

PLANT & PEST ADVISORY

A RUTGERS COOPERATIVE EXTENSION PUBLICATION



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Apple Maturity - Fruit Maturing Early Report for North-Central New Jersey

Win Cowgill, Agricultural Agent, and Suzanne Sollner-Figler, Research Assistant

Apple blocks in Northern New Jersey continue to mature early **this year.** Several McIntosh blocks ready for harvest, followed by Gala strains. Honeycrisp can be picked by color.

Reports from the Hudson Valley, NY are indicating that growers are actively harvesting McIntosh and that fruit is dropping prematurely. Some NY growers that indicated that even when they have used the split application of Retain with NAA, fruit is still loose this year. At the Rutgers Snyder Farm I used the split application of Retain on Macs and they are holding well. We will harvest one McIntosh block at Snyder by color in the next day or so.

Apple growers should be VERY observant as we approach Gala, McIntosh and Honeycrisp harvest in North-Central Jersey. All three of these varieties are significantly advanced. On my rounds to orchards Sunday and Monday I have found harvestable fruit on McIntosh and non-Retained Gala. I believe the significant number of 90+ F days this summer has advanced apple fruit maturity (8-10 days). Peach harvest has been 2 weeks early all season and most growers will be done with peaches by September 1.

Apples appear to be slowing down a bit in their maturity development; late September fruit may only be a week early. Careful observation of developing maturity is needed.

The highly colored strains like Linda Mac, Snappy Mac, BT1035 Mac, Brookfield Gala and others more red color than the older strains.

Galas should be harvested when the background color turns cream, is 16 lbs. pressure or more and has 12% sugar in a perfect world. I picked my first two bins of Gala cv Mitchel yesterday on August. 20.

Retain

It is too late to apply Retain except for later cultivars like for Macoun, Empire, Jonagold in Warren and Sussex counties. Retain must be applied before ethylene development if it is to prevent drop.

NAA

However, given the forecast it might be prudent to apply additional NAA by Thursday for added stop drop control on these cultivars. 10 -20 ppm can be used. It takes 3 days to work! It can be applied on Retain treated fruit as well if needed.

SEE APPLE MATURITY ON PAGE 2

Maturity Testing

Paulared harvest is all but complete.

McIntosh growers in Central and North Jersey should watch their Mac's closely for early maturity development and drop. They are running a full 2 weeks ahead of last year! Note the different dates on individual cultivars below.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Rogers Red Mac	Snyder	8//18	yes	14.6	11.6%	6.2
Linda Mac	Snyder	8/18	yes	14.3	11.3	3.3
Warren	Location	Date	Retain	Pressure	Brix	Starch-Iodine
McIntosh cv. Marshal	Hackettstown	8/19	yes	17.6	11.4	2.9
Mac Spur	Hackettstown	8/19	yes	14.9	11.4	4.7
McIntosh	Blairstown	8/21	No	14.8	11.2	1.9
Morris	Location	Date	Retain	Pressure	Brix	Starch
LindaMac	Harding Twp.	8/19	yes	16	12.5	5.3
Red Max	Harding Twp.	8/19	yes	14.9	12	4.9

Gala - Newer strains are already showing good red color with older strains fairly yellow. Avoid any additional moisture stress in Gala until harvest. Fresh market Galas should be harvested when the background color is turning from a yellow to a cream color. SI index with the Gala Starch chart can be a guideline as well.

Warren	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Gala	Hackettstown	8/19	yes	18.3	10.8	2.6
Gala	Blairstown	8/21	no	14.6	11.3	5.1
Morris	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Gala cv Fulford	Harding Twp.	8/19	yes	15.6	11.4	6.1
Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Buckeye Gala	Snyder	8/18	yes	18.2	12.2	5.9
Mitchel Gala	Snyder	8/18	Yes	16.6	12	7.7
Brookfield	Snyder	8/18	yes	16.8	10.5	4.4

Blondee

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Blondee	Snyder	8/18	yes	19.7	10.3	3.3

Honeycrisp is very slow to develop red color this year up till now. All the more reason to pick them at the optimal maturity to ensure the varietal flavors that help make Honeycrisp the winner it is commanding premium prices.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Snyder	8/19	yes	14.3	12	4
Morris	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Harding Twp.	8/19	yes	13.7	12.6	4.4
Warren	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Hackettstown	8/19	no	17.9	10.8	4

Note: Growers should note that Honeycrisp can drop severely and the tendency is to pick it early with red color development. *If it is picked prematurely* it may not develop the full array of flavor that this apple is noted for. It will be then hard to demand the premium price it deserves. ***A lousy eating Honeycrisp is a lousy apple.***

Early Fuji Strains - there are at least 8 early Fuji strains, usually ripe mid-September. They are moving fast like our earlier cultivars, mine were treated with Retain but appear to be at least 3 weeks early.

Note: We need to keep a close look at these early Fuji strains as they are maturing. The Morris County block will be ready to pick in a few days, the fruit is losing pressure.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
September Wonder	Snyder	8/18	yes	16.9	11.7	3
Morris	Location	Date	Retain	Pressure	Brix	Starch
Day Break	Harding Twp.	8/18	No	14.5	13	4

Fruit IPM

Dean Polk, Fruit IPM Agent and David Schmitt, Eugene Rizio and Atanas Atanassov, Ph.D., Program Associates, Tree Fruit IPM

✓ **Late Season Pests:** Last week's newsletter summarized the late season options for brown marmorated stink bug (BMSB) control. As we head into the last peach harvests, make sure to check the border areas of orchards and keep a tight program on for BMSB. A number of growers have made the observation that this has again been a "light" year for stink bugs. While that may be true up to now, it is also partially because they have been controlled. One grower had a block of peaches he thought did not have enough of a crop to merit a full spray program, and stopped spraying early. Last week that "light crop" was heavily damaged by BMSB. As the last peaches are picked, BMSB may move into nearby apples. Please refer to last week's table of insecticides for late season control on apple, adapted for SWD control below.

Peach

✓ **Spotted Wing Drosophila (SWD):** This small invasive fruit fly is not your normal fruit fly you find on old bananas in your kitchen. *Drosophila suzukii* lays eggs in and attacks ripening fruit that is not yet picked. Thin or soft skin fruit like cherries, caneberries, and blueberries have been favorites, but other fruit has been reported to be attacked. Anne Nielsen at RAREC recently found SWD maggots in some unsprayed peaches. Infestations have also been observed in lightly sprayed peaches in Massachusetts and the Hudson Valley. Growers who have late season peaches, particularly if you let them ripen well before harvest, should start to look for SWD, and be using materials that are effective for SWD. Do not use neonicotinoids for control of SWD, since they don't work (Admire, Assail, Actara, Calypso, Belay). Some OP compounds work well for SWD, including Imidan and Malathion, but these have practically no effect on BMSB.

Late Season BMSB and SWD Materials –7 Day Alt Middle					
Material	Rate/A	PHI Peach/Nec	PHI Apple	BMSB Control	SWD Control
Scorpion	5 oz	3	3	Yes	No
Venom	3 oz	3	3	Yes	No
Leverage	2.8 oz	7	7	Yes	Yes
Lannate SP	1 lb	4/1	14	Yes	Yes
Lannate LV	3 pt	4/1	14	Yes	Yes
Danitol	16 oz	3	14	Yes	Yes
Brigade WSB	16-32 oz	14	14	Yes	Yes
Bifenture EC	12.8 fl oz	14	14	Yes	Yes
Bifenture 10DF	16-32 oz	14	14	Yes	Yes
Warrior II	2.56 oz	14	21	Yes	Yes
Lamba Cyhalothrin	5.12 oz	14	21	Yes	Yes
Baythroid	2.8 oz	7	7	Yes	Yes
Delegate	4.5-7 oz	1	7	No	Yes

Note: Higher rate work better under greater BMSB pressure. Bifenthrin (Brigade and Bifenture) work best at the .2 lb ai/A rate, listed as 32, oz, 12.8 fl oz, and 32 oz/A

✓ **Borers (Peachtree Borer (PTB); Lesser Peachtree Borer (LPTB):** Butt sprays for PTB using Lorsban should now be made as soon as possible after harvest. Handgun applications are most effective, since that is what is needed to apply the volume required to "puddle" around the tree crown. The best timing is now through mid-September. Sprays should also be directed into the canopy for control of Lesser Peach Tree Borer, which is now approaching the end of the second generation.

Apple

✓ **Brown Marmorated Stinkbug (BMSB):** This is now the key insect pest in apples. See last week's newsletter for more information.

✓ **Apple Maggot (AM):** Assail @ 8 ozs./ac used at this time for Codling Moth control and BMSB suppression should control AM as well. Most pyrethroids are also effective, and will add to the control of BMSB. Belay is also rated excellent for AM. Belay will also control BMSB and suppress CM (7 day PHI).

SEE IPM ON PAGE 4

Grape

✓ **Grape Berry Moth (GBM):** The next predicted timings for 3rd brood applications using Intrepid is on or about 8/23 in southern counties if using Intrepid. Damage from the second brood has been very low in southern counties.

Blueberry

✓ **End of Season Insecticides:** Sharpnosed leafhopper continues to increase as adults emerge. This second generation should be treated as soon as possible. Adult SNLH are the motile forms that can move stunt disease around fields or between infected wild hosts and uninfected bushes.

✓ **Spotted Wing Drosophila (SWD):** Even though the berries are off the bushes, SWD will continue to lay eggs and reproduce on the few berries still hanging and on dropped fruit. Populations are Very High, and will get higher, since there is the possibility that several more generations will reproduce in the field, before overwintering. During the last part of the season we examined various lugs of machine picked fruit for processing. There were a number of fields that had fruit with 20 to 100+ larvae per 2 qt sample. The good news is that the firmness sorters and other parts of the sorting line took out the majority of the infested berries. The post processed fruit that we have looked at contain "0" larvae. So growers have done a good job in managing the "pest and the pack". This is now the key pest to deal with over the next several years.

Date	GBM	GRB
6/9	0.29	0
6/16	0.43	0
6/23	2	0
6/30	3.29	.8
7/7	6	3
7/14	2	3
7/21	1	9
7/28	1	14
8/4	1	10
8/11	3	5
8/18	2	9

Trap Counts – Southern Counties

Week ending	STLM	TABM-A	CM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
7/7	15	0	3	2	21	1	1	5	0
7/14	23	1	4	4	14	0	2	7	0
7/21	35	1	3	4	8	0	2	28	2
7/28	18	2	5	2	47	1	2	12	4
8/4	28	1	4	2	18	1	2	22	3
8/11	5	1	4	0	8	1	1	13	0
8/18	20	1	1	1	52	0	2	21	1

Trap Counts – Northern Counties

Week ending	STLM	CM	TABM-A	DWB	OBLR	OFM-P	TABM-P	LPTB	PTB
7/7	85	1.3	2.4	1.3	0.5	1.0	5.9	7.2	1.1
7/14	210	2.8	1.4	7.0	2.0	3.0	2.1	5.8	1.3
7/21	283	2.6	1.0	2.0	4.0	1.4	2.9	3.7	0.9
7/28	93	3.3	2.5	1.8	2.0	1.1	2.9	3.3	1.3
8/4	71	3.5	2.2	1.5	3.0	1.7	2.4	4.6	1.5
8/11	89	2.9	1.7	1.5	1.0	2.7	2.4	2.7	3.8

Blueberry Insect Trap Captures

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
7/7	0.03	25.59	0.08	0.29	968.87	0.496
7/14	0.00	18.51	0.56	0.52	433.89	0.444
7/21	0.05	21.03	1.86	1.41	60.48	0.235
7/28	0.00	38.53	0.79	2.33	24.58	0.17
8/4	0.00	29.05	0.39	3.71		0.097
8/11	0.00	13.00	0.63	5.77		0.090

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
7/7	0.00	17.38	3.30	0.64	470.00	0.030
7/14	0.06	14.75	0.30	0.32	473.89	0.142
7/21	0.00	8.03	0.33	0.03	88.44	0.077
7/28	0.0	1.20	0.50	1.22	16.00	0.54
8/4		1.50	3.50	2.88		0.000
8/11		3.50	1.00	5.33		0.000

Report from the Field: Images of Hail Damage

Bill Sciarappa, Monmouth County Agricultural Agent

The extreme supercell thunderstorm that wrecked the Monmouth County Fair Saturday night on July 28 also brought hail and high winds to some local

area crops. These damage photos of peach fruit, leaves and limbs and apple fruit are the result of pelting hail about the size of peas that sliced through plant tissue. Growers trying to salvage some production or avoid even more problems are applying fungicides and insecticides.

In the bottom right photo, one can see the exposed wind side of the fruit is damaged while the protected, less sun side has little damage.



Correction

The article in the 8/14/12 issue of the *Gloucester County 4-H Fair Results* was really the New Jersey Peach Festival results for the Grower Competition and was not authored by Jerome Frecon. The source of the article was the *Gloucester County Times*, August 14, 2012. It also included a brief mention of the poultry competition which was not part of the New Jersey Peach Festival.

Things to Consider in the Vineyard

Joe Fiola, Ph.D., *Viticulture and Small Fruit Specialist*, University of Maryland Cooperative Extension

Source: *Timely Viticulture*, August 17, 2012

When Establishing a Planting

In early August most of us are thinking about the pending harvest, however this is also the prime time for some other activities in the vineyard – especially if you are considering establishing a new vineyard. August is the preferred time for taking nematode samples for assessing their presence or absence in the soil. If you are establishing a new vineyard it is critical to test for the presence, types, and titer of nematodes in the soil, as this is important baseline info for making ground preparation decisions for the fall. If the site is free of nematodes or below threshold, then you can go ahead with turf establishment this fall. However if the type of the nematode is limiting and/or the titer of the nematodes is above threshold, some method of remediation – chemical or bio - will be in order and should be initiated immediately.

Factsheet on Pre-Plant Renovation and Soil Conditioning For New Vineyard and Small Fruit Plantings

<http://www.grapesandfruit.umd.edu/Pages/Pre-plantRenovationSoilCondNewVineYard.pdf>

Factsheet on Nematode Sampling: <http://www.grapesandfruit.umd.edu/TimelyVit2/TimelyVitNematodeSampling.pdf>

Rutgers Plant Diagnostic Lab & Nematode Detection Service: <http://www.njaes.rutgers.edu/plantdiagnosticlab>

Harvest Approach

Although bloom and fruit set were very early, veraison and harvest seem to be very similar to the 2010 season and the early varieties in 2011. As harvest approaches it is important to have a good handle on how the grapes are developing to get an accurate idea of potential harvest dates. Taking and analyzing fruit samples is an important tool in monitoring ripeness. The link below to my *Timely Viticulture* newsletter will give specific instructions on how to take an accurate representative sample. You can download and print or just view the pdf on line. Be diligent and good luck out there!

<http://www.grapesandfruit.umd.edu/TimelyVit2/TimelyVitCropDevelopmentSampling.pdf>

Additional information – sorted by plant development stage - is always available on my web site and the listed links.

<http://www.grapesandfruit.umd.edu/Grapes/TimelyVit3.htm>

Submitted by Jerome L Frecon, Agricultural Agent.

Wine Grape Information for the Region

Mark L. Chien, *Viticulture Educator*, Penn State Cooperative Extension

Source: *Penn State Electronic Newsletter*, August 16, 2012

Current Situation and Observations: Harvest is fast approaching and the weather has changed from warm and dry to warm and wet. This presents particular danger for fruit rots (sour, ripe, bitter, botrytis), powdery mildew and especially downy mildew. The alert should be up for all of these and hopefully the necessary measures (canopy, crop and disease and insect management) were taken throughout the year. These conditions remind growers of the necessary up front viticultural investment needed to secure a high quality grape crop in the fall. In the case of downy mildew, I had conversations with Andrew Landers and Han Peterson, both from Cornell University, recently and they highlighted a variety of fungicides that are available for DM control including Revus, Presidio and Ranman, that can be tank-mixed with a phosphorus acid product to give good protection. The NY-PA Pest Management Guidelines end with mid-summer recommendations but there is so much season still to go, so please review Alice Wise's Late Season Disease Management suggestions (especially for *vinifera* varieties) from Cornell Cooperative Extension on Long Island <http://www.pawinegrape.com/uploads/PDF%20files/Temporary%20Files%20-%20delete%20often/late%20season%20pest%20management.pdf>. Hopefully the vines have been given one final hedge pass before nets were applied, which tends to bunch and compress leaves, improving the environment for the mildews. The wet conditions cause two main problems for growers – the vines continue to produce new laterals and these are very susceptible, especially new growth on top to DM. On a 6-7' canopy, these leaves can be very difficult to maintain good spray coverage so calibrate your sprayer to emphasize the best possible coverage of the tops of canopies. Fruit zones also need excellent coverage so sprayers should also be calibrated to wash cluster thoroughly (see Vineyard Spraying the Finger Lakes

<http://www.pawinegrape.com/uploads/PDF%20files/Temporary%20Files%20-%20delete%20often/late%20season%20pest%20management.pdf>. Tower sprayers are favored for late season spray applications, the Cima being one example. I would say that every-

SEE WINE GRAPE INFO ON PAGE 7

where in the Eastern US that bird control measures should be fully operational now. I haven't yet heard that birds are a problem, but if damp conditions persist, any damage they cause will exacerbate fruit rots. With Hans we talked a lot about birds and there are widely differing opinions about all the various tactics and equipment that are available other than nets, and even those need spacers to provide adequate protection. PermaNet will provide some yellow jacket control, which can be a big benefit if they become a pest.

There is a linger stench of sour rot from the Susquehanna basin and east, a reminder that the fruit zone is oh-so vulnerable at this time of year. Anything you can do to open it up for air, sun and spray, loosen clusters and maintain cluster isolation will help to reduce the threat of fruit rots. So we have arrived at crunch time, where the wine quality rubber meets the road (and any other clichés you can think of). Make your last crop adjustment passes now, particular on the less ripe red varieties, focusing on green to pink berries and wings, clusters that are touching/bunching or growing into the wire or leaves or on short shoots. At Blair Vineyard, Rich has taken Bryan Hed's (Penn State grape research pathologist in Erie) work on early leaf removal to heart – over three varieties (Pinot Gris, Pinot Noir and Chardonnay) he did remove the leaf opposite clusters on every other row of a significant portion of his vineyard. He reports seeing the best cluster loosening effect on the Pinot Noir and will monitor fruit rots and make wines in separate lots to check juice/wine quality differences. This is the kind of in-house viticulture research that makes me smile and, in the end, makes better wines. The season is divided into 3 parts – budbreak to bloom, fruit set to veraison and post-veraison, and as a grower I always felt that this was the most important third. It would be so nice to just sit back and enjoy the fruits of the hard work of the past four months but with the rain and all the threats to the crop, it's a maddening time of year.

Harvest Instructions: Each year before harvest I refer grape growers to the Harvest article (http://www.pawinegrape.com/uploads/PDF%20files/Documents/Viticulture/Harvest/Harvest-Getting%20Ready_%20Sep10.pdf) written by Dr. Ed Hellman at Texas A&M and myself. It's a good overview of what is necessary to plan and execute a grape harvest.

Buying Grapes: Recently I have had a number of wineries ask me for recommendations about who to contact for grapes. It is WAY too late in the season to be sourcing grapes, and in case you had not heard, this was a frost year so the crop was bound to be short. I'm not trying to be sarcastic, but if you care about your wine, both quality AND quantity, wine makers should be locking up the best sources of grapes very early in the year. Now, you are playing the spot market and that's very dicey, for both quality AND quantity. In all cases, wine makers should be on the road, visiting the vineyards they are purchasing grapes from and inspecting crop quality AND quantity, and making last minute adjustments and offering instructions to growers. This can really help wine makers to get the grapes they want and expect to see later on the crush pad. It's absolutely worth the time and effort. Collaborate with the grower on late-season crop protection measures and how to determine grape maturity, and the very critical when to harvest decision, especially if the conditions, as they did in 2011, turn on a dime and go downhill.

PQA Workshop Summary: Denise Gardner has written an excellent summary of the wine aroma lecture (<http://extension.psu.edu/enology/wine-production/workshop-seminar-summaries/2012-pqa-meeting-wine-aroma-by-alain-razungles/view>) given by Professor (and wine grower) Alain Razungles at the Pennsylvania Quality Assurance summer workshop in July. This first part explains wine aroma compounds, their origins and how they are manipulated in grapes, juice and wines. In Part 2 (coming later) she will explain practical applications to improve wine aromas in the vineyard and cellar.

Calendar of Events

August 29, 2012, 3:00 – DUSK. **Tomato Tasting.** Rutgers Snyder Farm, 140 Locust Grove Rd, Pittstown, NJ. Contact Joanne Stevely, stevely@aesop.rutgers.edu. (908) 730-9419 RSVP website: <http://snyderfarm.rutgers.edu/tomatoes.html>. Event will be held Rain or Shine - Fee is \$7.00.

December 4-6, 2012, no times as of yet, **Great Lakes Fruit, Vegetable & Farm Market EXPO**, DeVos Convention Center, Grand Rapids, Mich. For more info visit: www.glexpo.com

January 10-13, 2013, no times as of yet, **Southeast Regional Fruit & Vegetable Conf.**, International Trade & Conv. Center, Savannah, GA. For more info call 877-994-3842 or visit: www.gfvga.org. ☐

RUTGERS

New Jersey Agricultural
Experiment Station

Plant & Pest Advisory
Rutgers School of Environmental
and Biological Sciences
ASB II, 57 US Hwy. 1
New Brunswick, N.J. 08901

PLANT & PEST ADVISORY

FRUIT EDITION - CONTRIBUTORS

Rutgers NJAES Cooperative Extension Specialists

George Hamilton, Ph.D., Pest Management
Norman Lalancette, Ph.D., Tree Fruit Pathology
Bradley A. Majek, Ph.D., Weed Science
Anne Nielson, Ph.D., Fruit Entomology
Peter Oudemans, Ph.D., Small Fruit Plant Pathology
Cesar Rodriguez-Saona, Ph.D., Cranberry/Blueberry Entomology
Daniel Ward, Ph.D., Pomology

Rutgers NJAES

Joseph Goffreda, Ph.D., Breeding

Rutgers NJAES - CE Agricultural Agents and Program Associates

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)
Gloucester County, Jerome L. Frecon (856-307-6450)
Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)
Morris County, Peter J. Nitzsche (973-285-8300)
Passaic, Elaine Fogerty, Agric. Assistant (973-305-5740)
Warren County, (908-475-6505)
Fruit IPM, Dean Polk (609-758-7311)
Atanas Atanassov, Ph.D., Program Associate (908-788-1338)
Gene Rizio, Program Associate (856-566-2900)
David Schmitt, Program Associate (856-307-6450)

Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES
Cindy Rovins, Agricultural Communications Editor

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