Cranberry IPM Bulletin

Prepared by: E.S. Cropconsult Ltd. *Volume 6 Issue No. 4 July 4th, 2022*

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 progressing in all fields, sped up by the recent heat. Some fields have pinhead-sized fruit with pea-sized fruit present on field edges in fields that are further ahead in development.

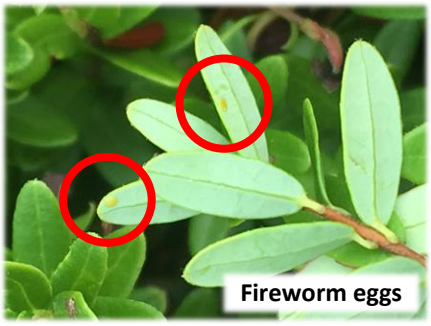
Fireworm

Fireworm moths are being caught in pheromone traps at peak flight levels, the second generation of fireworm larvae will be hatching soon. Given the staggered first generation that was seen earlier this season, the timing of the second generation is more uncertain than normal. It is important to monitor individual fields and act accordingly. This includes new plantings and recently mowed fields, as these can harbour fireworm and put the field and surrounding fields at risk in future. Correct timing of sprays is important as late sprays increase risk of burnout and fruit damage can occur.

Hot spots that were noted during the first generation should be checked closely for second generation larvae. A hand lens can be used to detect very small newly hatched fireworm larvae.

Fireworm larva

Girdler moth



Fireworm eggs

Sparganothis fruitworm larva

Cranberry Girdler

These moths are being caught at low levels in traps with numbers expected to increase in the coming weeks. Girdler moths tend to fly later in the afternoon on warm sunny days and settle on the foliage soon after taking flight. Keep grassy weeds and grass under control as these are alternate hosts for girdler. Monitoring moth flight helps with management timing. Nematodes need to be applied 2- 4 weeks after peak moth flight.

Sparganothis Fruitworm

Sparganothis larvae are also going to hatch in the fields soon. They differ from fireworm in that they do not have a black head capsule (their head capsule is transparent or brown), and they can also move quickly.

Cranberry fruitworm

These moths are currently flying and being caught in traps. Cranberry fruitworm moths have a 15 mm wingspan with white triangles and small dots on the forewings. Eggs are laid on the calyx end of the fruit around 10 days after moth flight is observed. The larvae hatch and burrow into the fruit, feeding on it from the inside. Once they're inside the fruit, they are more protected from sprays, so insecticide timing is very important for this pest.


Cranberry fruitworm moth

Insecticides should be applied if pea-sized fruit is present, and it is 7-10 days after moderate numbers of moths are caught. A second application can be made 10-14 days after the first. The variable weather conditions this year should be considered when planning pesticide applications, particularly that a spray's effectiveness can be reduced if it rains soon after application.

Precipitation

Rainfall has reduced quite a bit in the second half of June with a maximum volume of 10 mm, which fell in Richmond. Overall precipitation is well above last year in all regions; if you remember this time last year we had just experienced a heat dome.

Region	Total Rainfall (mm) Jan 1st, 2022- July 1st , 2022	Total Rainfall (mm) Jan 1st, 2021- July 1st , 2021	Total Rainfall (mm) June 18th, 2022- July 1st , 2022	Total Rainfall (mm) June 18th, 2021- July 1st , 2021
Pitt Meadows	927 mm	695 mm	7 mm	0 mm
Richmond	587 mm	402 mm	3 mm	0 mm
Abbotsford	763 mm	556 mm	10 mm	0 mm
Comox Airport	597 mm	470 mm	1 mm	0 mm

Growing Degree Days

Despite the warmer weather over the past weekend, the temperatures continue to be cooler than average. We are still over 100 degree days behind 2021 and 2020, as well as the 30 year average.

Growing Degree Days Based on YVR				
	2022	**2021**	**2020**	**30 year average**
January 31st	130.5	164.5	159.7	129.24
February 28th	255.4	221.9	288.9	263.22
March 31st	479.9	462.25	455.2	479.92
April 30th	718	746.4	722	764.38
May 31st	1069.7	1134	1146	1171
June 30th	1520.4	1671.5	1611.6	1647.56

Red Leaf Spot

This fungal disease appears as red blotches on leaves. In severe infections, uprights can die reducing yield for the following year. This disease is often seen in areas where a fertilizer application high in nitrogen has resulted in lush growth. Low levels can be tolerated but high levels are concerning. If you see this disease in your fields, make a note for management early next spring.

Pollinators

Chemical applications can have a serious impact on pollinators. Even products labelled as 'bee friendly' can deter bees from entering a field. Plan to spray permissible products in the evening and at night whenever possible (as bees are inside their hives then) to protect pollinators.

Recommendations

- Monitor fields for moth flight using pheromone traps (fireworm, sparganothis, cranberry fruitworm, and girdler) and make note of any field areas with high numbers or peaks.
- Monitor for fireworm and sparganothis fruitworm larvae. Check weekly for newly hatched larvae particularly 10- 14 days after peak moth flight.
- Monitor for cranberry fruitworm moths. In fields where moths are observed, plan to spray when pea-sized fruit are present.
- Monitor for rusty tussock larvae during bloom, which is a sporadic pest, during fireworm monitoring or by checking any patchy areas with no flowers present.
- Monitor for tipworm damage. If you are seeing significant damage, plan to control for this pest after bloom is over.
- Monitor for twig blight spores opening. When spores are starting to open apply fungicide(s) to prevent further spread of this disease.
- Monitor for cottonball leaf infections. Plan to treat next season at bud break.
- Monitor for red leaf spot and make note of any fields with high levels for management early next spring.
- Monitor bloom progression and apply fungicide sprays for fruit rot as per your spray program.
- 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.

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