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ALL ROTS ARE NOT CREATED EQUAL!

Over the past few weeks I've chatted with a number of growers and marsh workers at the summer field day and on marshes. There seems to be some confusion about the different fruit rots and how to manage them. Clearing up this confusion is critical to prevent needless spraying or spraying at the wrong time with the wrong thing. I want to make some general comments but will not go into great detail here. For more information you can pick up bulletins from your county Extension office or call me with specific questions.

"Fruit rot" collectively refers to rot diseases caused by at least 15 different species of fungi. Fruit rots can be divided into two main groups: 1. Pre-harvest rots that occur in the field (field rots); and 2. Post-harvest rots that occur in storage (storage rots). Berries can also deteriorate in storage apparently without any pathogen involved (sterile or physiological breakdown). Some fungi that are considered primarily field rot pathogens can act up in storage, and vice versa. We are fortunate that our climate is generally not favorable for field rots. By contrast, field rots are a limiting factor in cranberry production in Massachusetts and New Jersey. Storage rots are a direct concern for fresh fruit growers and an indirect concern for others since the quality of fresh fruit on the grocer's shelf reflects on the whole industry.

One field rot that can be troublesome in Wisconsin is cottonball. But the good thing about cottonball is that it's easy to identify, and the fungicides that have been available to control it are effective if applied at the right time—during shoot elongation and bloom when the fungus infects. Cottonball refers to a specific disease caused by a single fungus that fills berries with white, cottony fungal growth; it is not a collective term for off-color, soft berries.

Other field rots are not so easy to discern and identify. In other words, they really do look alike. Often a conclusive diagnosis requires growing the fungus out of the rotten fruit in the lab (the UW has such a lab; call your Extension office). Accurate diagnosis is important because some fruit rots are related to other cranberry maladies (e.g. viscid rot and upright dieback are caused by the same pathogen), and some respond better to fungicides than others (e.g., bitter rot is especially tough to control, so you wouldn't want to start a planting from vines heavily-infested with the bitter rot fungus). Once fruit are rotting, no fungicide will revive them. However, getting a diagnosis for a particularly troublesome spot will help you decide what (if anything) to spray and will help in monitoring the problem from year to year.

REPORTING ORBIT USE

The Section 18 permit for the fungicide Orbit (propiconazole) expired on July 31, and now is the time to report use of this product in Wisconsin. All cranberry growers in Wisconsin should have received a form to record their use of Orbit. Reporting Orbit use is required by the EPA, and future Section 18 or regular labels for Orbit will not happen if we don't provide them with use data. Reporting Funginex (triforine) use is not required by EPA, but this information would be useful as we continue to assess the need for fungicides to control cottonball. If you used Orbit but did not receive a form, please contact the WSCGA office (715-423-2070). Please return the form by September 26 to: Patty McManus, Dept. Plant Pathology, 1630 Linden Dr., Madison, WI 53706.

Patty McManus, UW-Madison, Extension Plant Pathologist

GIRDLER *vs*. RODENT INJURY

Many Wisconsin cranberry beds have had both girdler injury and rodent injury. Telling the difference between the two is important to know how to approach the problem since managing rodents is much different than managing insects.

Cranberry girdler injury is characterized by "bites" taken out of uprights. Depending on the age of the upright, the underlayers exposed by the chewing is tan to medium brown. This injury typically is found near the bed surface (just under the soil or just above the soil) and not on the upper portions of uprights. It is unusual for girdler to completely sever an upright. Usually injury begins in July and continues through September. Besides the signs of feeding on the uprights, the uprights turn brown and dry out from lack of water and nutrients. Girdler injury is frequently in patches. Diazinon 14G applied according to the label is the treatment of choice for cranberry girdler.

Rodent injury is characterized by uprights being completely severed, with the lower portion of the upright still in place. Rodents will build trails and the injury is most often seen as a line rather than as a patch as the rodents build runways. Sometimes tooth marks are visible where uprights are severed. Rarely would you see rodents gnawing off the outer layers of an upright, they simply chew through it.

Managing rodents is not as easy as managing insects. Further, there is not one predominant species of rodent injuring cranberries. The keys to managing rodents are to 1) reduce their food supply, 2) limit their habitat , and 3) make their natural predators efficient. Reducing their food supply on a cranberry marsh will be difficult if not impossible. Limiting their habitat can be done. Keeping dikes and surrounding areas mowed short will limit their ability to hide from their natural enemies. Obviously they will hide among the vines so complete habitat destruction will not be possible. Creating roosting and nesting sites for owls, hawks, etc. would assist them in feeding on rodents in the beds.

The other means to manage rodents is baiting with poison baits. The material of choice is zinc phosphide bait. Zinc phosphide is a quick kill poison and populations can be quickly reduced with this bait. Other baits such as Rozol or Ramik brown are slower acting but may also be effective. These come pelleted or

as treated grain. Because these baits are toxic to animals besides rodents the best approach is to use bait stations. Bait stations can take on several configurations. The purpose of bait stations is to protect the bait from weather, to protect rodents while they feed, and to keep non-target animals away from the bait. The simplest is to place a piece of shingle or scrap wood over a rock and place the bait under the shingle. A more substantial bait station can be made from 2 inch PVC pipe. Purchase a number of T's and lengths of pipe. Cut the pipe into foot long sections and place a piece of pipe into each of the three openings on the T. Place these out on the marsh. I would recommend placing them in areas with lots of rodent traffic and where rodents would have cover as they enter the station. Don't put bait in the stations when you first place them. The rodents will need a few days to become used to this new feature. To place the bait simply lift up the side arm and place about ¼ cup of bait in the T and then lay it back on its side.

If the baits become damp they can lose their effectiveness. You'll want to check and perhaps replace the baits after two weeks or so.

You can monitor the success of your baiting and habitat destruction program. Place apple quarters in or near active rodent areas and cover them with a shingle or tar paper. Return in 24 hours and look for apples that are gnawed, moved or missing. Do the same procedure a week or two after baiting. The number of apples that are disturbed should be less.

A harsh winter would help to reduce rodent populations so rodent problems next year will be reduced.

Teryl Roper, UW-Madison, Extension Horticulturist

LATE SEASON WEED CONTROL

With the availability of Stinger herbicide growers have a new tool in the effort to control some problem weeds. Some growers have been effective during the season in controlling weeds with broadcast or wiper applications of Stinger.

For some weeds, spot spraying after harvest may be another option. Weeds such as clover are still green and succulent after harvest. Spot applications of Stinger with a wiper or hand sprayer should be effective in controlling such weeds. When the vines are dormant a little bit of spray from treating clover should not pose problems to the vines or the buds.

Wait until at least 2 weeks after harvest and until the vines have taken on their characteristic dormant color before treating. Use a low rate of about ½ pint per acre for broadcast application or about 1 oz. per gallon for hand sprayers.

Remember that the label expires on December 31, 1998. It is unlikely that a full label will be in place for 1999, so we will likely petition for another section 18 exemption next year. Our chances for a renewal of the exemption are partially based on complete usage reporting for 1998. You will receive a reporting form later this fall after all treatments have been completed. Please promptly return the form completely filled out.

Teryl Roper, UW-Madison, Extension Horticulturist

When you make a mistake, don't look back at it long. Take the reason of the thing into your mind, and then look forward. Mistakes are lessons of wisdom. The past cannot be changed. The future is yet in your power.

Hugh White

Looking to 1999

Even though harvest has not yet begun it is not too early to begin thinking about 1999. Once harvest is complete, take a few minutes to sit down and reflect on the 1998 season. What went well? What went poorly? Do you have records of each so you can make appropriate changes next year?

Have you done an evaluation with each employee to evaluate their strengths and weaknesses? Next to your land and vines your employees are your greatest asset. Most people like to know their employers notice things they have done well and will take suggestions about how they could improve.

Do you have questions about unusual things that have happened this year? If so, drop me a card or give me a phone call and we'll try to discover an explanation or answer. The more feedback I get from you, the better I can do my job (Dan and Patty, too!).

Plan to attend the 1999 Wisconsin Cranberry School. The school will be held at the Stevens Point Holiday Inn on January 6-8. We have begun to put the program together and we think we have a fine slate of speakers and topics that will provide food for thought.

Next summer there will be some additional educational events for growers. We hope you will avail yourselves of these opportunities. Summer Extension meetings are always informal, give & take sessions where us "University types" learn as much as the growers.

Finally, a warm "thank you" to all who contributed articles, information or ideas for this volume of the newsletter. I sincerely hope you have found it useful.

Teryl Roper

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