

# Cranberry

## Crop Management Newsletter



University of Wisconsin-Extension

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### Special points of interest:

Tissue Sampling Methods

Yellow Vine Syndrome

Flea Beetles

Early Rot

NACREW Conference Proceedings

Available online

Fruit Pesticide Course

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### THE ROLE OF TISSUE SAMPLING IN NUTRIENT MANAGEMENT

TOD PLANER, COORDINATOR,

WSCGA – WHOLE FARM CONSERVATION PROJECT

Using the principles of nutrient management not only helps protect the environment, but assists in producing a more economical crop. Cranberry growers have consistently reduced their dependence on crop nutrients while maintaining or increasing production on their cranberry marsh. While improved use of fertilizer product alternatives have gone a long way in reducing phosphorus use, a balanced plan for all nutrient sources is imperative. The use of soil sampling has not shown to be overly effective in cranberry production due to the lab analysis not being consistent with cranberry nutrient utilization.

Plant tissue analysis is THE technique for analyzing the uptake of plant nutrients applied to the cranberry plant. Research has well established the parameters for the various plant nutrients with regards to cranberry. With these base levels in mind, growers can easily monitor their fertilizer application efforts.

While the plant analysis process is sound for the cranberry plant, timing and sample collection are important as well. Most research suggests late July thru early September as an ideal time to take tissue samples for analysis. It is this period that peak activity has been reached in the plant and ample time still remains for any corrective procedures that may benefit the plant for the following crop season. Remember that what you are doing this season is as much responsible for what you get next season, as it is impacting this crop. We currently are within the window of tissue sampling and growers need to set some time aside for this important management effort.

Probably the largest impact a grower can have on their nutrient management effort is taking a sound tissue sample at the correct time. Sample collection needs to be more than stopping the truck and grabbing a handful of vines. While movement within the bed is frowned upon, collecting a sample consisting of plant materials across a representative area of the bed is imperative. While a Z pattern is suggested, even a diagonal line across the bed with samples taken every 10-15 feet will give you a good blueprint for the entire bed. Clipping only NEW growth above the fruit is also important. Adding older material into the sample will not give you the full picture you need to make sound nutrient decisions. Samples need to be free of dirt, not washed, and placed in a clean preferably paper bag or container. Plastic bags will increase the likelihood of decay or rot in the sample. Several sources for testing exist, in the state. For many growers, your crop consultant can handle the sampling or sample submission for you. With the onset of harvest getting closer, tissue sampling should be at the top of your "TA-DO" list!!

# Cranberry Crop Management Newsletter

## Observations From The Field

Jayne Sojka, Lady Bug IPM

You all know the story of Johnny Appleseed .....well I want you to be on the watch for Johnny weed seed! Yes, an athletic looking type of individual is touring the Cranberry Marshes and planting Weeds. Can you imagine? Yes, I was an eye witness of Johnny Weed Seed out and about planting just yesterday. He made his escape with a four wheeler. Keep a watchful eye .....

As our team is scouting this week we are seeing more yellow vines. We refer to Carolyn DeMoranville's August 2007 article sharing her insights into the situation. Carolyn shares that the roots may have been stressed – winter, herbicides, or too much water or not enough. When the roots are not allowed to REACH or have been pruned by an herbicide this HOT weather can stress them. Growers feel that they want a quick fix so we are encouraging them to give the plants a foliar application of fertilizer because as I just mentioned the roots are stressed and perhaps unable to take up granular nutrient. But what we truly want to do here is have a long term solution to this yellowing look. Let's look deeper into the situation. I would encourage you to check out the moisture in those areas – use some scientific means of measuring the moisture so that you can be confident of the actual moisture content in healthy areas vs. yellowing areas. I would then put the beds that are showing yellow vines in our sanding schedule for this winter. In addition to that change up your herbicide game plan.

Flea Beetle is hatching out in this heat and we have a fair amount of growers having to take action. You may notice the skeletonizing of the leaves from the dike. It looks like Blackheaded Fireworm burn until you get closer and see the flea beetles.

Scouting season is winding down. Everyone is eagerly awaiting the harvest. I see harvest equipment being maintained and grass machines being made ready.

Lady Bug IPM, LLC

Jayne Sojka and the whole Bug Patrol

## Early Rot—Good News/Bad News

Patty McManus, UW Extension Plant Pathologist

**The good news:** In the past week I've scrutinized closely several beds where early rot was a problem last year, and have not found any signs of the leaf spot or fruit rot phase of this disease. However, all of these plantings have been treated with fungicides. The only plants that I examined that have not been sprayed are the five 6 foot x 6 foot check plots in each of our two fungicide trials. Perhaps the cool summer has held off early rot, a disease that likes it hot..

**The bad news:** if we don't see disease develop in our check plots, then we won't know anything about how well the fungicides worked. We'll end the summer just as ignorant as we started and have nothing on which to base recommendations. The other bad news is that we could still get several days of warm weather and early rot could show up as it has in the past.

The win-win situation would be if warm weather brings on early rot in our fungicide trials, but not in beds that you have sprayed and intend to harvest. Let's see what the summer brings!



## New Receiving Station in New Brunswick, Canada

*Photo courtesy of Charles Armstrong, University of Maine Cooperative Extension*

## Observations from New Brunswick

Matt Lippert, Wood County UW Extension Agent

NACREW, the North American Cranberry Research and Extension Workers Conference, a biannual event was held August 9-12 in Moncton, New Brunswick, Canada. As an attendee at the conference I was able to receive an update on current cranberry research. It was also an opportunity to observe cranberry production in the region.

The New Brunswick Cranberry Industry includes about 500 acres of producing vines. The majority of production here has begun since the mid 1990's. Rectangular 3 to 5 acre beds similar to those found in Wisconsin are common. Although we did not visit with every grower, the ones that I had the chance to observe were more conservative in their use of sand than what I am accustomed to in Wisconsin. Some new beds are being established directly in peat, others may have only 3" of sand. In the area of New Brunswick that we were at sand was present but did not appear to be as abundant as in Wisconsin's cranberry growing areas.

Growers seemed to enjoy a rather low level of insect and disease pressure, possibly because of the climate or as an effect of the majority of marshes being rather young. New Brunswick is in a part of Canada called the Maritimes, and some cranberry production is found very near to the coast and is moderated by the ocean being cool in the summer and relatively warm in the winter. Marshes further inland have weather quite similar to Wisconsin.

Growers struggle with a lack of infrastructure. We toured a new receiving station on a grower's marsh, eight area growers joined to create the receiving station with assistance from a provincial grant. Prior to this all fruit would need to leave the province for further processing. Growers mentioned acquiring booms and vines from as far away as Wisconsin to establish their beds.

A larger share of the crop is utilized as fresh fruit than what Wisconsin growers have the opportunity to experience. It appears there is more access to markets in Europe possibly because of their Eastern location or by virtue of being part of Canada.

Big news in the province is the development of a new cranberry marsh on public or "crown lands." If this marsh is completely developed it has permitting to include 2,000 acres of productive capacity- four times the total productive acres currently in the province. There were two presentations during the conference about the regulatory environment in New Brunswick. For this marsh to be developed it had to pass more steps than a marsh developed on private property would. Permits regarding navigable waters, wetlands, endangered species, native people's rights and other environmental impacts all had to be approved before the property could be developed. I was impressed that even with all of these regulatory layers the entire approval process was completed between last December and this past April- under six months time.

The New Brunswick industry are a progressive and hospitable group. In 2011 NACREW will be coming to Wisconsin. The 2011 NACREW conference will be a great opportunity not only to showcase our own industry but for those interested an opportunity to interact with specialists from all of the major cranberry growing areas.

### Proceedings Available on line

The North American Cranberry Research and Extension Workers Conference (NACREW) recently completed in New Brunswick, Canada. Proceedings and presentations from the conference can be viewed online at:

<http://nacrew.bioatlantech.nb.ca/public/jpage/1/p/Home/content.do>

or simply Google "NACREW Conference." Abstracts from 34 research presentations, workshop topics and posters are available to be viewed on line, simply click on "Proceedings" from the home page. Topics include insect management, plant disease, weeds, water management, human nutrition, bed establishment, permitting processes, fertility, pruning, sanding and plant breeding.

## More Pictures from New Brunswick, Canada



*All photos courtesy of Charles Armstrong, University of Maine- Cooperative Extension*



**Receiving Station  
and Cold Storage**

**Dike Construction in Peat**



# Cranberry Crop Management Newsletter

## Understanding Pesticides An Introductory Course for Commercial Fruit Growers

Are you familiar with all the new pesticide groups?

Do you understand how pesticides work?

Do you know the difference between a residue and a tolerance, and how these relate to the PHI?

Do you know all of the legal aspects of a pesticide label?

Do you understand how pests develop resistance to pesticides? And how to avoid resistance?

If you answered “no” to any of these questions, you may wish to take this UW-Extension workshop for fruit growers.

**Course objectives.** The purpose of this course is to provide basic information on pesticides, such as their toxicity, the laws that govern their use, and how pests develop resistance to them. The intent of the course is **not** to answer specific questions on controlling specific pests, but instead, to lay a foundation for a better understanding of safe and effective pesticide use. Much of the material in the introductory morning sessions (Pesticide Overview Modules) will be similar to content in Wisconsin’s Pesticide Applicator Training program. If you have Pesticide Applicator Certification, some of this material will be a review; if you are not certified, this information will be a useful introduction to some of the subjects covered in the certification training program. **(But note that this short course is not part of the formal Pesticide Applicator Training program.)**

*Who may attend?* The target audience is all commercial fruit growers, whether just beginning or with a life-long experience growing fruit. Those people new to farming will likely benefit the most.

*When is the workshop?* Saturday, November 7, 2009; 8:30 – 5:15.

*What is the location?* University of Wisconsin Extension’s Pyle Center, on the UW – Madison campus.

*What is the cost?* The **registration fee of \$40/person** covers facility costs, refreshment breaks, lunch, and hand-outs.

*Who are the instructors?*

Dr. Dan Mahr is Professor of Entomology and Extension Fruit Crops Entomologist, UW-Madison.

Dr. Patty McManus is Professor of Plant Pathology and Extension Fruit Crops Pathologist, UW-Madison.

Dr. Jed Colquhoun is Associate Professor of Horticulture and Extension Weed Scientist, UW-Madison.

The minimum enrollment for this course is 20 registrants by Friday October 16.

Registration will be capped at 48; registration is first-come, first served.

The final, fees-paid, registration deadline is Friday, October 23.

**No on-site registration.**

**For more information, contact Dr. Dan Mahr at 608-262-3228 or email [dmahr@entomology.wisc.edu](mailto:dmahr@entomology.wisc.edu) .**

Isn't it interesting that the same people who laugh at science fiction listen to weather forecasts and economists?

Kelvin Throop III

Annual income twenty pounds, annual expenditure nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pound ought and six, result misery.

Charles Dickens, *David Copperfield*, 1849

## Understanding Pesticides

### An Introductory Course for Commercial Fruit Growers

#### The Day's Agenda

- 8:30 – Registration
- 9:00 – Pesticide Overview – Module 1
- 10:30 – Break
- 10:45 – Pesticide Overview – Module 2
- 12:00 – Lunch (provided with registration fee)
- 12:30 – Catch-up and discussion
- 12:45 – Fruit crop fungicides
- 2:00 – Break
- 2:10 – Fruit crop herbicides
- 3:25 – Break
- 3:40 – Fruit crop insecticides
- 4:55 – Catch-up; wrap-up; evaluations
- 5:15 - Adjourn

Specific topics to be covered in the morning modules include Pesticide Categories, Understanding Pesticide Toxicology, Spectrums of Pesticide Activity, Pesticide Names, Pesticide Formulations, Pesticide Laws and Regulations, the Pesticide Label, Reducing Pesticide Risk, Avoiding Pesticide Resistance, Pesticide Movement in Plants, Pesticide Application, Understanding Label Rates, Biorational Pesticides, Pesticides for Certified Organic Production.

In the afternoon, specialists will present information about the major groups of pesticides – fungicides, herbicides, and insecticides. The emphasis will be on the characteristics and general uses of specific pesticide groups. Discussions will include conventional and biorational products as well as those for certified organic production.

I love trees because they seem more resigned to the way they have to live than other things do.

Willa Cather, *O Pioneers!* (1913)

# Understanding Pesticides: An Introductory Course for Fruit Growers

Presented by University of Wisconsin – Extension; Saturday, November 7, 2009

## Registration Form

Contact Name \_\_\_\_\_

Farm/Business \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (      ) \_\_\_\_\_ Email \_\_\_\_\_

Name(s) of Attendee(s) (for name badges)

(1) \_\_\_\_\_ (2) \_\_\_\_\_

(3) \_\_\_\_\_ (4) \_\_\_\_\_

**Registration fee is \$40/person.** Fee covers facility costs, handouts, lunch, and refreshments.

**Final Registration Deadline: Friday October 23.**

You will be sent a registration acknowledgement.

Number attending: \_\_\_\_\_

Total amount enclosed @ \$40 each: \_\_\_\_\_

Make checks payable to: **University of Wisconsin.** *(Sorry, we can not process credit cards.)*

Mail form along with payment to:

Fruit Growers' Workshop  
Department of Entomology  
University of Wisconsin  
1630 Linden Drive  
Madison, WI 53706

**Important – meal choice!** Boxed lunches will include a sandwich, chips, fruit, beverage, and light desert. Please check your choice of sandwich from the following list. If there is more than one attending from your group **on this registration form**, place the initials of the attendee(s) next to the choice of sandwich(es).

Choice 1: Smoked turkey breast on cheese roll, with lettuce, tomato, onion. \_\_\_\_\_

Choice 2: Corned beef and baby Swiss on onion roll with lettuce, tomato, onion. \_\_\_\_\_

Choice 3: Pine nut humus & feta spread and veggies on sourdough (vegetarian). \_\_\_\_\_

**The following information is optional, but will guide us in developing the program.**

How long have you been farming?      a. In the process of getting started.

b. 1-2 years

c. 3-5 years

d. 6-10 years

e. more than 10 years.

Have you taken the Pesticide Applicator Training Program to become a certified applicator?    Yes      No

What is your current total producing acreage of fruit crops? \_\_\_\_\_ acres

What are the primary fruit crops that you grow? (Circle up to 3.)

apple

cherry

grape

strawberry

blueberry

cranberry

raspberry

other (please list) \_\_\_\_\_



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