

# Cranberry Station Newsletter

JUNE 2002

UMASS CRANBERRY STATION

1 STATE BOG ROAD

P.O. Box 569

EAST WAREHAM, MA 02538

<http://www.umass.edu/umext/programs/agro/cranberries>

## AVAUNT® CLEARS FOR CONTROL OF RESISTANT CRANBERRY WEEVIL

***Under a Crisis Petition for Massachusetts, Avaunt insecticide is available for limited acreage where growers are experiencing an emergency situation with cranberry weevil outbreaks.*** Peak numbers of weevil will be swept on bogs now through the next two weeks and again in the first weeks of July. You must work through the Cranberry Station before obtaining the material because state and federal regulators as well as the registrant have required this. Call Marty Sylvia (508-295-2212 x 20) or Joey Mason (508-942-6138).

**Use pattern:** 6 ounces/A/application. Four applications/season: 2 pre-bloom and 2 post-bloom. Do not exceed 24 ounces/season. PHI = 45 days. REI = 12 hours.

**Application:** Aerial, ground, or chemigation. *Always start with water—add Avaunt to water.* This is a water-dispersable granule that goes into suspension, so agitation is critical. *Wait two days to check for efficacy.* (We have very limited experience with this compound but efficacy looks excellent).

**Rules:** Take maximum care to assure NO movement into water proximate to your bog—hold water for 5 days after application, drop ditch water prior to application, do not apply to flow-through bogs, half-heads must be in place.

**Mode of action:** Ingestion (primary) and contact—so coverage is key. Active ingredient = indoxacarb, which inhibits proper functioning of nerves, resulting in paralysis and death. This is a novel mode of action; thus, a great alternative for Lorsban-resistant weevil. Lucky for us, the active ingredient is designated as a reduced-risk compound by US-EPA. It has a favorable environmental profile and is said to help conserve beneficial insects—although it is toxic to pollinators and only has a low impact on honeybees after spray has dried.

Many people worked far above the call of duty to make this happen and it's a bit of a miracle that we got a compound. We charged after 6 other compounds over the past few months but were unable to move them forward. Weevil is very hard to control and many effective compounds have wicked ecotoxicological profiles or cannot be used owing to highly inflexible FQPA rules. We're fortunate to have had a team of heavy lifters in the high-pressure blitz (and I mean blitz) to get a compound: Steve Antunes-Kenyon/Brad Mitchell (MA-DFA) and Jeff LaFleur and thanks go to Jere Downing and Matt Pitts, DeCran for supplying product, Gary Garretson for spray equipment, and all at the Cranberry Station. Special thanks go to Dan Sherrod of DuPont for his support.

**ANNE AVERILL AND MARTHA SYLVIA,  
CRANBERRY ENTOMOLOGISTS**

## JUNE BOGSIDE CHAT

A discussion of cranberry production issues with the Staff of the Cranberry Station  
Place: Airport Bog, Wade Street, Carver  
Hosts: Charlie and Jenney Silva  
Date: June 18, 2002  
(in case of heavy rain - June 19)  
Time: Meet at 9:00 a.m., chat until 10:30 a.m.

Cranberry growers, Charlie and Jenney Silva will be hosting a bogside chat with members of the Cranberry Station Staff and all interested Massachusetts growers on June 18, 2002 at 9:00 a.m. We will be covering production issues for early season bog management, including weeds, diseases, insects, and general horticulture issues (fertilizer, etc.). If you wish to participate, please meet at the Silva's bog on Wade Street in Carver.

### Directions:

From Wareham: Take route 58 towards Carver. Stay on Route 58 towards Carver center (pass Edaville RR). Take a right onto South Meadow Street - it is the road with the small airport sign (after you pass Mayflower Road). Follow South Meadow almost to Plymouth line then take a left on Wade Street (before the airport) - the bog is on the right.

From the Cape: Leave the Cape on Route 25. Exit the Highway at Route 58. Take a right at end of ramp then follow Wareham directions.

From Carver/Plymouth: Follow route 58 through Carver Center. Take a left on South Meadow Street - look for the airport sign at the corner. Follow South Meadow almost to Plymouth line then take a left on Wade Street (before the airport) - the bog is on the right.

## JULY BOGSIDE CHAT

A discussion of cranberry production issues with the Staff of the Cranberry Station  
Place: Cranberry Station, E. Wareham  
Date: July 9, 2002  
(in case of heavy rain - July 10)

Time: Meet at 5:00 p.m., chat until 6:30 p.m.

## IPM Phone Message, x60.

Due to technical difficulties with the out-going announcement length on our phone system, the IPM Phone Message can only be accessed on our web site. Please go to the home page and click on the most recent IPM Phone Message date in the "What's hot?" box.

We apologize for this inconvenience and will notify you when the out-going announcement problem has been resolved. I will put an update on the phone each week alerting callers to access the web if needed.

Thank you for your patience.

**HILARY SANDLER**

## CHART BOOK CHANGES

Under either fruit rot or upright dieback, the following rates should be utilized for these two fungicides:

Bravo Weather Stik: 4.0 – 6.5 pt

Bravo Ultrex: 3.8 – 6.0 lb

The maximum allowable formulation is 19 pt for Weather Stik and 18 lb for Ultrex.

**FRANK CARUSO**

**PLANT PATHOLOGY**

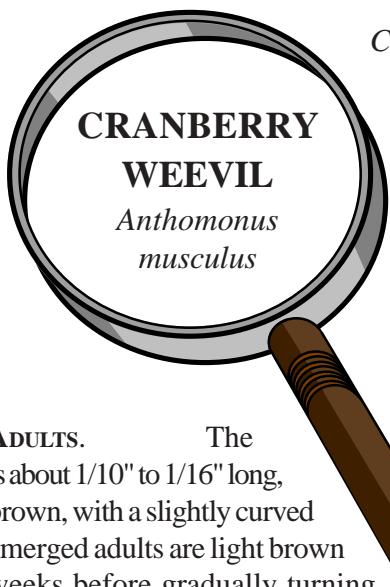
UMass Cranberry Station  
1 State Bog Road, P.O. Box 569  
East Wareham, MA 02538  
(508) 295-2212 FAX (508) 295-6387

JUNE 2002 Issue

Deborah Cannon, Editor

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Carolyn DeMoranville,  
Assistant Extension Professor, Acting Director



Cranberry weevil is a major pest on MA bogs.

## PEST PROFILE

**ADULTS.** The is about 1/10" to 1/16" long, brown, with a slightly curved emerged adults are light brown weeks before gradually turning brown. Adults are commonly observed on black huckleberry (*Gaylussacia baccata*) and the flowers of chokeberry (*Aronia [Pyrus] melanocarpa*).

In recent years, sweep sets have turned up a gray “look-alike” weevil. These gray weevils do not feed on cranberry vines and should not be counted in with your sweep counts.

**Eggs.** Females will insert a single egg between the petals of a developing blossom bud during June and July. Each female may lay 50 or more eggs in her lifetime. The smooth, round eggs are about 1/16-1/50" and pale yellowish in color.

**LARVA/PUPA.** The white, legless, grub is approximately 1/9" long and has a yellowish head. As it grows, it will consume all of the internal flower parts. The larva then becomes a pupa, and then an adult. The life cycle from egg to adult takes about 2 months and can be completed on wild and cultivated blueberry (*Vaccinium angustifolium*) as well as cranberry.

**DAMAGE.** Both larvae and adults are damaging to the cranberry plant. Larvae damage cranberries by completely consuming the flower parts within the blossom pods causing a characteristic color change from pink to orange. Infested buds usually become detached from the uprights and fall to the bog floor. Severe infestations can seriously reduce the number of blossoms.

Newly emerged adults feed on developing berries, leaves, and terminal blossom buds. This feeding may affect the current and next season's crop. Berries damaged by cranberry weevil look similar to hail damage in that both leave tiny dimples on the berry surface. Overwintered

overwintering adult reddish black-snout. Newly for about two dark reddish

adults tend to feed on developing terminal buds and leaves. This feeding injury appears as tiny, crescent-shaped black spots on the underside of leaves and as tiny holes in the terminal buds.

**MONITORING.** Adult weevils are most active during mid-afternoons on warm, calm, sunny days. If you have a history of weevil infestations, you could consider doing additional sweeps near bog edges that border the woodlands. Weevils frequently feed first on alternate hosts located in woody uplands and later move onto cranberries.

Weevils are cryptic; they often ‘play dead’ and may resemble dried-up pinheads in the sweep net. When sweeping, inspect the contents of the sweep net closely and wait a minute without movement to see if any weevils are present.

The action threshold (AT) for cranberry weevil is 4.5 weevils per set of 25 sweeps. Adult weevils can be picked up throughout the growing season. Even if the AT is exceeded, sometimes it is advisable to wait a week or two to treat because weevil numbers may continue to rise, with additional weevils moving in from the upland sources. Utilizing ATs will also depend on the available management options.

**MANAGEMENT.** At present, the key to successful cranberry weevil management is a compilation of sweep records over the years.

Management of cranberry weevil, especially in areas around Wareham, remains difficult due to the development of insecticide resistance. It is hopeful that new insecticides may be registered in the future. For 2002, a crisis exemption has been passed to use Avaunt on bogs where resistance has shown up. Guthion is also registered to use against cranberry weevil, but in most areas, this insect has developed a resistance to this insecticide. Late water floods and sanding are not known to be effective against weevils. Consult the Chart Book for current recommendations.

### HILARY SANDLER

### References

Averill, A.L. and M.M. Sylvia. 1998. Cranberry insects of the Northeast. UMass Extension and Cranberry Station Publ.

Eck, P. 1990. The American Cranberry. Rutgers Univ. Press, New Brunswick, NJ.

Weldon, M. Pest profiles (personal communication).

## **FINAL KEEPING QUALITY FORECAST**

Thank goodness for the rainfall in April, where-in we did not come close to the normal 6.7 inches that falls that month. As in 2001, rainfall in April accounted for our **only point** of the sixteen possible keeping quality points. Consequently, the June 1, 2002 Keeping Quality Forecast is **VERY POOR** (as it was last year). Both April and May were warmer than desired and the May rainfall exceeded the desired amount for additional points.

Consequently, this is another year you will need to be very careful with your fungicide usage, particularly if it is a bed for fresh fruit. Fruit quality will be sacrificed if you reduce your fungicide use drastically. Be especially conservative in those beds that were not managed and sprayed with fungicide last year or in those beds that had significant fruit rot/scald (especially Stevens for the latter).

If the summer months are hotter than usual, if there is drought stress, or conversely, if it is a very wet season, we will not see any improvement in the forecast. Things will remain as they are predicted. One of these years, I hope we can return to a decent KQF!

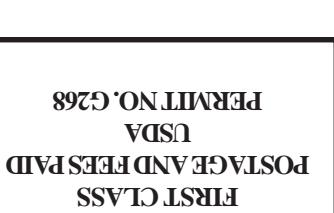
If you have any questions with fruit rot management, please do not hesitate to contact me.

## **STEM CANKER/GALL**

In 1993 and to a much lesser extent in 1994, we had a condition in several of our beds where-in the uprights died back in small patches, very similar to what you observe for upright dieback. Looking closely at the uprights, you would see a swollen, cankered area on the stems. We never conclusively identified a causal agent of the problem, and by 1995, it had disappeared from the scene in Massachusetts.

This is a recurring problem in Wisconsin, and Dr. Patricia McManus has had a graduate student studying the condition, attempting to identify a causal agent. They believe (as we did here) that certain species of bacteria are involved in the symptoms. If you believe you have such a condition on one of your beds, please let me know. Bring me some uprights and I can send them to Wisconsin, so they can determine whether this is the same thing they observe out there. It is odd how this condition comes and goes, even in Wisconsin, where it occurs more regularly than any other growing area.

**FRANK L. CARUSO**  
**PLANT PATHOLOGY**



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