

# 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

Most fields are in the bud swell and cabbage head stages. Some field edges have flower hooks starting, however usually as you go in the field bud swell and cabbage head are still quite evident. The plant stages also vary with variety so keep this in mind. Some of the earlier varieties (Mullica's and Crimson Queen) are at bud elongation, roughneck and flower hooks.

**Bud Swell**



**Cabbage Head**



**Bud Break**



**Bud Elongation**



**Roughneck**



B. A. Workmaster, J. P. Palta, and T. R. Roper. Terminology for cranberry bud development and growth.



## FIREWORM

Fireworm hatch is well underway in most regions this week. It appears hatch is a bit staggered this year with the weather lately as larvae of all sizes are being observed this week. Fireworm can be anywhere from 0.5mm to 8mm in length with a black head.

**Monitoring:** Fields are slightly behind this year so nice uniform tents may not be obvious. Open up several buds while taking samples to ensure there are no larvae. Generally the fireworm hatch in the warmer areas of the field first so it isn't unusual for the first generation of fireworm to be a prolonged scattered hatch.

## SPARGANOTHIS FRUITWORM

Sparganothis are starting to hatch with the first generation of fireworm. Sparganothis larvae look very similar to fireworm. They have a light green/beige body with a light brown almost translucent head. A microscope or hand lens make the identification of this pest easier. Correct identification of this pest is important because not all insecticides for fireworm are effective against sparganothis.

**Monitoring:** Monitor for sparganothis as you are monitoring for fireworm. Sparganothis tents usually include multiple uprights and can appear messier than fireworm tents. When the larvae are first hatching their tents may be more similar to a fireworm tent.



## Things to keep in mind when choosing a product for spring sprays...

- **Frost Protection & Sticking Power:** if you were wanting to use a chemical that needs an extended dry time, try to spray in the morning when all chance of frost is over. This ensures you maximize dry time before a potential frost event.
- **Type of Pest:** historically, contact chemicals have very little effect on sparganothis larvae. If you are spraying for both fireworm and sparganothis, an Insect Growth Regulator insecticide is your best option.
- **Weather:** ensure the weather forecast is clear before spraying. In most cases the insects slow down while the weather is overcast and rainy, as the larvae don't feed or hatch as quickly as they would in warm conditions.



### BLACK VINE WEEVIL

Overwintered weevil larvae have been seen active in the soil. Historically dry pick fields tend to have a problem with weevils, as the fall flood for harvest will kill most overwintering larvae.

**Monitoring:** Weevil vine damage will look similar to girdler damage. If girdler trap counts are historically low on your farm and there are weak vines present, the damage you are seeing could be weevil. Pull back weakened vines and dig in the top couple cm of soil for larvae. Weevil larvae are white with brown heads and often are curled in a "C" shape.

Weather History Based on Vancouver Airport									
Cumulative Precipitation					Growing Degree Days Cumulative base temp 0				
Month	2019	2018	2017	Monthly Total 2019	Month	2019	2018	2017	27 year average
January	0mm	0mm	0mm	162mm	January 1st	0	0	0	0
February	162mm	261mm	99mm	75mm	February 1st	160.8	171.05	83.55	126.57
March	216mm	357mm	228mm	34mm	March 1st	194.7	277.25	179.8	272.04
April	249mm	467mm	445mm	111mm	April 1st	386.8	465	393.2	485.95
May	360mm	602mm	676mm	N/A	May 1st	675	745.6	678.9	770.6

#### Precipitation-

Levels are just over half of what we got in 2018 for rain. April "showers" did not live up to its potential this year!

#### Degree Days-

So far in 2019 we are behind in growing degree days compared to 2018 as well as the 27 year average. That being said, we are very similar in degree days to 2017.

## COTTONBALL

The first symptoms appear as interveinal browning on leaves; the infected leaves then turn a tan colour and start to droop before bloom. This fungus is not present on all farms, your fruit handler would inform you at harvest if this is present on your farm.

If your farm has a history of this disease, treat at bud break and again 10- 14 days later.



## RODENTS

Fresh rodent activity is being observed in fields. These pests can cause significant damage under the canopy without detection. Damage includes tunneling under the plant canopy as well as rodent chewed vines. If using rodenticide bait stations, it is important to place rodenticide bait in tamper-proof bait stations to protect non-target wildlife, pets and children. Do not place bait stations in the field, rather place it around field edges or areas where rodents may go to nest (ie. Other plants, piles of wood, close to shops etc.)



## WINTER VINE KILL

Winter vine damage is being observed in most growing regions in BC. Likely this occurred when we got the hard freeze in February after a mild January. True yield reduction levels will likely not be evident until bloom.



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

## Recommendations

- Monitor for fireworm. If fireworm are found in more than 50% of samples taken throughout the field, apply a registered insecticide. Keep spring conditions in mind when choosing an insecticide.
- Monitor for sparganothis fruitworm. Ensure proper identification by checking the head capsule on the larva, which should be light brown not black. Choose an insecticide effective for both fireworm and sparganothis.
- Monitor for black vine weevil larvae. If larvae are found, an insecticide targeting adults can be considered. It is important to apply this at night as this is when weevils are active and registered insecticides are contact control. Registered insecticides are very toxic to pollinators so application must be done well before bloom. Nematodes can be used to control black vine weevil larvae for a fall application.
- In fields with a history of cottonball apply a fungicide when the majority of the field is in the bud break stage. If infection levels are high, a second application can be done 10- 14 days later.
- Monitor for new rodent damage. Set up trap stations in areas around the fields where rodents would frequent- burn piles, other plants, around buildings and shops.
- Monitor weed emergence. Alter Casoron practices for next year based on this years weed presence.
- Keep frost protection detectors in fields and adjust to the changing weather accordingly. We did have a frost incident in June of 2017.



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.