

Aphid management in strawberries

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Strawberry aphid, *Chaetosiphon fragaefolii*, is a main vector of many strawberry viruses in northeastern Canada such as strawberry mottle, strawberry vein banding, strawberry mild yellow edge and strawberry crinkle virus. Although virus control has improved, viruses are still present. Due to this, these aphids are a major pest which routinely require control to eliminate the potential for economic losses. If you don't have a plan for managing the strawberry aphid, your fields may continue to decline from virus diseases.

Some common virus management strategies include:

- Reduce inoculum – remove older strawberry fields that are infested with viruses. These fields are probably low in vigour and patchy in appearance.
- Start new fields with clean plants from an accredited plant grower, and isolate new fields from sources of virus such as older fields, and wild strawberries.
- Monitor for vectors –aphids, whiteflies
- Control surrounding weeds as they can harbour aphids in both summer and winter
- Control strawberry aphids during their flight period.

It's also important to manage aphids in new fields to prevent the introduction of viruses. What's your plan to monitor and control strawberry aphids?

When to spray for aphids and how to monitor:

Aphid eggs can be found overwintering on the lower leaf surface of strawberry leaves and begin to hatch in early May. If the aphids are easy to find, they should be controlled after all the eggs have hatched but before they begin to take flight and travel to new places in the field.

To continue monitoring once they have hatched, scout on the underside of new, folded leaves. Scouting should be done weekly throughout the season. Control is required season long.

To get an idea of the population abundance, collect 60 new, folded or partially unfolded leaves from strawberry plants throughout the field, and determine the number of aphids per leaf. Economic thresholds have not been determined. However, because aphid populations can build quickly, try to keep populations below 15 aphids/60 leaves. This is especially important in new plantings!

Insecticide options for strawberry aphid control:

Cygon 480-Ag, Lagon 480E, Diamante 4 (dimethoate, Group 1B): These systemic insecticides are very toxic to bees and should not be used when buds or bloom is present. These products are economical and effective, and good options for non-bearing plantings. Use of Cygon 480-Ag, /Lagon 480E/ Diamante during the pre-bloom period will also control tarnished plant bug adults. These broad-spectrum insecticides will probably have some activity on leafhoppers, leafrollers and clipper weevils.

Admire 240 F (imidacloprid, group 4A): This systemic insecticide is highly toxic to bees. Follow recent re-evaluations, Admire can only be applied as a foliar spray. Do not apply pre-bloom or during bloom or when bees are actively foraging. Apply post-bloom only. Admire will also suppress leafhoppers.

Assail 70 WP and **Aceta 70 WP** (acetamiprid, group 4A): These locally systemic insecticides are moderately toxic to bees. They are also labelled for tarnished plant bug (at the high labelled rate) and leafhoppers, so it is a good choice when these pests are also a concern. Note a maximum of 2 applications of products from group 4A per season.

Cormoran (acetamiprid + novaluron, group 4A, 15): This product is labelled for control of aphids, leafhoppers, clipper weevil and tarnished plant bug (at a higher rate). Do not apply when bees and beneficial insects are active. Note a maximum of 2 applications of products from group 4A per season.

Sivanto Prime (flupyradifurone, group 4D): Sivanto is considered safer to beneficial insects and bees than most group 4 insecticides, although it should not be sprayed when bees are working. It can be used in rotation with other group 4 insecticides if there is no other option. It may also have some activity on leafhoppers. This is a good option to use in rotation with Beleaf.

Exirel (cyantraniliprole, group 28): This insecticide is very toxic to bees exposed to direct treatment or residues on blooming crops and weeds. It's best to use this product at a high rate and short intervals between applications under high pest pressure. Use an adjuvant, where permitted, for optimum control- see label, and [Adjuvants Used in Fruit Crops](#), for more information. Don't tank-mix or make sequential applications with Group 11 fungicides, copper fungicides, Captan, Maestro, Folpan, Bravo or Echo. See product label for numerous other tank-mix restrictions.

Beleaf 50 SG (flonicamid, group 9): This product provides good control of aphids, is safe to bees and beneficials, and will also suppress tarnished plant bug (at the high labelled rate). Although aphids apparently stop feeding within hours of being treated, they might take a few days to die. This is a great product to use in rotation with Sivanto Prime.

SuffOil-X (80% mineral oil) and **Vegol Crop Oil** (canola oil): SuffOil-X deters aphid feeding only! Apply in a high-volume spray to ensure thorough coverage and use when populations start to build but before winged stages develop. The tolerance has not been

determined for all varieties, test a small area first. Do not apply oil within 48 hours of freezing temperatures, when temperatures are high (above 30°C), prior to rain or to heat- or moisture-stressed crop. Do not use within 14 days of Captan, Maestro or copper and 30 days of sulphur and do not apply to wet foliage.

Malathion, Mako, Decis, Matador, Rimon: These products do not control aphids in strawberries!

The monitoring and control of strawberry aphids is an important part of a strawberry pest management program. Weekly scouting and 3-5 insecticide applications a year are important for virus management in strawberries. As potential virus vectors, regular aphid monitoring and management is important.

This is an update of an article originally posted in 2016.