



Maine Tree Fruit Newsletter

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Maturity Report

Fruit maturity at Highmoor Farm on Thursday September 10

PLUMS

Japanese plums: : Vanier fruits dropped after the last strong wind. This is our last Japanese variety.

American plums: Most of the Toka (Bubblegum) fruit dropped in the last wind, as well. They had excellent flavor, as usual, but small size.

European plums: Castleton ready for a first pick. Rosy Gage is at peak ripeness. Long John is softening, but still too sour for harvest. Brown rot is severe this year.

PEACHES – Highmoor Farm does not have late-ripening peaches this year.

(Gordon Kenyon, who grows peaches in Albion reported earlier this week that the peach harvest continued to be "out of whack". The normal sequence is Red Haven, overlapping and followed by Canadian Harmony, then a gap of up to a week before Contender harvest.

This year, Contender ripened before Canadian Harmony, and had to be quickly harvested before they dropped. This had never happened in over 15 years of having both cultivars. Differences in soil moisture between plantings may have been a contributing factor. The Contender trees are in drier soil.)

PEARS - Purple pears have ripened on the tree, and a few have internal browning already. The unknown green variety still very firm, but has sweetened.

ASIAN PEARS - Both varieties have ripened and are dropping.

APPLES – A high degree of variability in stage of ripening occurs with Honeycrisp among different orchards, so check each one rather than relying on regional averages. Honeycrisp are nearly ready for a first harvest for storage in some orchards.

Ripening of McIntosh is more uniform than in Honeycrisp. Harvest for storage should begin soon.

Gala are still bland and starchy.

The Apple Starch Index is on a scale of 1 to 8. Starch breakdown values are expected to be off from normal because of the extended dry weather.

	Starch index 1 – 8		Normal First Harvest
	Thur., Sept. 3	Thur., Sept. 10	
McIntosh (spur type)	3.8	4.2	Mid-September
McIntosh (nonspur)	2.6	4.3	
Honeycrisp	1.4	3.3	Mid-September
Gala	1.1	3.0	Late September
Snowsweet	4.7	6.2	Late September
Cortland	1.0	1.1	Late September
Macoun	1.0	2.4	Late September
Sweet 16	--	2.5	Oct. ?
Northern Spy	--	1.2	Mid-October

The Delta absorbance meter is a relatively new tool for measuring maturity in fruits that show chlorophyll breakdown with ripening. McIntosh does not do this. The IAD values for McIntosh are shown to illustrate that point.

The IAD values have been useful in Honeycrisp when starch index does not follow normal patterns. The values listed below for Honeycrisp are based on two years of research in Maine. Standards for when to harvest are specific to each variety and are not fully developed for most.

	DA Meter Index		Value associated with harvest date
	Thur., Sept. 3	Thur., Sept. 10	
McIntosh (spur type)	2.02	1.85	Unknown
McIntosh (nonspur)	2.03	1.90	
Honeycrisp	1.32	0.98	First pick: 0.8 to 1.0
Gala	0.87	0.72	0.4 to 0.8, but not tested in Maine.
Snowsweet	1.01	1.23	Unknown
Cortland	2.15	1.79	Unknown
Macoun	2.03	1.93	Unknown
Sweet 16	--	1.23	Unknown
Northern Spy	--	2.07	Unknown

Necrotic Leaf Blotch

Excerpts adapted from

Don't Be Fooled by Necrotic Leaf Blotch by Dr. Sara Villani, North Carolina State University Extension. <https://apples.ces.ncsu.edu/2019/09/dont-be-fooled-by-nectrotic-leaf-blotch/>

Symptoms of Necrotic leaf blotch (NLB) are similar to Glomerella leaf spot (GLS). Here's a quick comparison:

Cultivar susceptibility

GLS: All cultivars with 'Golden Delicious' parentage. Severity of symptoms is generally the same across all cultivars

NLB: Symptoms are usually observed first and are most severe on the 'Golden Delicious' cultivar. Symptoms may be observed on other cultivars (particularly those with Golden parentage) but do not tend to be as severe.

If you have a block (or row) of 'Golden Delicious' with leaf spots and premature defoliation and another cultivar susceptible to GLS adjacent to that 'Golden' block, take a look at the other cultivar for leaf symptoms. If you've sprayed identical fungicide programs in both cultivars, and only the 'Goldens' have leaf symptoms, this evidence points more towards NLB than GLS.

Causal Agent

GLS: A fungal pathogen: *Colletotrichum* spp. It is a disease of apple.

NLB: Cause is unknown but is believed to be associated with a zinc deficiency. It is a physiological disorder of apple.

Leaf Lesion Appearance

GLS: Symptoms usually begin in early to mid-summer as small purple flecks on leaves and rapidly expand into irregular concentric lesions with purple borders. Lesions can be located anywhere on leaves, but are not usually observed on leaf margins or initiating from the leaf mid-vein.

NLB: Symptoms (see photo) are most often observed later in the summer and can appear suddenly. I have not observed early "purple fleck" symptoms with NLB. Mature leaf lesions/blotches are in general larger than GLS (though not always the case) and appear more like chemical burn. Lesions lack the concentric ring appearance.



Leaf Appearance

GLS: Yellowing (chlorosis) appears on heavily infected leaves. GLS lesions are always present on leaves prior to yellowing and defoliation. A relatively gradual progression of symptoms is often observed (purple flecks to concentric lesions to yellow/"leopard spotted" leaves to defoliation). Leaves defoliate from any location within a branch, but premature defoliation tends to initiate in the top and inner canopy. Defoliation can approach 100% in some years.



NLB: Yellowing (chlorosis) tends to be observed more suddenly and later than GLS and yellowing may occur with minimal blotch (e.g. lesion) severity on leaves. Similar to GLS, premature defoliation occurs, however, defoliation is most apparent on the lower third of shoots. Defoliation usually does not exceed 50% in even the most severe cases.

Fruit Appearance

GLS: Early fruit infections appear as small indented spots/lesions on fruit. As fruit matures (or after harvest) lesions expand and cause a fruit rot (bitter rot). Under the lesion, a V-shaped pattern can be observed in apple flesh. (See photo below).



NLB: Fruit are only indirectly affected by NLB. If heavy defoliation occurs near harvest, fruit can become sunburned which may predispose the fruit to rapid rot development.

Environmental Conditions

GLS: Warm/hot + humid weather.

NLB: Symptoms most often appear during a period of hot, dry weather that follows a period of humid, rainy weather.

How to Manage?

GLS: Fungicides: Strobilurin, mancozeb, and/or captan on 7 to 10 day interval beginning at petal fall.

NLB: While not labeled specifically for NLB, trees that have been treated during summer covers with fungicides containing zinc (Zn) ions tend to have less NLB than trees in which Zn-containing fungicides are absent. On Golden Delicious, consider applying ziram occasionally in summer cover sprays. Alternatively, zinc oxide (ZnO) may be effective.

Closing Words

"If we learn nothing else from this tragedy, we learn that life is short and there is no time for hate. "

~ Sandy Dahl, wife of Flight 93 pilot Jason Dahl

"What separates us from the animals, what separates us from the chaos, is our ability to mourn people we've never met."

~ David Levithan

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