

# Cranberry IPM Newsletter

May 26, 2017

**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

The plants are now moving along, the majority of farms are in bud elongation, roughneck stage, some flower hooks, and in newer varieties (Crimson Queen & Mullica Queen) there are flowers starting to bloom around field edges!

### Bud Elongation



### Roughneck



### Flower Hooks



### Bloom



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



## Fireworm

Fireworm have started hatching on most farms now, if you were planning on applying a first generation fireworm spray the timing is likely this week so monitor intensively. Keep in mind some newer chemistry products do not target all life stages of fireworm, so after monitoring consult with your representative to determine the best chemical for the size of larvae you are finding. Another thing to keep in mind when choosing a product is the upcoming weather conditions. Some products have increased efficacy with more dry time, so if there is a chance of rain in the forecast it is better to wait until after the rain or to choose another product.

**Monitoring:** Scan uprights for fireworm "tents". Watch for leaves that have been pulled and glued together. Once these are found, assess the sizes of larvae found.

## Sparganothis Fruitworm

Sparganothis historically hatch shortly after fireworm, start monitoring for sparganothis over the next couple of weeks. Low levels of sparganothis have been found on farms with history of this pest. Keep in mind not all chemicals used for fireworm are effective against sparganothis.

**Monitoring:** Monitor for sparganothis the same as you would for fireworm. Sparganothis tents can appear messier than fireworm tents and may include more than one upright. When opening tents look closely at the larvae to distinguish whether the larvae have a beige/ brown head (Sparganothis) or a black head (Fireworm).

## Sizing Larvae

- minute (0.5 – 2 mm) --
- small (2 – 3 mm) ---
- medium (3 – 5 mm) ----
- large (5 – 8mm) -----



E.S. Cropconsult

## Cranberry Tipworm

Tipworm damaged uprights are starting to appear this week. This insect overwinters as pupae in the soil and adults emerge in early spring to lay eggs. Eggs are laid in the inner upright leaves. This is where the three instars of larvae feed on the leaf tissue causing the cranberry leaves to become cupped. Once this damage is observed you can usually find late instar larvae in the upright.

**Monitoring:** Once initial damage is observed in the spring, healthy uprights (no cupping) can be collected for assessment under a microscope. You can do this to keep track of what the populations are on your farm. It is important to keep in mind that no sprays should be applied for tipworm until after bloom.

## Dearness Scale

Scale assessed under the microscope this week have not emerged. Crawlers are forming under the scale preparing for emergence. This will likely occur in the next couple of weeks. It is crucial to get in the habit of good biosecurity practices like disinfecting boots and equipment as well as practicing biosecurity on other farms.



Photo by T. Bence

### For more information...

#### Integrated Pest Management for Cranberries in Western Canada

<http://www.bccranberries.com/pdfs/ipm-booklet/IPM%20for%20Cranberries%20Low%20Res.pdf>

#### Cranberry Production Guide

<http://productionguide.agrifoodbc.ca/guides/14/section/25>

#### 2016 Canadian Pesticide Chart

<http://productionguide.agrifoodbc.ca/sites/pg.localhost/files/files/2016%20Canadian%20Cranberry%20Pesticide%20Chart%20Printable.pdf>

## Rose bloom

Rose bloom is now sporulating in most growing regions. Keep monitoring for spores (white spores, greying edges) with a hand lens. When it appears most have sporulated or are close to sporulation, apply a fungicide if levels are moderate to high on your farm.



No spores present



Spores present

## Red Leaf Spot

This fungal disease causes glossy red spots to appear on the upper surface of the cranberry leaf. The terminal growth of uprights may be killed with a severe infection, which will in turn affect next years yield. Disease levels are often increased in newly planted fields and fields with excessive overgrowth (too much Nitrogen).



## Weather

Growing degree days for 2017 are still behind the 25 year average. Keep in mind that the growing degree days for 2015 and 2016 were quite advanced so our spray timing will be different this year. We have had quite a rainy spring but overall we are only 65mm above 2016. The majority of 2016 rain occurred February and March whereas this year was concentrated in April and May.

Bi-Weekly Precipitation	
April 1- April 14	96mm
April 15- April 28	41mm
April 29- May 12	198mm
May 13- May 26	93mm

Weather History Based on Vancouver Airport									
Cumulative Precipitation					Growing Degree Days Cumulative base temp 0				
Month	2017	2016	2015	Monthly Total	Month	2017	2016	2015	25 year average
January	0mm	0mm	0mm	99mm	January 1st	0	0	0	0
February	99mm	169mm	159mm	129mm	February 1st	83.55	153.35	181.6	127.78
March	228mm	337mm	272mm	129mm	March 1st	179.8	364	385.15	277
April	445mm	486mm	428mm	140mm	April 1st	393.2	625.85	650.45	492.23
May	575mm	510mm	480mm	77mm (May 22)	May 1st	678.9	979.4	930.3	777.17

## Keep Monitoring for...

- Clay Coloured Weevil notching (C shaped “notch” in leaves)
- Rodent damage (orange vines, trails, and rodent holes)
- Cottonball leaf infection (interveinal browning and drooping uprights that otherwise look healthy.)

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

**Keep in mind with bloom in the near future to be mindful of chemical choices. Try to avoid spraying during bloom if at all possible- if not spray at night while pollinators are not active.**

## Recommendations

- Monitor for Fireworm. If an insecticide has already been applied do a post spray check to ensure the spray was effective.
- Monitor for sparganothis fruitworm. Ensure proper identification by checking the head capsule on the larva, which should be light brown instead of black. Try to time a spray with fireworm to avoid a second application.
- Monitor for new tipworm damage. Check for cupped leaves and late instar larvae, no spray recommendations until after bloom.
- Monitor for dearness scale emergence. Once emergence begins, practice biosecurity for yourself and others.
- Monitor for clay coloured weevil notching. If notching is found throughout the field on a dry pick farm, an insecticide should 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.
- Monitor for rose bloom. Watch for sporulation and apply a fungicide spray when this occurs in the majority of samples.
- Monitor for red leaf spot infections. If damage is evident try to limit the amount of Nitrogen applied the rest of the season and in the next growing season.
- Monitor for new cottonball infections.
- Monitor for new rodent damage.

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.

*Funding provided by:*

