

# Cranberry IPM Bulletin

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**Please note:** The following recommendations are based on field monitoring data from cranberry fields in all cranberry growing regions in British Columbia. Not all recommendations listed in this newsletter are applicable to all fields. Each cranberry field has unique insects and diseases. Field monitoring is strongly recommended before making any pest management decisions.

## Plant Development

Bloom is close to done in most fields and berries are developing. Most fruit is pinhead to pea-sized, with some larger fruit in fields that are further ahead or around field edges. Slower developing fields are still in bloom.

## Fireworm

**The second generation of fireworm is now hatching and sprays are being recommended.**

Check first generation hotspots for hatching larvae. When larvae are found in more than 30% of samples spray a registered insecticide. After sprays have been applied make sure post-spray checks are conducted. Some chemicals can take up to two weeks for full efficacy so if you are still seeing live fireworm two weeks post-spray a clean-up spray may be necessary.



When conducting a post-spray check, look for the following:

- ❖ Are you finding wiggling normal-coloured larvae? Larvae impacted by sprays will be dead or sick-looking (lethargic, slow to move, darker yellow or brown and starting to turn darker).
- ❖ Have larvae greatly increased in size after you sprayed an insect growth regulator insecticide? These products should stall larval growth.
- ❖ Are you seeing berry and upright damage in certain areas of the field (very edge, corners, in-between sprinklers, around one sprinkler)? If yes, you may have a blocked sprinkler, poor coverage, or low chemigation pressure.



Always consult your marketing agency for information on MRLs and pesticide products for various markets before applying pesticides.

## Cranberry fruitworm

Cranberry fruitworm lay their eggs on the fruit, and when the larvae hatch, they burrow directly into the fruit and feed there. Once larvae are inside the fruit, they are somewhat protected from sprays. Control timing is crucial when targeting eggs and tiny larvae, select a chemical with good sticking ability and ovicidal properties for maximum effectiveness.

Spray for cranberry fruitworm if moths are being caught in traps consistently for multiple weeks and pea-sized fruit is present in the field. For fields that are still in bloom, wait until more fruit is present and monitor moth flight. A second application can be made 10 days after the first spray. Early management of this pest is key to avoid fruit infestation.



Cranberry fruitworm moth



Cranberry fruitworm inside berry



Girdler moth

## Cranberry Girdler

Girdler moth trap catches have been quite low so far this season. With the late start to summer this year it makes sense the girdler moths are delayed as well. Keep monitoring pheromone traps and conducting girdler walks on warm afternoons; walk fields in a zig-zag pattern to see if moths fly up, this can indicate peak flight and potential girdler larvae hot spots where nematodes can be applied at a higher rate. Management for cranberry girdler is done by applying nematodes 2 -3 weeks after peak moth flight. If possible try to pick a cool overcast period for nematode application to give nematodes the best chance at viability- applying during a heat spell is very hard on the nematodes. Getting on a nematode and sanding program will help keep girdler populations low.

## Tipworm

With bloom over in most fields, it is time to think about tipworm management, which can be done once bloom is over and all bee hives have been removed from the farm.

Inspect uprights using a hand lens or microscope. Where 30% of uprights sampled are infested with eggs, first, and second instar larvae, apply a spray. If majority of larvae found are third instar or pupae wait to spray even if above threshold.



Tipworm pupae



Assessing for tipworm using a microscope

## Heat damage

With the weather warming up, it is important to check that irrigation systems are working well and to inspect fields for signs of heat stress and heat damage. Monitor moisture levels in the soil and irrigate as necessary. No heat damage has been observed so far this season, given the cooler conditions. Keep an eye out for wilted fruits and dying vines.



## Recommendations

- Monitor for second generation fireworm. If fireworm are found in more than 30% of samples taken throughout the field, apply a registered insecticide. Keep weather conditions in mind when choosing an insecticide. After your insecticide was applied conduct post spray checks to check for problem areas and ineffective sprays.
- Monitor for cranberry fruitworm moths and larvae in the fruit. Apply a spray if moths have been caught consistently and pea-sized fruit is present in the field. Spray can be repeated 10 days later.
- Monitor girdler moth flight. When moth flight peaks apply nematodes 2-3 weeks after this peak on a cool day. Get your farm on a rotation with sanding and nematode applications to keep populations down.
- Monitor for tipworm by checking uprights with a hand lens or microscope. Apply a spray only once bloom is over and bees have been removed from fields.
- Monitor for cottonball berry infections. Plan to treat next season at budbreak.
- Monitor for berries exhibiting signs of fruit rot. If unsure how to control for the fungus present collect samples to submit to the BC Ministry of Agriculture for pathogen testing.
- Check fields regularly for dryness and heat stress symptoms.

The above recommendations are based on the BC Berries Production Guide and/or local IPM monitoring experience. Always consult your marketing agency for information on MRLs for various markets before applying pesticides.