



**UMASS
EXTENSION**

Cranberry Station Newsletter

NOVEMBER 2004

UMASS CRANBERRY STATION

1 STATE BOG ROAD

P.O. Box 569

EAST WAREHAM, MA 02538

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

**CRANBERRY MANAGEMENT UPDATE
RADUSSUB HOTEL PLYMOUTH HARBOR
Tuesday, January 11th, 2005
7:30 AM - 4 PM**

This educational program is a streamlined session with “how-to” information for growing cranberries effectively and economically by implementing the latest research. It is a combination of Cranberry Production Training and Research & Extension Update. **We plan to offer a Cranberry 101 (beginner) in late March and a Pesticide Management meeting in early April.**

This meeting will offer an opportunity for the Cranberry Station faculty and staff to present areas of research that have reached the grower-implementation stage. \$15.00 charge includes a morning coffee, a mid- morning coffee break and handouts. Pesticide recertification credits for the cranberry category will be offered - **4 contact hours.**

TENTATIVE SCHEDULE

7:30 - 8:00	Registration (with coffee/poster setup)
8:00 - 8:30	Station Update -C. DeMoranville, Director
8:30 - 9:00	Nutrition - C. DeMoranville
9:00 - 9:50	IPM & Weed Control - H. Sandler
9:50 - 10:20	Coffee break with poster session
10:20 - 10:40	Floods - Michelle Botelho
10:40 - 11:00	Physiology - Justine Vanden Heuvel
11:00 - 11:45	Cranberry Root Growth and Water Management - New Insights from Burying Our Heads in the Sand - Kevin Kosola
11:45 - 1:00	LUNCH BREAK & POSTER SESSION (lunch on your own)
1:00 - 1:25	Dieback - Nora Catlin
1:25 - 2:05	Disease Management - F. Caruso
2:05 - 2:30	Cranberry Weevile - M. Sylvia
2:30 - 2:50	Grubs - Erik Wenninger
2:50 - 3:30	Insect Management - A. Averill
3:30 - 4:00	Wrap-up and Paperwork for Credits

**CRANBERRY VIABILITY PROGRAM
ROUND 5**

This program is designed to enhance farm operations in an effort to maintain viability of the MA cranberry industry and preserve open space. Based on project and farm size, grants of \$60,000, \$40,000, and \$20,000 are available in exchange for a 5-10 year agricultural covenant granted to the State. Business planning assistance is part of the program. Applications are due December 17. The program is jointly managed by the Cape Cod Cranberry Growers Association and MDAR. To obtain applications or for more information contact Susan Smith (ssmith@cranberries.org) or Jeff LaFleur (jlafleur@cranberries.org) at CCCGA or call 508-759-1041. Applications are available online at www.comm-pass.com or www.cranberries.org.

**MDAR - AGRICULTURAL ENVIRONMENTAL
ENHANCEMENT PROGRAM**

The application for the Agricultural Environmental Enhancement Program (AEEP) is now available. There are **TWO (2)** due dates for the response/application – November 26, 2004 and April 1, 2005. Construction projects must meet the first deadline. The program has expanded this year to include funding activities that improve air quality in addition to funding water quality and conservation measures on Massachusetts’ farms. Eligible growers include all commercial agricultural operations in the Commonwealth including shellfish growers. Funding is made available for installing best agricultural practices. Examples of installations include: pesticide storage shed, trickle irrigation, flumes and manure storage areas.

This year \$250,000 is available with a maximum of \$24,000 per farm. All projects must be completed by June 30, 2005. For more information or to get an application, look on the DFA website www.state.ma.us/agr (and search under Programs for AEEP). You can also get an application at your county USDA offices or by calling the Coordinator, Susan Phinney at 617-626-1772 or via email, susan.phinney@state.ma.us

PHYSIOLOGY 101: CARBOHYDRATES

When I give a presentation at our winter meeting, or make some comments at a bog-side chat, I often don't have time to provide much background on some of the issues which I'm discussing. For that reason, I'm planning to write up some short articles to provide some of that background. This first column of Physiology 101 will provide some information on carbohydrates, and why cranberry growers should be thinking about them.

First, we need to completely ignore the current dogma that we hear almost every day – that carbohydrates are bad. It's true that in humans too many carbohydrates can lead to excessive weight gain, but in plants carbohydrates are good. Plants need carbohydrates to produce energy for growth. Essentially, the more carbohydrates, the better.

Carbohydrates are formed through the process of photosynthesis. In photosynthesis, carbon dioxide that is in the ambient air enters the plant leaf through one of many microscopic openings called the stomata. That molecule of carbon is eventually incorporated into carbohydrates, and oxygen is released. (Incidentally, this process is why plant life is so important to humans – this release of oxygen provides most of the oxygen that we breathe). These carbohydrates store energy for future use by the vine.

The important carbohydrates formed in cranberry leaves are sucrose, glucose, fructose, and starch (which is a number of glucose molecules joined together in a chain). All of these carbohydrates combined are called "total non-structural carbohydrates". These carbohydrates are basically the energy that is used for almost all growth in the plant – root growth, upright growth, and fruit growth. Carbohydrates are also important as they act as antifreeze during the winter, and we also think they are involved in plant resistance to disease and insects. Researchers at the University of Wisconsin demonstrated why so few flowers on an upright develop into fruit – the answer is that developing fruit actually compete for carbohydrates, and that the vine just does not have enough carbohydrates to go around. Biennial bearing of uprights is also thought to be related to a lack of carbohydrates.

Carbohydrates are broken down for energy through a process called respiration. This process occurs constantly in the vine, although through the growing season, the rate of photosynthesis during the day is often greater than the rate of respiration, and so the vine is usually forming more carbohydrates than it is using. However, at night when

there is no light available for photosynthesis, the vine is only respiring and using up these precious carbohydrates. Some of you may have heard me discussing carbohydrates in relation to the ability of vines to withstand flooding. Sometimes, during a flood, the rate of respiration is greater than the rate of photosynthesis. As a result, the vine is once again using more carbohydrates than are being formed.

In closing, carbohydrates are required for vine and fruit growth. Formation of carbohydrates can be affected by factors beyond our control (such as weather), but can also be affected by bog practices, such as ensuring adequate water supply while avoiding saturated soil conditions, removing large weeds so that vines are not shaded, and ensuring adequate Nitrogen nutrition.

Justine Vanden Heuvel, Physiologist

INTERNATIONAL BUYERS TO MEET WITH SUPPLIERS IN BOSTON

Here is a low-cost, low-risk opportunity to get product feedback from international buyers and develop business relations and sales. There will be some 20 international buyers in Boston on **Thursday, January 13, 2005**. There will be 30-minute meetings to meet with each buyer that you have pre-selected prior to the mission. You may use the meetings to cultivate new export sales, solidify relationships with current buyers, or gain primary feedback about your products in specific international markets. The cost is \$75.

Buyers will be looking for a vast range of products from a variety of market segments including retail, foodservice, ethnic and healthy organic. The list of buyers is being finalized. You may obtain FREE pre-meeting assistance including information to develop export pricing and quotations. To review details about the event including buyer profiles and/or sign up for assistance, please contact bonita.oehlke@state.ma.us

The Massachusetts Department of Agricultural Resources is working closely with Food Export USA Northeast to coordinate this event. www.foodexportusa.org www.mass.gov/agr/.

WORKER PROTECTION TRAININGS CRANBERRY STATION LIBRARY 2 - 4 PM

Worker Protection Trainings for cranberry workers in the handler category will be offered in the spring of 2005: April 27, May 25, and June 29. Anyone working on the bog must be trained every five years unless they are a family member or already have a pesticide license. There will be a \$5.00 charge that includes training book and EPA verification card.

Contact Martha Sylvia: 508-295-2212, ext. 20 for additional information.

Advanced sign up is a **MUST!!!**

Dr. Carolyn DeMoranville
Station Director

CRANBERRY STATION NEWSLETTER 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**. **Subscription fee of \$15** (for a single one-year subscription) 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. Include a check (made out to UMass) with the renewal form if you are out-of-state or are industry personnel. **All out-of-state and or industry personnel subscriptions sent by email are FREE.**

**Everyone must respond to this notice by Dec. 31, 2004
or your name will be taken off of our mailing list for 2005!**

NAME _____
 COMPANY _____
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Please check one:
 Owner _____
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Return to: UMass Cranberry Station
 P.O. Box 569
 East Wareham, MA 02538

Change of address? (Y or N) _____

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

**Registration Form for Cranberry Management Update
 Tuesday, January 11, 2005 7:30 AM - 4 PM
 Radisson Hotel Plymouth Harbor**

Please register for the meeting using this form.

COMPANY _____

CONTACT _____

PHONE _____

NAMES OF ATTENDEES _____

Attach additional sheets as necessary.

**Return with payment by:
 January 4th, 2005**

Include check made out to:
UMASS
 In the amount of:
\$15 per person.

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

Agricultural Business Courses - UMass Dartmouth DCE

This winter, UMass Dartmouth Division of Continuing Education will offer courses beneficial to ag business owners. Below is a listing. Complete listings with descriptions are available at the Cranberry Station from Sarah Kelley - SEMAP Executive Director. For more information call Sarah at 508-295-2212 x50. To register for these courses call UM-D DCE at 508-678-3636 or 508-990-1160. Classes are held at the Fall River (139 S. Main St.) or New Bedford (800 Purchase St.) facilities of UMass Dartmouth in cooperation with SEMAP and UMass Extension.

<u>Course</u>	<u>Date</u>	<u>Price</u>
Developing a Business Plan (PRD 276-92)	1/12 6-9 PM	\$30
Accounting for Ag Businesses (PRD 276-91)	1/19 and 26, 6-9 PM	\$30
Marketing Basics and Plans (PRD 274-94)	1/22 9 AM - 3 PM	\$75
Effective Direct marketing: Farm Stands and Roadside Markets (PRD 273-92)	3/23 6-9 PM	\$30
Effective Direct Marketing: Farmer's Markets (PRD 267-91)	4/5 6-9 PM	\$30
Effective Direct Marketing: Farmer's Markets (PRD 267-92)	4/12 6-9 PM	\$30
Free farm publicity through non-profits and the media (PRD 267-94)	2/24 6-9 PM	\$30
Computer training for Agricultural Business (CMP 193-91)	2/8 and 10 6-9 PM	\$50
Computer training for Agricultural Business (CMP 193-92)	2/15 and 16 6-9 PM	\$50
Introduction to the Internet for Ag Business (CMP 194-91)	2/8 6-9 PM	\$30
Introduction to the Internet for Ag Business (CMP 194-92)	3/15 6-9 PM	\$30
Quickbooks Pro for Ag Business (PRD 190-91)	12/7 and 14 1/11 and 18 6-9 PM	\$179
Developing your business vision: Equestrian Business Law (PRD 278-91)	3/24 1-4 PM	\$30
Composting Workshop series (PRD 266-94), all 3 sessions below		\$75
Composting - overview (PRD 266-91)	2/16 6-9 PM	\$30
Composting - best practices (PRD 266-92)	2/23 6-9 PM	\$30
Composting - Vermiculture - worms (PRD 266-93)	3/3 6-9 PM	\$30