

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

SEPTEMBER 5, 2006



*Bitter rot on Honeycrisp*

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## Honeycrisp Apple - Hard to Grow, but Customers Love it

*Win Cowgill, Agricultural Agent*

**H**oneycrisp has turned out to be one of the more difficult apples to grow, almost every thing goes wrong with it. Japanese beetles and deer prefer it and every disease in the book seems attracted to it.

But the bottom line is the consumer loves it and continues to pay a premium price for it, \$2.49 a pound in NYC and select markets. Wholesale prices remain strong as well as commanding \$40 a bushel box.

This year the challenge has been sunburn followed by infection with both **bitter rot** and or **white rot**.

In New Jersey, eastern New York and parts of New England, the first few days of August experienced high temperatures (mid-90's F) and high humidity. Dr Dave Rosenberger, Cornell University, reported that within a week, severe sunburn and heat injury were evident on Honeycrisp apples at the Hudson Valley Lab. He reported that growers in Massachusetts and southern Vermont brought Honeycrisp fruit with similar symptoms to the field day hosted by Northeast Fruit Consultants on August 17 in Massachusetts.

Dr. Rosenberger wrote the following in the Scaffolds (<http://www.nysaes.cornell.edu/ent/scaffolds/>) newsletter; "Most growers recognize sunburn when it shows up as browning or bleaching of the skin on the sunward faces of apple fruits growing in exposed positions within the tree canopy. However, internal fruit damage caused by high temperatures is less common. High ambient temperatures combined with solar heating of exposed fruit can cause breakdown of cells in the fruit flesh. The injury first appears as water-soaked areas on the fruit surface. Water-soaking is also evident in the fruit flesh if fruit are inspected soon after the injury has occurred. Because the damaged cells die and collapse, whereas non-killed cells in the fruit continue to grow, fruit soon become misshapen. Sections through the damaged fruit then reveal necrotic and collapsed tissues."

Dr. Rosenberger reports that Honeycrisp fruit damaged by sunburn or heat injury are especially susceptible to black rot, white rot, and bitter rot. The heat-damaged skin can no longer maintain the natural defense mechanisms that normally help to protect apple fruit from infection by these pathogens, so summer fruit rots may appear even

*SEE HONEYCRISP ON PAGE 2*

where reasonable fungicide protection has been maintained through summer.

**North Jersey** -This was certainly true of the NJ Honeycrisp fruit I have seen all across north Jersey. Even in the best sprayed orchards there was more disease than normal.

Rich Buckley, Rutgers Plant Diagnostic Lab, confirmed the disease causal agents on multiple samples of HC submitted. All were found to be bitter rot and/or white rot.

In my HC blocks at the Rutgers Snyder Farm I have used *Surround WP (Kaolin Clay)* from *Englehard Corp*, recently sold to BASF, to assist with control of Japanese Beetles. I have used this product for two years very successfully against beetles. This year the side benefit is that I had very little sunburn and very little disease on my Honeycrisp. Washington State Apple growers have used Surround for years to prevent sunburn which is a labeled use. Consider using Surround WP next year in your spray control program for Honeycrisp.

Jon Clements of UMASS has put together and excellent web page on Honeycrisp disorders:

<http://www.fruitadvisor.info/honeycrisp/honeycrisp.html>

Honeycrisp Movie- to watch a movie clip online of David Bedford, University of Minnesota, entitled *Honeycrisp (introduction) — is it right for you?* Tune your web browser to the Virtual Orchard Movie Theater at:

<http://virtualorchard.net/video/qtss/honeycrisp2.htm>

Caution: you will need a broad band connection and the Quick Time plug in which is available from [www.apple.com/](http://www.apple.com/) and select Quick Time. □



*Bitter rot on Honeycrisp*

## Plum Pox Virus Found in Michigan

*Norman Lalancette, Ph.D., Specialist in Tree Fruit Pathology*

In addition to Pennsylvania and Ontario, there are now two other North American locations where **plum pox virus** (PPV) has been detected on a stone fruit crop. On Friday, August 11, the U.S. Dept. of Agriculture announced that the Michigan Dept. of Agriculture had found PPV in one tree in an orchard in southwest Michigan. The orchard was located at the Michigan State University Southwest Michigan Research and Extension Center (SWMREC) located near Benton Harbor. And previously, in early July, PPV was found on two plum trees in a 1-acre block in western New York, located five miles from the Canadian quarantine area (see P&PA Fruit Edition Vol. 11, No. 16). Subsequently, PPV was again detected in NY, this time on a peach tree, 11 miles further east of the original find.

In the recent Michigan discovery at the SWMREC, strain D of the virus was detected in samples taken during a routine survey from one symptomless plum tree planted in 2003. The survey at the station examined every PPV strain D susceptible tree, which numbered approximately 14 thousand. Michigan Dept. of Agriculture specialists are now surveying trees in the immediate vicinity to ascertain the extent, in any, of virus spread. Work will continue to determine the source of the virus. If necessary, a quarantine will be established and any infected orchards or other sources removed to eradicate the pathogen. Hopefully, this occurrence of PPV will be isolated.

PPV strain D is the less virulent form of the virus that is not as easily vectored by aphids. Also, strain D is not transmitted by fruit or seed. Thus, this detection of PPV in Michigan will not affect production, harvest, or sale of stone fruit from the region. Although strain D can infect peaches, nectarines, plums, and apricots, it is not known to affect cherry trees, an important stone fruit crop in Michigan.

Even though PPV was not detected in the New Jersey survey, growers need to remain vigilant to avoid development of this disease in the Garden State. Long-distance dispersal of PPV (strain D) is primarily through transport of infected plant material. Thus, the single most important way to keep PPV out of NJ orchards is to purchase new trees that are not infected. However, nurseries do not certify trees as being "virus-free" or "PPV-free". Consequently, growers should buy from reputable nurseries that follow strict disease management practices. Growers should look for nurseries that test their stock for PPV (and other viruses) on a regular basis, preferably at least once per year. A good working relationship between nurserymen and growers is vital to the PPV eradication effort. □

# Wine Grape Information for the Region

Mark Chien, Wine Grape Agent, Penn State  
Cooperative Extension

*Note: I got a few inquiries from my last e-newsletter about using Pristine and captan together in a tank mix. The two fungicides are tank compatible and in some cases will complement each other well. Pristine is a broad spectrum fungicide that will help cover both **bunch rot** and **ripe rot**. In most cases it can be sprayed alone with good results. Captan can be used to supplement Pristine. That said...*

Rains are here and Ernesto is on his way to Pennsylvania. I am always amazed at the variability of rainfall accumulation in the region. Growers in parts of south central PA and into MD and VA tell me they are dry. Vineyards in SE PA got from 2-9" in the past week. If rain shadow effects exist, that should be another important criteria for site selection. I have already had a few reports of **botrytis** and ripe rot getting started even in fruit that is quite far from 20 brix. Late season applications of Pristine may help because of its rainfast properties. If the Pristine has enough time to dry it will stand heavy rains. Follow this with a second application in 10-14 days but watch your pre-harvest intervals. Captan is nearly as effective but washes off with rain. However, it has the benefit of redistributing with rain and has good spreading ability on the berry surface. There is no certainty that this will help but even if infections occurred earlier in the season these late sprays may help to contain the spread of ripe rot.

Two fact sheets on ripe rot:

[www.umass.edu/fruitadvisor/factsheets/RipeRotFactSheet.pdf](http://www.umass.edu/fruitadvisor/factsheets/RipeRotFactSheet.pdf)  
<http://www.smallfruits.org/SmallFruitsRegGuide/Guides/BunchGrapeSprayGuide.pdf>

My own experience is that spreader-stickers were very helpful with wettable sulfur under rainy conditions. It doesn't mean that you can "go the distance" on spray intervals and quantities of rain are an important consideration, but you may want to consider using a sticker material with captan. I think we are finding out now why those pre-closure sprays at bloom and bunch close are so important. It is tough to play catch-up-ball with these diseases. I considered late botrytis sprays to be more effective as "feel good" sprays than actually doing anything about the disease. Dry weather is the best remedy and unfortunately we cannot spray that. Comment from Dr. Bruce Zoecklein at Virginia Tech: Captan is an ergosterol inhibitor. It therefore impacts yeasts ability to control cell import and export. That is a warning shot across the bow on the use of captan as we approach harvest and its potential impact on fermentation. Check with your wine maker about spraying

captan after veraison.

For my part, I suggest if the rains keep coming some leaf stripping around the fruit zone, thinning clusters that are touching each other and those lagging behind in maturity, and praying to whoever your god is for sunny and dry weather (maybe with a nice breeze tossed in for good measure). In my experience that is the only condition that really helps with rot diseases.

Birds are moving in and quite fierce in some areas. In today's wine tech meeting Lisa van de Water accurately described grapes as "bird candy." The function of the vine is to ripen seeds and disseminate them. Birds are the main way to spread the seeds. One grower said birds are bouncing off the nets trying to get at the fruit. My extension colleague on Long Island, Alice Wise, says the situation is very bad up there. She is experimenting with a variety of netting products and will have recommendations after the season but not soon enough to help us now. Nets are, of course, the best solution if you can afford them (see WBM article at <http://www.winebusiness.com/GrapeGrowing/webarticle.cfm?dataid=43363>). I would argue that you cannot afford not to have them, especially if you are an estate winery. The alternatives are available but not as effective. Some growers swear by their bird guards which, I believe, work in low to moderate pressure but not heavy bird pressure. Other pyrotechnics are useful and patrols at dawn and dusk are the effective. You may have to get local permits to use pyrotechnics. It is not a bad idea to make your neighbors aware of why all that noise is coming from your vineyard. Knowing what is happening goes a long way towards peaceful coexistence.

Bees are here, too. The main method I used was to find their nest (usually by accident) and to destroy it. Most experts suggest you hire an expert to destroy a nest. A bad childhood experience confirms that advice. Trapping is the other method and you can hang them in the vineyard by the dozen and see if it helps. Type in "yellow jacket control" into Google for more information. Bee and bird damage creates the opening for opportunistic fungal pathogens to move in and make a mess so anything you can do to prevent both are helpful in the quest for high quality grapes.

Vineyards are starting to pick Foch and Baco. Split berries are being reported in some hybrids. There is still time for this to be a very fine vintage. The weather will determine how good it is.

*Submitted by Jerome L. Frecon, Agricultural Agent. □*

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## Calendar of Events

**September 7, 2006** – Fall Variety Showcase, Lawrence, Michigan. Sponsored by International Plant Management. Contact: 800-424-2765.

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