-shaped spots.

Include broad-spectrum group-M fungicides in your disease management program for botrytis and anthracnose. **Quadris Top** has been registered for control of powdery mildew and

anthracnose. **Pristine (7+11), Cabrio (11), Quadris Top (11+3), Diplomat (19) and Switch (9+12)** are also registered for control of anthracnose. Anthracnose resistance to group 11s has been identified in Ontario. Rotate the use of group 11s with different groups. Always alternate fungicide groups.

Blueberries: are in bloom or petal fall across the province . The warm conditions this weekend will be good for pollinators.

Insects: plan to spray for cranberry and cherry fruitworm at petal fall. I have found more gypsy moth larvae in blueberries this year. They are not usually a concern in blueberries but I have seen more damage than previous years. *Bacillus thuringienesis* products (Dipel, Bioprotec) applied for cranberry and cherry fruitworm will also have some activity on gypsy moth larvae.

Figure 2. Gypsy moth larvae and damage.

Nematodes: If any growers suspect they have nematode damage in their blueberries please let me know. I am working with AAFC nematologist Tahera Sultana to conduct a nematode survey across the province and am happy to visit any sites with plants with poor vigour or suspected nematode damage.

Raspberries: flower clusters are present in fields across the province and bloom will begin shortly. Primocane fruiting raspberries are 2-3 feet tall in early areas.

> **Insects:** watch for raspberry fruitworm and strawberry clipper weevil especially now as insect activity is increasing. Do not spray any insecticides during bloom.

Spotted Wing Drosophila: Very low numbers of SWD have been caught in traps in New York and Michigan. We have started to set up our SWD traps across the province and will begin to include updates in this Bulletin and on our blog- make sure to monitor the blog for regular updates.

Applying insecticides for SWD is not necessary until SWD is present in your area and there is **ripe fruit** present. Calibrate your sprayers now to ensure excellent coverage once you start to spray. Once harvest begins plan to pick every other day if possible (every day is even better), and cool fruit immediately after harvest. Also, have a plan for removing unmarketable fruit from the field.

Have a great, sunny weekend!

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