
PLANT & PEST ADVISORY

A RUTGERS COOPERATIVE EXTENSION PUBLICATION

Apple Maturity- Fruit Maturing Early

Second Report for North-Central New Jersey

Win Cowgill, County Agricultural Agent, Suzanne Sollner-Figler, Research Assistant, Ben Cowgill, Visiting Scholar

Apple blocks in Northern New Jersey appear to be maturing significantly early this year. Several McIntosh blocks are very close to harvest, followed by Gala strains. Honeycrisp appears to be dragging just a bit as to the other two.

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 not 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 September 1-5.

Several nights in the low sixties have started to bring on red color.

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.

Retain

It is too late to apply Retain for Macs, Galas and probably Honeycrisp in Central and most of Northern NJ. It is time to apply Retain for Macoun, Empire, Jonagold

NAA

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

Note: Next week will time to think of applying Retain to Empire, Red Delicious and Macoun varieties in North West New Jersey.

Paulared is our old standby late August apple in northern NJ. It is being harvested this week in Warren County. Pressure is down so short term storage only.

Warren	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Paula Red	Hackettstown	8/13	yes	14.4	11.9	6.7

Maturity Testing

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!

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Rogers Red Mac	Snyder	8/13	yes	13.7	11%	5.4
Linda Mac	Snyder	8/13	yes	13.6	11.5	4.6

Warren	Location	Date	Retain	Pressure	Brix	Starch-Iodine
McIntosh cv. Marshal	Hackettstown	8/13	yes	13.7	10.9	2.7
Mac Spur	Hackettstown	8/13	yes	13.7	10.9	2.7
McIntosh	Blairstown	8/14	No	14.4	10.6	1.8

Morris	Location	Date	Retain	Pressure	Brix	Starch
LindaMac	Harding Twp	8/13	yes	16	11.9	4.6

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.

Mercer	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Gala	Princeton	8/12	No	20.3	10.8	3.9

Warren	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Gala	Hackettstown	8/13	yes	16.9	10.5	1.6
Gala	Blairstown	8/13	no	15.8	11.1	4.6

Morris	Location	Date	Retain	Pressure	Brix	Starch-Iodine
Gala cv Fulford	Harding Twp	8/13	yes	16.7	10.8	2.3

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Buckeye Gala	Snyder	8/13	yes	20.3	10.7	2.5
Mitchel Gala	Snyder	8/13	Yes	19	11.4	5.7

Blondee

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Blondee	Snyder	8/13	yes	20.3	10.7	2.5

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	8/13	yes	14.3	10.7	1.0

Morris	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Harding Twp	8/13	yes	11.4	11.1	1.1

Warren	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Blairstown	8/13	no	13.7	10.4	1.8

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 well. ***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. We need to keep a close look at these strains.

<u>Hunterdon</u>	<u>Location</u>	<u>Date</u>	<u>Retain</u>	<u>Pressure</u>	<u>Brix</u>	<u>Starch</u>
September Wonder	Snyder	8/13	yes	16	10.6	2.3

Fruit IPM

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

Invasive Species

Brown Marmorated Stink Bug (BMSB): In both peaches and apples, activity is increasing in blocks being harvested and around orchard edges, mostly in southern counties. Most of the nymphs that were present earlier in the season have now matured into adults. This higher population of motile adults is moving in and out of orchards, feeding and laying more eggs. More nymphs are being found along with hatching egg masses. Alternate middle sprays about 5-7 days apart are most important now. Scout your orchard for damage and bug presence. Observations continue to indicate that this insect tends to stay localized within a crop, but damage can be significant when moderate to large populations are present. Blocks near woodlines or field crops such as corn or soybeans are more likely to be injured. Make sure to check edge rows, since most of the insects come in from other hosts. Also scout orchard canopies since we continue to find elevated levels of injury in the tops of trees. **Control of Brown Marmorated Stink Bug (BMSB):** All insecticides used at this point **For All Insects**, should be effective BMSB materials, and have a 14 day (central and northern counties) or less PHI. Use the following table as a guide:

Late Season BMSB Materials – Alternate Middle Applications Every 7 Days			
Material	Rate/A	PHI – Peach/Nec	PHI - Apple
Scorpion	5 oz	3	3
Venom	3 oz	3	3
Leverage	2.8 oz	7	7
Lannate SP	1 lb	4/1	14
Lannate LV	3 pt	4/1	14
Danitol	16 oz	3	14
Brigade WSB	16-32 oz	14	14
Bifenture EC	12.8 fl oz	14	14
Bifenture 10DF	16-32 oz	14	14
Warrior II	2.56 oz	14	21
Lamba Cyhalothrin	5.12 oz	14	21
Baythroid	2.8 oz	7	7

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

Peach

Oriental Fruit Moth (OFM): Any moths that are in pheromone traps are 4th generation, for which there is no reliable model. Insecticides should only be applied if the trap count is above 6-8 males per trap, and the harvest date is at least 2 weeks away. In southern counties the latest peach varieties are 10 days to 2 weeks out, and 2-3+ weeks out in central and northern counties. The major pest at this time is **brown marmorated stink bug**.

Tufted Apple Budmoth (TABM): Any treatments applied for BMSB (above) will also control TABM.

Apple

Codling Moth (CM): Overall trap counts are low, but captures above 5 males per trap indicate a problematic 3rd generation. Treatments for BMSB should control any emerging codling moth issues.

Summer Diseases: Summer disease pressure is high from a change to a more humid and wet weather pattern. Pristine remains the best option to weather extended rainfall but protection will be limited whenever heavy rainfall exceeds 2 inches in total. Topsin/Captan followed by Captan/Flint combinations are the next best options. Higher

volumes of water may help to improve coverage. Whichever program is used tight schedules every 7-10 days will afford the best possible control during periods of frequent rainfall.

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.

Date	GBM	GRB
7/7	6	3
7/14	2	3
7/21	1	6
7/28	1	14
8/4	1	10
8/11	3	5

Weekend	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
3/24	2				3		0.17			
3/31	2				27		0.28			
4/07	7				2		0.14			
4/14	3	0			24		0.34	0		
4/21	9	0.3	11		49		2	0		
4/28	5	1	12		52		2	1		
5/5	4	1	4		13		0	1	39	
5/12	2	9	10		11		0	6	60	
5/19	4	13	5		6		1	15	12	
5/26	8	20	6		6		0	26	47	
6/2	33	16	5		5	58	1	30	39	0
6/9	13	12	3		2	60	0	13	60	1
6/16	7	5	2		3	37	0	5	21	2
6/23	47	2	1		1	51	0	2	35	3
6/30	22	0	1		2	29	0	1	19	2
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
7/21	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

Weekend	STLM	CM	TABM-A	AM	DWB	OBLR	OFM-P	TABM-P	LPTB	PTB
3/24	15						0			
3/31	51						0			
4/07	71						0			
4/14	88	0					1.8			
4/21	202	0.0	0.0				6.7			
4/28	56	8.2	0.0				6.9			

5/5	9	2.5	0.4				1.2	0.1	0	0
5/12	21	7.1	4.6				1.2	3.2	11.7	0
5/19	18	6.9	9.3			0	1.4	7.9	24.8	0
5/26	9	7.9	11.8		7.3	8.0	0.7	14.0	24.2	0
6/2	163	5.4	14.2		8.8	6.7	0.5	17.2	18.1	0.2
6/9	114	3.3	21.2		5.8	21.3	0.4	23.9	10.8	0.5
6/16	76	4.1	19.1		5.8	10.3	0.3	22.9	9.4	0.3
6/23	135	2.4	14.9	0	4.0	7.0	0.5	16.7	5.1	0.1
6/30	146	1.3	7.8	0	5.0	1.3	1.4	10.4	4.1	0.8
7/7	85	1.3	2.4	0	1.3	0.5	1.0	5.9	7.2	1.1
7/14	210	2.8	1.4	0	7.0	2.0	3.0	2.1	5.8	1.3
7/21	283	2.6	1.0	0	2.0	4.0	1.4	2.9	3.7	0.9
7/28	93	3.3	2.5	0	1.8	2.0	1.1	2.9	3.3	1.3
8/4	71	3.5	2.2	0	1.5	3.0	1.7	2.4	4.6	1.5
8/11	89	2.9	1.7	0	1.5	1.0	2.7	2.4	2.7	3.8

Constriction Canker Management on Peach: Cultural Control

Dr. Norman Lalancette, Specialist in Tree Fruit Pathology

Peach and nectarine orchards in New Jersey continue to sustain considerable shoot death and fruit loss from constriction canker (previously called *Fusicoccum* canker). The majority of infections that took place last fall and this past spring have girdled the shoots, resulting in dead or blighted branches. Any fruit distal to the cankers on these shoots have already fallen off or remain attached, slowly drying up and shriveling. This yield loss directly impacts your bottom line.

Unlike most of our peach diseases, effective management of constriction canker requires both cultural and chemical control. Neither of these practices alone will provide enough control to adequately lower canker incidence in your affected orchards. In a few weeks we'll be discussing what you need to do in terms of fungicidal control. Now, however, is the best time to perform cultural control.



Breaking the Disease Cycle

Cankers on infected shoots are the source of inoculum. Spores from these cankers will initiate infections on this year's new growth during the post-harvest leaf drop period and spring bud break. These newly infected shoots, which are to bear fruit next season, will then die next summer, producing yet another "crop" of cankers to continue the disease cycle.

Two control methods should be combined to halt the disease cycle. The first method is to remove as much inoculum as possible, thereby reducing the likelihood and amount of infection that does take place. The second method is to protect the shoots by applying fungicides during any potential infection periods during the fall and spring. Given that neither of these approaches are highly effective (>90% control), both methods should be employed to obtain maximum control.

Cultural and Labor Management

The obvious way to reduce inoculum is to prune out any cankered shoots. What is not so obvious is that the timing of this pruning operation is critical. If pruning is done too early, as I have noticed in past seasons, then many of the younger, non-girdling cankers are missed. Early pruning may only remove half of the cankers, which helps somewhat, but is insufficient to have a major effect on managing disease. So, late summer (now) is the best time to prune out cankers since the majority of them have killed the shoots, making them much easier to find.

Pruning out diseased shoots takes a lot of man-hours and some training. Since most labor at this time is geared towards harvest, focus your control efforts on the most valuable and/or heavily infected blocks. Make sure workers cut 2-3 inches below the canker. I have seen cuts above the canker! The dead shoot was gone, but the sporulating canker remained! And, finally, prune during dry weather so that the cuts have time to heal before other pathogens can enter the tissue.

One final comment: don't worry about identifying constriction canker during the pruning operation. There's dead shoot tips from winter injury, bacterial spot, and blossom blight cankers. It won't hurt to remove these as well.

Black Light Traps for Monitoring BMSD

Ann Neilson, PhD, Assistant Extension Specialist in Fruit Entomology, Win Cowgill, County Agricultural Agent

Dr. George Hamilton, Rutgers maintains a series of Black Light Traps throughout NJ along with Kris Holmstrom, Rutgers Vegetable IPM. They check these traps weekly and publish a BMSB map in the weekly plant and pest vegetable newsletter. All maps are also archived at the Rutgers Vegetable IPM website. Note that the archive is a few weeks behind but should be caught up by the end of this week. You can also download back issues of the Vegetable Plant and Pest to view the map for those weeks.

We are researching the best monitoring methods for BMSB in a variety of crops. Visual or beat/shake sampling in crops can be a good way to scout for BMSB but is a nocturnal insect with very good hiding behaviors. This can make it very difficult to detect populations in the field. At the current time, blacklight traps give us the best indication of activity and relative numbers. The numbers in NJ blacklight traps have increased substantially over the past few weeks. In general the numbers are much lower than previous years but they do indicate that populations have increased. There is stink bug pressure in many orchards and we are still finding egg masses and young nymphs as well as adults, however the numbers are significantly less than 2010. Please see the Rutgers IPM website for average nightly trap captures in your area.

Note: the map files are in jpeg format. It is very interesting to have several weeks of maps open at a time to compare the trends in your area. They are giving an average nightly catch so you times by 7 to get the weekly.

<http://www.pestmanagement.rutgers.edu/IPM/Vegetable/Pest%20Maps/maparchive.htm>

Rutgers Snyder Farm went from 10-20-40-114 and this week dropped back to 85 for weekly numbers.

Thus, the blacklight traps in combination with visual samples and damage assessments of fruit indicate that the population is quite active, feeding and reproducing in many crops. Maintain coverage.

Please see deans notes in this newsletter for the best materials to use and PHI's. He recommends alternate middle sprays 5-7 days apart.

Gloucester County 4-H Fair Results

Jerry Frecon, Agricultural Agent

Peach Pack and Governor's Cup Awards

White Flesh Peaches

First – William Schober & Sons, Monroeville
Second – Summit City Farms, Glassboro
Third – Nichols Orchards, Franklinville

Nectarines or Fuzzless Peaches, White or Yellow Fleshed

First – Nichols Orchards, Franklinville
Second – Gala Orchards, Elmer
Third – Summit City Farms, Glassboro

Largest Peach

First – Moods Farm, Mullica Hill
Second – Holtzhauser Farms, Mullica Hill
Third – Moods Farm, Mullica Hill

Best of Specialty Class

William Schober & Sons, Monroeville

Select – Peaches That Are Hand Selected By The Grower/Shipper

Peaches Between 2 ¼ to 2 ½ Inches Diameter

First – Holtzhauser Farms, Mullica Hill
Second – A.L. Gaventa Farms, Logan Twp.

Peaches Between 2 ½ to 2 ¾ Inches Diameter

First – Holtzhauser Farms, Mullica Hill
Second – A.L. Gaventa Farms, Logan Twp.

Peaches 2 ¾ Inches and Up In Diameter

First – Holtzhauser Farms, Mullica Hill
Second – William Schober & Sons, Monroeville
Third – A.L. Gaventa Farms, Logan Twp.

Beat of Select Class

Holtzhauser Farms, Mullica Hill

Commercial – Peaches Pulled Off The Packing House Line

Peaches Between 2 ¼ to 2 ½ Inches Diameter

First – Holtzhauser Farms, Mullica Hill
Second – Summit City Farms, Glassboro
Third – F&R Grasso Farms, Mullica Hill

Peaches Between 2 ½ to 2 ¾ Inches Diameter

First – Holtzhauser Farms, Mullica Hill
Second – Heilig Orchards, Mullica Hill
Third – Summit City Farms, Glassboro

Peaches 2 ¾ Inches and Up In Diameter

First – Summit City Farms, Glassboro
Second – Nichols Orchards, Franklinville
Third – Heilig Orchards, Mullica Hill

Best of Commercial Class

Holtzhauser Farms, Mullica Hill

2012 Governor's Cup Award Holtzhauser Farms Commercial 2 ¼ Box of John Bay

2012 NJ Peach Festival Bake-Off

Bake – Over 13

First – Madison Ginotti – Maddie Spiced Peach & Carrot Bread
Second – Katie Livingston – Chai Peach Pie
Third – Anne Danilak – Peach Clafouti
Honorable Mention – Diane Mick – Peach Coffee Cake

Bake – Under 13

First – Marisa Henderson – Peachy Turkey Chilli
Second – Valeri Monzo – Peach Leather Swirl

Poultry Show

Grand Champion – Kourtney Pyle

Secretary of Agriculture Doug Fisher with Tom Holtzhauser of Holtzhauser Farms.



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