



Volume 14, 2006

Healthy Fruit

Prepared by the University of Massachusetts Fruit Program

Healthy Fruit, Issue 19, September 6, 2006

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

The way I see it -- J Clements

Well, quiet is good I guess. Harvest of McIntosh has started in earnest and the weather continues to be favorable with below normal high temperatures observed during the past week and seasonal weather predicted. One gets the impression that Macs are on the loose side, although there was not excessive drop with the wind over the weekend. ReTain seems to be performing well. Flavor is green-tart at best. Still, you should be in fairly high gear now, obviously spot-picking for color.

Honeycrisp harvest has also started, and color and quality are good for that first pick, which you should be doing this week. Concentrate on color -- these fruit are ready to go and taste very good. Honeycrisp, like McIntosh, likes cool weather. Farther south, there have been reports of significant heat/sunburn injury to Honeycrisp -- see accompanying article by Win Cowgill. I have not seen that much of this here, so most Massachusetts Honeycrisp growers are in good shape. I suspect good fungicide coverage throughout the wet growing season has also helped keep the crop clean.

Gala are coming along, with a likely harvest window of next week at the earliest. Again, cool weather has favored color development and quality on the tree, but Gala likes hot weather to mature.

Note that the next (and last for 2006) Healthy Fruit will be published September 19.

Honeycrisp apple: hard to grow, but the customers love it -- W Cowgill

Honeycrisp 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 city and select markets. Wholesale prices remain strong as well 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 experienced high temperatures (mid-90's F.) and high humidity during the first few days of August. Dr David 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 New England Fruit Consultants on August 17 in Shelburne, MA.

Dr. Rosenberger wrote the following in a recent issue of Scaffolds Fruit Journal (<http://>

www.nysaes.cornell.edu/ent/scaffolds/):

“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 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 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. (Just be prepared to wash it off at harvest -- J Clements)

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

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

Honeycrisp video -- to watch a short video 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>

You will need a broadband internet connection and QuickTime available as a free download at:

<http://www.apple.com/quicktime/>

Apple Maturity Report -- J Clements

Here are results from recent apple maturity testing of 'early fall' apples at the UMass Cold Spring Orchard in Belchertown. Fruit maturity is progressing nicely, and cooler weather has been favorable for color development. We seem to be on track for about a 'normal' harvest. Monitor apple blocks closely for color development, taste, and use the starch-index test to help assess maturity. If you need starch-iodine solution, let me know. For details on the starch-index maturity test see:

- <http://www.umass.edu/fruitadvisor/clements/articles/sitest.htm>

date	variety	drop	size (in.)	color (%red)	firmness (lb.)	soluble solids	starch index	taste	disorders	comments
5-Sep	Honeycrisp	some	3.2	70	15.0	13	5.5	very good		very nice, ready to 1st pick
5-Sep	Lindamac	none	3.0	80	15.5	11.5	3.5	green-tart		nice Mac, color there, pick end of week
5-Sep	McIntosh	some	2.9	55	15	12	4	green-tart	OBLR	needs another week
5-Sep	Buckeye Gala	none	2.9	100	20	12.5	3.2	not there		pick next week



Bitter rot fungus on Honeycrisp apple

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