



**UMass
Extension**

Cranberry Station Newsletter

NOVEMBER 1, 2014

UMASS CRANBERRY STATION

1 STATE BOG ROAD

P.O. BOX 569

EAST WAREHAM, MA 02538

<http://www.umass.edu/cranberry>

UMASS CRANBERRY MANAGEMENT UPDATE

**Wednesday, JANUARY 14, 2015
Radisson Hotel Plymouth Harbor**

4 contact hours

\$30 for early sign-up, \$40 for late

REGISTRATION SIGN UP ON PAGE 5

- 7:30 Registration (with coffee)
- 8:00 What's new? Carolyn DeMoranville
- 8:30 Weed Biology affects Weed Management
Hilary Sandler
- 9:00 Weed Management Research Update
Katie Ghantous
- 9:20 Fruit Rot Management, Erika Saalau Rojas
- 9:40 New Virus Disease and Footprint Disease, Erika
- 10:10 Coffee break
- 10:40 Nitrogen Movement in Cranberry Water: Panel
Buzzards Bay Coalition, Marine Biological
Laboratory, DeMoranville, Kennedy
- 11:40 Drain Tile Management, Nick Alverson
- 12:00 LUNCH BREAK (on your own)
- 1:15 Processes of P Loss in Cranberry Floodwaters
Casey Kennedy USDA-ARS
- 1:45 Recommendations for Frost Cycling
Peter Jeranyama
- 2:15 Insect Outbreaks in Cranberry, Martha Sylvia
- 2:45 Cranberry Pollination, Anne Averill
- 3:30 Advising Adjuvant Use, to be determined
- 4:00 Wrap-up and Paperwork

GIVING THANKS FOR HARVEST

On behalf of the Cranberry Station I want to take the opportunity to thank our grower partners for providing (at their cost) harvesting services for the State Bog and Rocky Pond Bog. Once again this year, the A.D. Makepeace Company provided all the labor and equipment for harvesting State Bog at the Cranberry Station. Cranberry Growers Service (Peter Beaton with Rob Rubini coordinating) provided labor, equipment and trucking for the Rocky harvest - with an assist from Jeff LaFleur (trucking). The money we save from these donations will be used to support our research and extension mission! Below is a photo from State Bog. Hope your harvest meets expectations.

CAROLYN DEMORANVILLE



Mixed varieties on the 'Checkerboard' Section

USE OF FALL FERTILIZER IS NOT RECOMMENDED

Fertilizer applied in the fall has the greatest potential for leaching loss, especially on mineral soil bogs. Fall fertilizer may be moved below the root zone by the winter flood and any added phosphorus may dissolve into the flood. It is preferable to apply supplemental fertilizer in the following spring when plant metabolism is active and plants are using mineral elements for growth.

Occasionally, a grower considers the use of fall fertilizer. As the title of this article indicates, I do not recommend this practice. If you are determined to use fertilizer in the fall, answer the questions in the table below to decide if a conservative application of fall fertilizer will provide any benefit.

Should I Use Fall Fertilizer?

<u>Question</u>	<u>Answer</u>	<u>Fall fertilizer?</u>
Are your vines lush or long?	Yes	No
Did you have a big crop?	No	No
Have you already applied more than 30 lb N (50 lb for hybrids)?	Yes	Probably not
Does the bog have deep organic soil with normally little need for early spring fertilizer?	Yes	No
Did the late summer tissue test show deficiency?	Yes	Maybe, but better to wait until spring

If you still think that fall fertilizer is needed, follow the recommendations below.

- Apply no later than mid-November
- Apply only when soil temperature is >50° F
- Apply no more than 5 lb/acre N
- Choose a product with no P but high K

P is not needed in the fall (natural release from the soil is occurring), but added K may enhance hardiness. N and K are the two elements that are removed in the greatest quantity in harvested fruit; P is at much lower concentrations in the berries. For late harvest, fertilizer should be applied soon after the harvest flood is removed to maximize the time between fertilizer application and the winter flood and minimize nutrient leaching. Applications when soil temperature is below 50° F are not likely to be taken up into the plant.

CAROLYN DEMORANVILLE

USING FALL HERBICIDES

Allow at least 3 weeks between the time of application and the winter flood. Flooding within **3 weeks** of application moves the herbicide into the water and away from the target. Flooding too soon will reduce efficacy, increase environmental risk, and waste money. Although temperatures will be lower and the risk of volatilization is lower (especially important for Casoron), it is important to plan your application just prior to a rain event to favor soil incorporation. This is critical if you still have conventional sprinkler heads, which have been removed for harvest. If your bog has pop-ups, you have the option to water the herbicide in if no rain is forecast.

Evital. Evital, in particular, can be quite effective when applied in the fall after harvest. Evital must be applied with a ground applicator. The fall rate can be as high as 160 lb/A on an established bog and up to 80 lb/A on new plantings; only one application can be made per year. People tend to use higher rates in the fall than the spring. Use higher rates for switchgrass and woolgrass. Lower rates can be used to control barnyardgrass, rice cutgrass, needlegrass, and smokegrass. Evital can injure vines if bogs have puddles, so be careful. Varieties such as Stevens and MacFarlin are sensitive to Evital injury, so use lower rates. I do not have experience with the newer hybrids and Evital, so exercise caution. Also, **please let me know if you use(d) Evital on the new varieties** and how it worked for you and the vines.

Casoron. Fall applications of Casoron were popular 20+ years ago, but were not encouraged in the 1990's and 2000's. Some growers are trying fall applications of Casoron for perennial weed control (especially Poverty grass). Asters, loosestrife, nut sedge, woolgrass, narrow leaf goldenrod (if followed by late water in spring), and spike rush are among the weeds that may respond to fall applications. Remember you can only apply 100 lb/A in a 12-month period (important if you want

to use Casoron in the spring for dodder control). Casoron is labeled for use in the fall prior to ice sanding but you should not sand on top of a Casoron application (if you are doing fall sanding). Single doses of high rates are needed to control many established perennial weeds.

Devrinol. I do not have experience with the 50DF in the fall; **let me know if you do!** The 10G was recommended at the high label rate for control of barnyard grass, corn grass, cutgrass, nut sedge, poverty grass and spike rush. Devrinol is easy on new plantings but lower rates should be used.

Roundup sprays can be used as spot applications in the fall. Rates as low as 1-2% solutions can injure or kills cranberry vines, even into November. So **BE CAREFUL!** I would use this herbicide in situations where the weed(s) have gotten so bad, there are few vines to worry about. Good candidates might include dewberry and poison ivy infestations.

UMASS CLOSING DATES:

UMass has instituted a policy of closing its facilities for the last two working days of the year. As a result, the **Station will be closed on Tuesday and Wednesday December 30th and 31st as well as on Thursday January 1st.** We will be open the day after Thanksgiving (November 28th) but on that day as well as December 24th, 26th and 29th and January 2nd expect reduced staff due to folks taking holiday leave.



Carolyn DeMoranville, Director

Request for Proposal

10-year Agreement

40 Acre Cranberry Bog

The Town of Carlisle is accepting proposals for the farming of a 40-acre Cranberry Bog located at Curve Street, Carlisle, MA. Three floors of a four-floor Cranberry Bog House are also included.

The Cranberry Bog is owned by the Town of Carlisle and managed by the Carlisle Conservation Commission. The historical bog is the only working cranberry bog in Middlesex County. The farmer must be willing to accept the conditions associated with a publicly owned working cranberry bog, including the use of portions of the bog by the public for passive recreation.

The bog is available on November 1, 2015 for a term of 10-years; an extension for an additional 10-years is available upon request and approval. Copies of the Request for Proposal (RFP) may be obtained at the Carlisle Town Hall, between the hours of 9:00 AM and 3:00 PM from Monday through Friday. It is also available on the town's website found at: www.carlislema.gov

Requests for inspections should be directed to the Conservation Administrator, Sylvia Willard, at (978) 369-0336. Farming proposals, including a farm management plan, must be submitted in writing to the Chief Procurement Officer, Timothy Goddard, Carlisle Town Hall, 66 Westford Street, Carlisle, MA 01741 by 1:00 PM, December 15, 2014. All proposals will be publicly opened at that time. Proposals that are not received by that time will be deemed non-responsive and returned unopened.

The Town of Carlisle reserves the right to reject any and all proposals.

Sylvia R. Willard, Administrator

Carlisle Conservation Commission

Pollinator Health and Safety Conference

November 20, 2014, 8:30 AM - 4:30 PM

Portland Marriott at Sable Oaks
200 Sable Oaks Drive
South Portland, ME 04106

Co-Sponsored By the Maine Department of
Agriculture, Conservation & Forestry

Cooperating Sponsors: Maine Organic Farmers
and Growers Association, Maine State Beekeepers
Association, and Maine Farm Bureau

[Register Online Now!](#)

<http://umaine.edu/agriculture/pollinator-conference/>

Register by October 31, 2014: \$50.00/person

Registrations after October 31, 2014: \$75.00/person

DEADLINE TO REGISTER: November 14, 2014

Hotel & Venue Information: [Portland Marriott at Sable Oaks](#). We have a small block of overnight rooms available for this conference at the preferred rate of \$128.00/night. To reserve rooms please, [RESERVE ONLINE](#) or call 1.800.752.8810 and identify yourself as with the "UMO- Pollinator Conference" group. There are a limited number of rooms available in this block, so please be sure to make your reservation as soon as possible. The deadline to reserve your overnight room within the block is November 1, 2014.

If you have any questions or concerns please contact Meghan Dill, meghan.dill@maine.edu or 207-581-3878.

TENTATIVE SCHEDULE

Factors Affecting Bee Mortality in the US
Factors Affecting Bee Mortality In ME Agriculture
Status of Native ME Pollinators
Pesticide Risks
Use Patterns for Neonicotinoids and Other Pesticides in Maine
Best Management Practices for Pollinator Safety

***MA pesticide applicator recertification credits may be available.**

Fruit Scars Caused by Viruses

Erika Saalau Rojas, Plant Pathology
UMass Cranberry Station
October 2014

This summer we confirmed two virus diseases new to our state: Tobacco Streak Virus (TSV) and Blueberry Shock Virus (BShV). Both viruses are relatively new to the cranberry industry and we have only recently begun to understand details about their spread, transmission, and potential impact on cranberry. Here we provide some general characteristics about TSV and BShV and what we have learned about them so far.

TSV has a very broad plant host range and is generally spread by infected pollen and planting material, insects such as thrips, and seed. Initial studies on cranberry suggest that pollen and propagation material, rather than seed, are the main modes of dispersal. BShV is a problem only in blueberries and it is also spread via pollen and shipping of nursery stock. Patty McManus from University of Madison-Wisconsin has been working on TSV and BShV of cranberry since 2012. Preliminary findings indicate that TSV- or BShV-infected plants do not necessarily show symptoms every year. Similar to BShV in blueberry, we believe that fruit scarring caused by these viruses is due to a 'shock' reaction on newly infected cranberry plants. In the following year(s) after infection, uprights may produce healthy-looking berries, but given that virus-infected plants rarely recover, asymptomatic plants can continue to test positive for TSV or BShV. Based on WI data, it appears that TSV and BShV may have little or no effect on total yield, but it's too early to rule them out as potential disease threats to production.

Symptoms. In MA, we have only observed scarring symptoms on fruit (picture to the right), but according to the McManus lab, TSV can also cause flower and tip blight. TSV- or BShV- infected berries can have multiple, deep, tan- to dark brown- colored scars that can severely distort the shape of the berry. These symptoms are unlike any fruit scarring associated with fungicide phytotoxicity or insect damage (picture below). Early infections can lead to completely shriveled berries and it is not uncommon to observe several symptomatic berries/upright next to a healthy-looking upright. It is not possible to differentiate TSV and BShV based on a visual analysis and special testing will be required to tell them apart.

If you suspect TSV or BShV please contact the Station and we will provide you with more information about testing services available.



Superficial fruit scars caused by fungicide phytotoxicity



Fruit scarring caused by TSV or BShV

Management. At this point we can only make precautionary recommendations to avoid further spread of these viruses. It is important to document the presence of the virus(es) in each bed, especially since asymptomatic propagation material taken from infected plants can continue to spread these diseases. When renovating, make sure all propagation material comes from virus-free sources. Given that infected pollen is suspected to spread and transmit both viruses, consider minimizing traffic from infected to healthy beds, especially during bloom period. If possible, work on infected beds last or disinfest (10% bleach) any equipment and shoes before entering a healthy bed.

CRANBERRY STATION NEWSLETTER & REVISED 2015 CHART BOOK RENEWAL
YOU MUST RETURN THIS FORM EACH YEAR TO STAY ON OUR MAILING LIST !!

The Cranberry Station Newsletter is provided **FREE to all MA growers, cranberry researchers and IPM consultants nationwide**. Annual subscription fee of \$15 is required for **out-of-state growers and industry personnel**. All persons wishing to receive this newsletter (whether paying or not) must complete and return this renewal form to maintain a subscription. All out-of-state or industry personnel must include a check (made out to UMass) with the renewal form. **All subscriptions sent by email, including out-of-state and/or industry personnel are FREE .**

**Everyone must respond to this notice by Dec. 31, 2014
or your name will be taken off of our mailing list for 2015!**

NAME _____
COMPANY _____
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TOWN _____
ZIP _____
PHONE _____
EMAIL _____

Please check one:

Owner _____
Employee _____
Researcher _____
Consultant _____
Industry _____
Private sector _____

Return to: UMass Cranberry Station
P.O. Box 569
East Wareham, MA 02538

Please Choose One!!! Postal delivery _____ or Email _____

Registration Form for UMass Cranberry Management Update
Wednesday, January 14, 2015 7:30 AM - 4:00 PM
Radisson Hotel Plymouth Harbor

Please register for the meeting using this form.

PLEASE PRINT

NAME _____
EMAIL _____
PHONE _____

ADDITIONAL ATTENDEES _____

Return with payment by:
January 7th, 2015

Include check made out to:
UMASS
In the amount of:

\$30.00 PER PERSON
IF POSTMARKED BY 1/7/15
AFTER THAT DATE, REGISTRATION
INCREASES TO \$40.00 PER PERSON

Return to:
UMass Cranberry Station
P.O. Box 569
East Wareham, MA 02538

*****ALL Meeting attendees (whether receiving credits or not) MUST register and pay *****

SEE INSIDE !!!

JANUARY UPDATE MEETING

The registration form for the meeting is in this newsletter. The fee for this year's meeting is \$30 if you pay by Jan. 7th (or postmark your mail-in by that date). Later registrations, including call-ins to pay at the door will be charged \$40. We instituted this system in response to an increase of folks calling in at the last minute to pay at the door and then not showing up for the meeting (and thus not paying). We have to give a final count to the hotel ahead of time, and pay on that count, so we request that you register and pay by the deadline.

January Update Meeting

Registration Form: Page 5

NEWSLETTER SIGN-UP

Please remember that we are required to remove names from mailing lists annually, so sign up to stay on the newsletter list for 2015.

Sign Up Form: Page 5

UMASS EXTENSION
UNIVERSITY OF MASSACHUSETTS
P.O. BOX 569
EAST WAREHAM, MA 02538
OFFICIAL BUSINESS