Integrated Cranberry Crop Management for Wisconsin

Cranberry
Crop Management Newsletter

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Your county extension office

This Issue:

FRUIT ROT IN 2010

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UW-Extension Fruit Crops Specialist

Heading into harvest, many cranberry growers were aware that they had more fruit rot this year than in the past, especially along the edges of beds where berries sat underwater following heavy rain. As harvest wears on, many growers are discovering alarmingly high levels of fruit rot, even more than can be accounted for by the "edge rot" effect. From our research in the Tomah area and miscellaneous samples submitted for diagnosis, the predominant pathogens from rotten fruit this year are two species of *Colletotrichum* (bitter rot), *Physalospora vaccinii* (blotch rot), *Coleophoma empetri* (ripe rot), and *Phomopsis vaccinii* (viscid rot). All of these fungi are common in Wisconsin. We found a small amount of *Phyllosticta vaccinii* (early rot) in rotten fruit and from leaves in August and September, but this fungus, which has been associated with newer plantings of newer varieties, is much less predominate than the others.

Undoubtedly this year's warm, wet weather contributed to high levels of fruit rot. Nighttime temperatures, especially, were higher than normal. In addition, we had a very long growing season, which means the pathogens had an extra few weeks to rot fruit. These hallmarks of 2010 are precisely what some climatologists are forecasting for central Wisconsin in the coming decades. If these predictions bear out, then 2010 might not go down in history as a bad rot year, but rather as a typical season.

On that gloomy note, what can you do to minimize fruit rot in 2011? At this time you should be thinking about cleaning up as much plant debris as possible. When you harvest you remove a lot of leaves and fruit that are loaded with pathogens, and that will help reduce disease pressure the following year. Doing a "trash" flood will of course remove even more leaves and therefore pathogens. Fall trash floods are good, but I am even more in favor of doing this in the spring so that you can clean up leaves that dropped during the winter. Notice my obsession with leaves? Pathogens can overwinter in rotten fruit as well, but leaves are both more abundant and more likely to carry fungi over winter than are fruit. Trash piles should be placed as far away from cranberry beds as possible, and ideally in low spots where they will stay moist to enhance decomposition. Despite all this trash talk, most fungal pathogens also overwinter on the living plant; no matter how diligent you are about trash floods, there will be pathogens carrying over to 2011. Also, the two species of *Colletotrichum* are not specific to cranberry, so these will persist on weeds and other plants in or near cranberry beds. Look for more on fruit rot at the winter cranberry school and in early spring editions of CCMN.

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OBSERVATIONS FROM THE FIELD

Jayne Sojka

LADY BUG IPM, LLC

Rot, Rot and more Rot has been the conversation this fall. We can't undo what was done in 2010 but we can plan ahead.

Ok it happened, now what?

Try your hardest to get as much of the rotten fruit out of the beds. Once you have them loaded on a truck, please take them and the trash far away from the cranberry beds. If a Disease is the cause for the rot we do not want the spores to make their way back to our cranberry beds. Prune this fall or early in the spring as we need to address the lush canopy so that when we use Fungicides the product actually reaches our fruit. Sand this winter to bury mummy berries, or trash layers that may have disease bearing pathogens. I know that it is not always possible to sand every acre on your marsh so prioritize your routine. Document which beds gave you the most challenges with rot and then start sanding those beds first.

Plan on fungicides in 2011 and use products that have proven themselves to be the most effective against the specific challenge you have. For example if you have Cottonball use a product that is labeled specifically for that disease. Use the Cadillac products and skip the cheap and least effective products.

Pay close attention at Cranberry School as I am confident that Patty McManus and Jack Perry will have the newest research data proving the most effective timing of specific products. Let's not reinvent the wheel, if something has been proven to be effective against rot let's add it to our best management practice in 2011.

Understand that the growing environment is a key factor in what we see this harvest. Next year, 2011, may very well be a totally different growing season. With that said, know that if a disease is indeed present it just doesn't go away. It may linger for the right environment to grow again. Think seriously about getting your "rot" identified so you know what you are dealing with and what direction you need to go. Send samples to:

Diagnostic Clinic

Department of Plant Pathology

1630 Linden Drive

Madison, WI 53706

The excessive rain in September did not help anything. I walked marshes that had devastating water damage. On some I could still see the water line 10 days after the rain event. I also saw a berry line with that water line. Any fruit that was knocked off the vine floated away. ❖❖❖

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CAN ALTERNATIVE ENERGY POWER MY MARSH ?

TOD PLANER

WSCGA Whole Farm Conservation Project

Current efforts into the use of various alternative energy systems have created a lot of interest. While other energy conservation measures can be used, the production of your "own" energy has people looking into what is available. High energy costs, conservation programs and thinking "green" all play a role. In addition, Rebates and incentive programs often "sweeten" the curiosity of the grower into looking at what's out there.

There are numerous alternative energy options being promoted today. These systems range from solar to wind to water to bio-mass utilization. Whether one of these would work for you requires considerable homework on your part.

Solar Energy discussions have been around for quite a while. Cost of installing solar and the limitations of applying the energy it produces to your needs, limits its application. Solar produces *Direct Energy or DC* current that without conversion cannot be utilized directly on the marsh. Cost of conversion and the initial start-up costs often limit the application of solar. Solar may have some minor applications in situations where electricity is not available and energy demand is low. We need to further investigate applications that in the future may apply to low volume pumping, battery operated "Start-Up" systems and or other possible applications.

Wind Energy applications seem to gather most interest among growers. Wind farms are popping up around the region and create a lot of interest as to the potential application on the marsh. The general concern with wind lies with marsh location and dependable wind velocity. In many instances, wind velocity is at the low end of desired levels of dependable wind in the cranberry producing areas of the state. In addition, cranberry country wind velocity and volume are specifically in the winter months and likely much less during the main growing season. While wind does have some practical applications, you need to realize that wind generated energy basically is energy sold back to the "Grid System" of your energy supplier. This results in a "Credit" against your use of energy on the marsh.

Wind energy again is "Direct Energy" and cannot be directly utilized on the marsh. Costs associated with conversion units and battery storage is not economically feasible at this point. The majority of electrical energy use is associated with the shop due to the power equipment there. Marsh electrical energy in most cases is very limited as most power use is diesel. Whether wind energy generation can make electrical energy use more efficient to consider returning to electrical pumps remains to be seen. We can't however turn our backs to these alternatives, but we also need to study what information is out there and make some qualified decisions when considering such a system.

Hydro Energy Production certainly is limited to those growers with a sufficient water flow to consider this form of energy generation. A water source with sufficient "Head" to provide enough energy conversion is the major issue surrounding Hydro-Generation. That is not to say it should not be considered, but requires specific issues and environmental concerns for this form of energy production.

To move forward considering one of these alternative systems requires study and planning on your part. We can help on some issues and can provide direction with regards to an energy audit and in depth plan for your marsh. Interested? Give me a call. ❖❖❖

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