

# Cranberry IPM Bulletin

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**Please note:** The following recommendations are based on field monitoring data from cranberry fields in all 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

Fruit development is progressing, lots of berries are sizing up and starting to show some colour. Bud set is starting to be observed in most fields.



## Insect Berry Damage

Insect damage can all look similar, however there are some small differences as well as clues left in the field to determine which insect is present. This is important to see if sprays were ineffective and to plan for control next year.

## Fireworm

- Berries damaged by fireworm begin to shrivel in the field quite quickly. The damaged fruit will sometimes be stuck together from the larvae moving to new fruit.
- Sometimes the fireworm-damaged berry will begin to rot.
- Check surrounding areas to look for burnout, dead brown skeletonized leaves that fall apart to the touch, and old empty tents in the uprights.
- If a spot with damage is observed, watch for small brown fireworm moths flying in the general area.



## Sparganothis Fruitworm

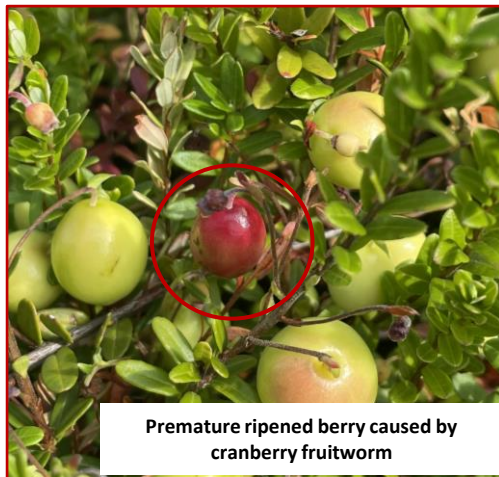
- Berries damaged by sparganothis hold their shape and firmness. Larvae tend to feed on the outside of the fruit and the seeds inside the fruit, for this reason a lot of the berry structure remains intact.
- Unlike fireworm, there will be no vine damage in the surrounding areas.



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

## Cranberry Fruitworm

- Fruitworm damaged berries will be completely hollowed out and filled with frass.
- They will look prematurely ripened i.e. a small red berry when the rest of the field is in green berry.
- When opening a fruitworm berry it will feel light and almost “pop” due to the entire fruit being eaten.
- Check the inside of fruits for the presence of green fruitworm larvae.



Premature ripened berry caused by cranberry fruitworm



Fruitworm larva



Fruitworm damage - note how thin the skin on the fruit is

## Nematodes for Girdler Control

- Most farms had peak girdler flight within the last two – three weeks. Nematodes are being applied either this week or next week on most farms.
- Try to apply on a cool overcast day if possible.
- Before applying nematodes ensure the field is saturated to allow for quick transition in the soil and improved mobility for nematodes.
- Water needs to be applied daily for up to 3 weeks to keep nematodes alive and active.

### Where pests are at...

Fireworm	Second generation hatch is now over. Watch for damage and moth flight, some fields with issues are seeing moth flight starting to increase again.
Sparganothis	Moths are still being caught. Watch for newly hatched larvae and berry damage.
Tipworm	Timing is right to control for tipworm, now that bloom is over. Monitor larval stages for maximum efficacy. Keep PHI in mind when applying products for this pest.
Cranberry Fruitworm	Damaged berries and larvae are now present in fields with history of this pest. Moths are still flying this week, although catches have decreased.

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## Sunscald

- Berries with sunscald are starting to be observed.
- Fields with high yields and less canopy coverage are most likely to be affected.
- The top of the fruit exposed to the sun is damaged. This generally will start to rot.



## Red Leaf Spot

- Fungal reaction to excessive nitrogen applied.
- No chemical control is necessary the plant tends to grow out of it.
- Starting to be observed now, after fertilizer applications.

## Recommendations

- **Fireworm:** Monitor for third generation moth flight and newly hatched larvae. Look for damage from this pest. If there were any issues during second generation, there is a higher likelihood of a third generation on your farm.
- **Sparganothis Fruitworm:** Monitor for sparganothis fruitworm in cranberry uprights like you would for fireworm. Note sparganothis tend to use multiple uprights in their tents and have a translucent or brown head capsule. Apply a registered insecticide if levels are of concern. Note not all insecticides for fireworm are effective against sparganothis.
- **Cranberry Fruitworm:** Monitor for cranberry fruitworm larvae and damage in the field. Larvae will always be found in berries as this pest does not make tents in cranberry uprights. Look for clusters of prematurely ripening fruit.
- **Girdler:** If applying nematodes; apply on a cool overcast day if possible. Irrigate heavily before application and continue to irrigate daily to keep nematodes alive and active in the soil.
- **Tipworm:** Monitor for tipworm larvae by using a microscope or hand lens. If tipworm is in susceptible stages; mostly eggs, 1<sup>st</sup>, and 2<sup>nd</sup> instar larvae and at 30% infestation, spray a registered insecticide for this pest. Before spraying ensure all pollinator hives are off the farm and bloom is over. Keep PHIs in mind when applying late in the season.
- **Cottonball:** Monitor for cottonball berry infections. If disease is detected plan to treat with fungicide next year at bud break.
- **Heat Stress:** Monitor fields for symptoms of heat stress.

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.