



# Cranberry Station Newsletter

MAY 1, 2015

UMASS CRANBERRY STATION  
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P.O. BOX 569  
EAST WAREHAM, MA 02538  
<http://www.umass.edu/cranberry>

## Scouting and Managing Dodder Preemergence

It has been a cold spring but we are expecting that dodder seedlings should be showing up any time now. Inland areas and sanded or bare areas will be warmer and you may see seedlings in these areas sooner than in coastal or unsanded bogs. Look for newly emerged seedlings where infestations have occurred in the past or where berries are removed from the beds at harvest. Newly emerged seedlings are usually yellow in color, very slender, and 0.5 to 3 inches long (see photo).



If the vine cover is good, move the vines aside so that you can see the duff layer; this is where early emerging seedlings will be seen. Dodder populations emerge slowly at first, but then peak quickly (50-90% germinate 30-45 days after first or early emergence) and then decline.

Scouting is necessary for correct timing of preemergence herbicide application. Herbicides should be applied within 10-14 days of early seedling emergence, so that the chemical is present when the peak in germination occurs. Many growers have had luck with Casoron for dodder control but it can be variable. Traditionally growers have used 30-60 lb/A. Some growers have experienced poor control with 30-40 lb rates.

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## Winter Moth Found on Cranberry!

The Entomology Lab reports tiny **winter moth** (WM) larvae have been picked up in sweeps in Plymouth and Rochester! Despite temps below 60, a few larvae per sweep set have been found. They are **incredibly tiny** but they are out. Reports are that all eggs have hatched at this point. Continued on page 5.

Tiny Winter Moth larva found on cranberry  
*(photo courtesy Heather Faubert, URI)*



Winter Moth larva and its frass in blueberry  
*(photo courtesy Erika Saalau Rojas)*

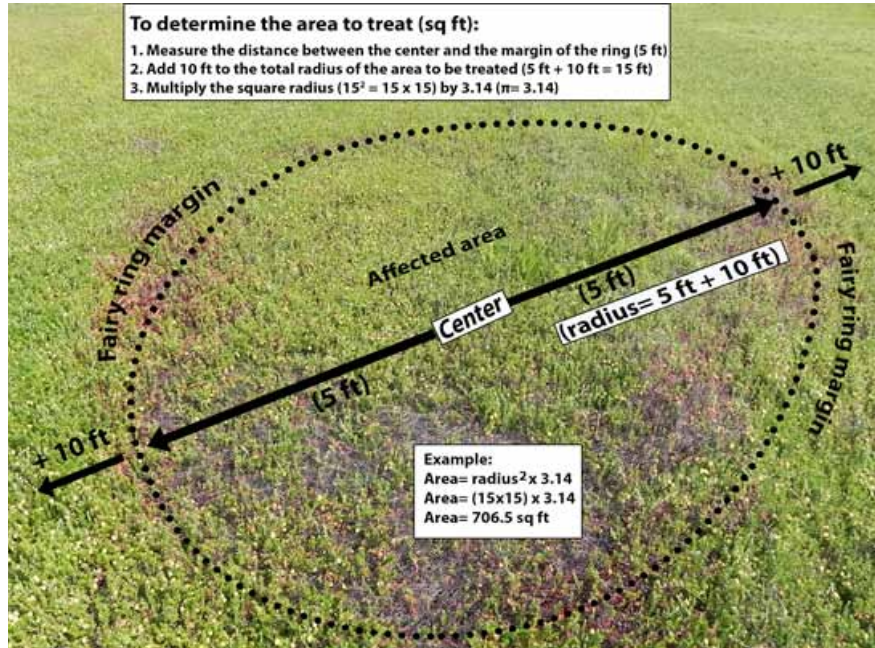


## Early Spring Fungicide Applications: A Review

Spring has finally sprung and with warmer temperatures comes bud break, insects, and of course cranberry pathogens. At this time of the year your fungicide applications (if any) should be directed towards Phytophthora root rot, upright dieback, and fairy ring disease management. Phytophthora root rot is caused by a fungus-like pathogen that thrives under wet and cool weather conditions. Severe infections are more likely to occur in low spots or areas with poor drainage and fungicide applications will only be effective once drainage conditions are improved. Also, keep in mind that only certain fungicides (in order of efficacy: metalaxyl, mefenoxam, fosetyl-Al, and phosphorus acids and salts) will be effective against Phytophthora. The first fungicide application should occur between April 25 and May 15 and the second application 60 to 90 days later according to label instructions and PHI specifications. A third application can be made in the fall depending on the severity of infection in the area affected. Some of the products labeled against Phytophthora should be watered in, so please read the label carefully and/or call the Station.

Upright dieback is caused by relatively 'weak' pathogens, but this disease can severely impact yield if infected vines undergo stressful conditions such as prolonged heat or drought periods in the summer. Fungicide applications are warranted only if symptoms and plant infection by one or more of the fungal pathogens associated with this disease have been confirmed by an extension professional. Following diagnosis, a well-timed springtime fungicide application of chlorothalonil or copper should provide adequate disease control. For best results, the timing of application should take place during bud break or early bud expansion, usually between April 25 and May 15. NOTE: given that there is a new chlorothalonil MRL for export-certified fruit (see previous Newsletter), please consult with your handler regarding any restrictions before making any chlorothalonil applications.

Effective fungicide applications against fairy ring should be made during or shortly after bud break, preferably during the month of May. Currently, the most effective fungicide treatment available consists of a drench with Indar and Abound. Research on fairy ring control, led by Dr. Peter Oudemans in New Jersey, suggests that application method, fungicide rate, and volume of water may impact fungicide efficacy.



Using a drench method, one can treat up to a tenth of each acre while remaining within the label restrictions. One tenth of an acre is approximately 4,300 ft<sup>2</sup>.

To estimate the area to be treated:

1. Measure across the center of the fairy ring.
2. Divide by 2 to get the radius.
3. Add a 10 ft buffer to the radius.
4. Use the formula  $\text{Area} = r^2 \times \pi$ .  
(r is radius,  $\pi$  is  $\sim 3.14$ )

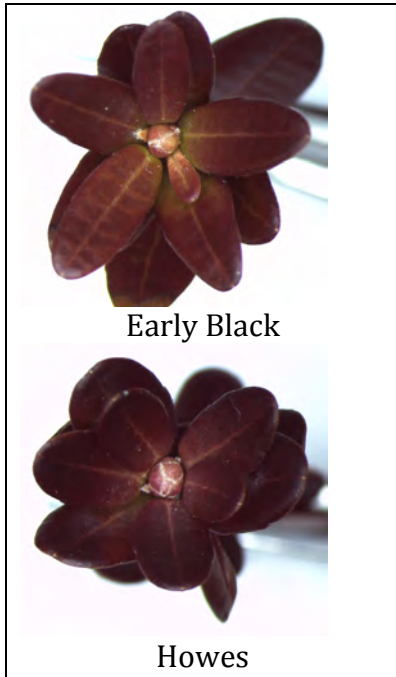
The fairy ring in the photo has a 5 ft radius. Add 10 ft to the radius of the ring to include a buffer (radius now equals 15 ft).

$$\text{Area} = 15 \times 15 \times 3.14 = 706.5 \text{ ft}^2$$

Now calculate the rates of Indar and Abound for your fungicide mix. The rate for Indar will be equal to the fairy ring area (ft<sup>2</sup>) multiplied by 0.0028 fl.oz. The rate for Abound is equal to the fairy ring area (ft<sup>2</sup>) multiplied by 0.004 fl.oz. For every ft<sup>2</sup> to be treated, use 0.1 to 0.2 gallons of water. Apply the tank mix evenly over the affected area (entire ring area plus the 10 ft outer margin). If the fairy ring area is larger than one tenth of each acre, contact the Station.

Erika Saalau Rojas, Plant Pathologist

Spring Frost Tolerances - Early Black and Howes



Spring Dormant 18°F



White Bud Stage 20°F



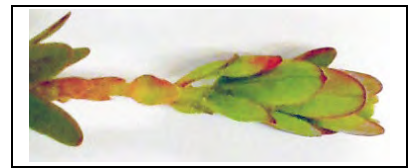
Bud Swell Stage 22°F



Cabbage Head Stage 25°F



Bud Elongation 27°F



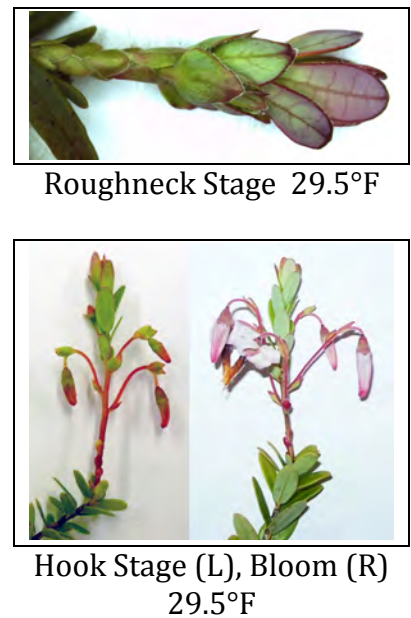
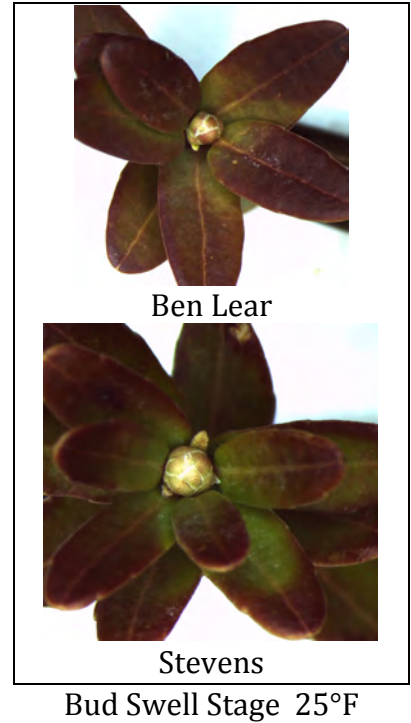
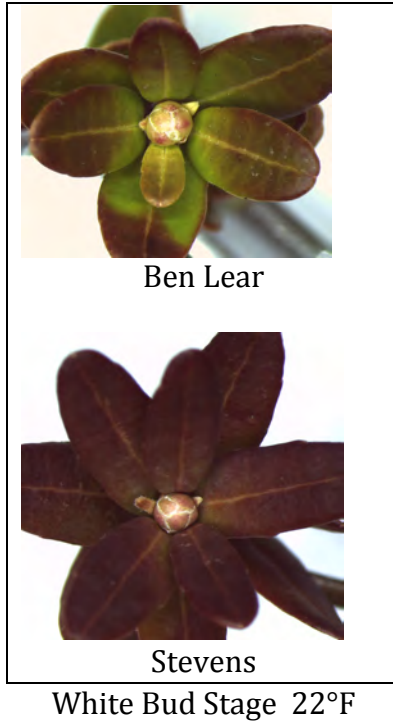
Roughneck Stage 29.5°F



Hook Stage (L), Bloom (R)  
29.5°F

Spring Frost Tolerances - Ben Lear and Stevens

Tolerances for large-budded hybrids are assumed to be similar to these. Crimson Queen, Mullica Queen, and Demoranville have been observed to develop in a similar timeline as Ben Lear.



Dodder, continued from page 1:

If this is your experience with Casoron, consider increasing the rate for improved control. Repeat applications at least 3 weeks apart can be used (not to exceed 100 lb/A total in a 12-month period), and may be more effective than a single application.

QuinStar (8.4-16.8 fl oz/A) can be used for dodder control. Target the majority of the seed population as they are germinating and emerging. Two applications are permitted (not to exceed 16.8 fl oz/A in a 12-month period) but a minimum of 30 days must elapse between applications. Handlers may be restricting QuinStar use so check before using! QuinStar can be used during the preemergence and postemergence phase.

We do not know if Callisto will control dodder populations when applied preemergence, though some growers have experimented with this application timing. Please contact us (508-295-2212 x21 or x43) and let us know what you have seen.

Hilary Sandler  
Katie Ghantous

**Frost season is underway!**

As of April 23<sup>rd</sup>, most bogs had reached white bud stage. Some bogs that iced-out late were lagging behind a bit. Starting on April 27<sup>th</sup> and updated as the plants advance, photos of tolerance stages will be posted on the Station website. Photos of all spring stages from 2014 are included in this newsletter.

**\*\*\* Chart Book Errata \*\*\***

Page 49 of the 2015 Chart Book (print version only) should read 1.9 tsp NIS, not 1.6 tsp (referring to the amount of NIS to use with Callisto). The web version is correct.



**Carolyn DeMoranville, Director**

Winter Moth, continued from page 1:

If you are going to treat for WM, consider Intrepid, Avaunt or Delegate. Given that larvae can now be found; they will only grow bigger by eating the tiny buds! Although the numbers may be below threshold, WM will get into buds and may be harder to kill once inside. The threshold of 18 per sweep set is not a long-standing "tested" number; it is a guideline to help management. Consider only treating pieces where the higher numbers are found and perhaps at reduced rates of insecticide, and then sweep again. A spray will stop the larvae already on the bog. But it is also possible that larvae may come in from surrounding blueberries and trees and may continue "ballooning" in. Another consideration is size of cranberry bud... if the buds are too small, larvae may just die, if buds are bigger (i.e., sanded pieces, early varieties, warm locations) larvae may do well and grow faster.

Heather Faubert, University of Rhode Island Extension, reports that winter moth eggs started hatching on April 19. Over the past week, all the eggs at the monitoring tree in Kingston, RI have turned blue and hatched. She expects all eggs have hatched by now in our area as well.

Martha Sylvia

**IPM MESSAGE is now active!**

Call 508-295-2212 ext. 60  
or visit website homepage to read the message!  
<http://www.umass.edu/cranberry>

**WORKER PROTECTION STANDARD  
HANDLER TRAININGS**

Last Wednesday of spring months  
**CRANBERRY STATION LIBRARY, 2-4 PM**

Worker Protection Trainings for cranberry workers in the handler category will be offered in 2015: May 27<sup>th</sup> and June 24<sup>th</sup>. There is a \$5 fee to cover the cost of the WPS training manual. If you have a pesticide license, you do not need this training. Contact Martha Sylvia: 508-295-2212, ext. 20 to sign up or for additional information.

**Being audited this year? In need of pesticide contact hours to maintain your pesticide license?**

Get pesticide credits by attending UMass Cranberry Station bogside workshops this spring.

**Demonstration of drainage tile, update of insect pests, weed management,  
and planning your fungicide program**

May 12<sup>th</sup>, 9 AM to 12 Noon

Location: Edgewood Headquarters, 73 Tremont St., Carver, MA

Kick off the growing season! See the state of the art drainage tile on a recently renovated bog. Discuss experiences using various depths and spacings. Hear the latest update on insect scouting in the area: what is active and what is recommended. Talk about herbicide timing for dodder, early summer weed management, and see a demonstration on backpack sprayer calibration. Disease management tips and strategies will be discussed for managing with and without Bravo! Upright Dieback and Fairy Ring reminders will be presented as well.

*Two pesticide contact hours in category 30*

**Timing for first fungicide and first fruitworm**

June 9<sup>th</sup>, 8 AM to 10 AM

Location: State Bog, UMass Cranberry Station, 1 State Bog Road, East Wareham, MA

Get ready to calculate % in bloom and % out of bloom to properly time your fungicides and insecticides this June! Discuss current recommendations for best management of fruit rot and fruitworm pests.

*Two pesticide contact hours in category 30*