

PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

SEPTEMBER 20, 2005



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Apple Maturity Update for North-Central New Jersey

Win Cowgill, County Agricultural Agent

Apple maturity is moving quickly with the dry weather, no rainfall and warm sunny days. Drought stressed trees have fruit that is very loose even if Retained. The continued drought in northern New Jersey has stressed trees, some fruit size reduction has occurred. Trees that go into the winter drought stressed have more potential for winter injury. We received virtually no rain in September. In August at the Rutgers Snyder Farm we had 1.98 inches, and just 0.21 inches in September. That puts us 5 inches down to date for just that two-month period. Growers that have irrigation should be running it.

Harvesting at the correct maturity. I guess you can call this paragraph "Win's Soapbox." Apples harvested prematurely will not have the best flavor for retail sales. Picked too soon green apples will be starchy and not have the full flavor components developed, nor the best sugar acid balance. For retail sales, most cultivars should be 5-6 on the starch chart and at least 13% Brix (sugar).

McIntosh-Macintosh harvest is done in central New Jersey and winding down in the most northern New Jersey counties.

Jonagold- is ready at several locations. We would like to see a 6 on starch for retail sales and 14-16% brix.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
JonaGoRed	Snyder	9/19	yes	16	13	6.4
Jonagold	Snyder	9/19	no	15.7	13.4	5.1
King Jonagold	Oldwick	9/19	yes	19.4	13.8	5.3
Warren	Location	Date	Retain	Pressure	Brix	Starch
Jonagold	Blairstown	9/18	no	15.9	11.4	6.9
Morris	Location	Date	Retain	Pressure	Brix	Starch
Jonagold	Harding Twp	9/19	yes	16	13	7

Macoun- Macouns are starting to color, note no samples tested were mature enough for harvest. Jon Clements, Extension Fruit Specialist UMass says "harvest when they taste good!" But that means 5-6 on the starch chart. No samples tested were ready for harvest.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Oldwick	9/19	Yes	17.6	12.2	2.9
Macoun	Pittstown 2	9/18	No	15.2	11.9	2.3
Macoun	Snyder	9/19	yes	15.7	10	2.1

SEE APPLE MATURITY ON PAGE 2

Warren	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Hackettstown	9/18	yes	17.4	12	2.3
Morris	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Harding Twp	9/19	yes	17.5	12.3	2.8

Cortland is an apple that has increased in popularity with newer strains being highly colored. Cortland is usually picked one week after Macs. They do not starch test well but SI testing can be used as guideline. For Cortland target a starch of 5-6. All samples tested have sugars moving up, and great color but still very low on SI chart, not quite ready.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
RedCort	Snyder	9/19	no	16.2	12.5	1
Warren	Location	Date	Retain	Pressure	Brix	Starch
Cortland	Hackettstown	9/19	yes	16	11.9	1
Morris	Location	Date	Retain	Pressure	Brix	Starch
Cortland	Harding Twp	9/19	yes	16.3	12.8	1

Jonathan is an oldtime favorite apple popular in the Midwest. It has colored nicely and ready for harvest in several locations.

Morris	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Harding Twp	9/19	yes	16.1	13	7
Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Pittstown 2	9/19	no	15.8	13.5	5.8
Warren	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Hackettstown	9/18	?	16.4	13.3	5

Empire-Was not ready for retail sale type harvest in any sample tested. We would look for starch of 5-6, brix of 13-14%, pressure 16 lbs.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Empire	Snyder	9/19	no	18.8	10.5	2.4
Empire	Oldwick	9/18	yes	17.6	12.3	2.5
Warren	Location	Date	Retain	Pressure	Brix	Starch
Empire	Blairstown	9/18	no	16.9	11	3.2
Empire	Hackettstown	9/18	yes	19.4	10.8	2.4
Morris	Location	Date	Retain	Pressure	Brix	Starch
Empire	Harding Twp	9/19	yes	18.6	12.8	2

Red Delicious- Was not ready for retail sale type harvest in any sample tested.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Super Chief	Snyder	9/19	no	17.4	10.2	2.3
Oregon Spur	Snyder	9/19	no	18.4	11.1	3.2
Ace Spur	Snyder	9/19	no	16	10	2.9
Super Chief	Oldwick	9/19	yes	16.4	12.2	3.9
Warren	Location	Date	Retain	Pressure	Brix	Starch
Red Chief	Blairstown	9/18	no	15.7	11.1	3.4
Red Chief	Hackettstown	9/18	yes	17.5	10.7	1.5
Morris	Location	Date	Retain	Pressure	Brix	Starch
Red Delicious	Harding Twp	9/19	yes	17.4	11.4	4.1

Early Fuji Types- there are four to five new strains of early Fuji types, all are getting close to maturity. I have four under extensive testing (30-50 trees each) at the Rutgers Snyder Farm. These include BeniShoegun Fuji, September Wonder Fuji, Auvil Early Fuji, and EarliRed Fuji. These are very interesting in looking at the early PYO market with a Fuji type. These are true Fujis as contrasted to the older Yataka Fuji which is not a true Fuji.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
September Wonder	Snyder	9/19	no	15	13.8	4.6

Pinova (also called Corail) is an interesting new apple cultivar from the German apple breeding program at Dresden-Pillnitz. At present this cultivar is commercially planted in Europe and being looked at in the USA. The parents are Clivia (Oldenburg x Cox Orange) x Golden Delicious, so the excellent taste of Cox Orange is combined with the good cropping capacity of Oldenburg and Golden Delicious and the storage and shelf life characteristics of Golden Delicious according to the Institute of Plant Genetics at Dresden, Germany.

2005 Crush Season

Stephen Menke, Penn State University Enology Educator

Reprinted from Grape and Barrel Newsletter, September, 2005, Penn State Cooperative Extension

The 2005 crush season has started. Reports filtering back to me are very promising. Disease has not yet become a serious problem, and the dry weather also seems to be promoting higher Brix, more even maturity and some earlier harvest dates. I am hoping that this is also due to better canopy management, especially dropping green clusters and leaf thinning at veraison.

Wet weather and bunch rot development not yet happening; this is a year that extra hang time for Brix increase, acid reduction, and color and flavor development is an acceptable risk. Grapes I have tasted so far seem to be maturing in taste and color evenly with Brix and acid and pH, thus allowing the possibility of longer hang time with balanced maturation. But be careful of extra hang time in soils rich in potassium, as the pH may rise to unacceptable levels at higher Brix.

A bit of warning for later harvest is in order, if no rain is received soon. Many areas have seen no rain for weeks, and vines are just starting to show stress. If you have the ability to give an inch of water to your stressing

plants each week until a week or two from harvest, it will not hurt your fruit for harvest or post-harvest hardening off. If no irrigation is available, you will have to decide soon whether to assume that the rains will come as usual, drop some crop, or accept the risk of raising before maturation.

The 2005 Crush Workshop was held September 7 at Crossing Vineyards and Winery. Much thanks to Chris, Tom, Tom, all of the staff for their great hospitality and beautiful facility, and for the good questions by attendees. Clayton Cone and Sigrid Gertsen-Briand presented a wealth of information on yeast physiology and malolactic bacteria. I think I learned more than anyone there, as so many connections were filled in by Clayton's vast yeast experience, allowing practical winemaking techniques to be understood in the light of the central needs yeast have to have in order to do our winemaking work.

I was disappointed that the Crush Workshop was not better attended, given the quality of the information presented, and in light of the fact that almost 40% of NJ wineries attended, as well as several from MD and other states, while only 7% of PA wineries attended. I am hoping to move the 2006 crush workshop to the last week of July or first week in August, and will take any program suggestions to heart.

Submitted by Jerome L. Frecon, Agricultural Agent. □

NUMBERS FROM PAGE 2

Warren	Location	Date	Retain	Pressure	Brix	Starch
Pinova	Blairstown	9/18	no	19.1	13	3

What the numbers mean

Several growers have asked for a bit of information on what the numbers mean in our brix and starch iodine tests. The SI is a measure of how much starch has converted to sugar. The lower the number the more "immature" the fruit is. The higher the number the more "mature" the fruit is. We like to have an SI of between 5-6 to harvest for retail sales. Brix is a measure of sugar content of fruit. A brix of at least 12 percent should be present for acceptable eating quality. Pressure is also an excellent indicator of maturity and the "crunch factor". For most varieties I would like to see a pressure of at least 16 lbs at harvest. The exception is Honeycrisp. It has excellent crunch at 13-14 lbs pressure. Studies have shown that it has double the number of cells that give it its unique crunchy texture.

Retain®: Reminder Retain® should be applied 28 days before anticipated harvest and with a 21 day Pre Harvest Interval (PHI). If blocks were not treated with Retain®, it is too late this season to apply except for October maturing apples such as Fuji, Stayman, Braeburn. It is too late to apple to empire and red delicious in New Jersey.

Note: Retain will not work well if applied to drought stressed trees!

Note: This report takes approximately two days to prepare in collecting and testing samples and in preparation of the text and data. A note of thanks to all who make this report possible beginning with all the growers who participate, M. Compton who assists in obtaining fruit samples, Jim Beyer and Carolyn Fegan research assistants at the Rutgers Snyder Farm. Thank you to Ed Dager for the Snyder weather data. Most importantly thank you to the growers for allowing me to sample their blocks. □

Annual Farm Safety Twilight Meeting

The 4th Annual Farm Safety Twilight Meeting will be held hosted by Paul and Barbara Shinn at the Toyland Farm (610 Georgetown-Juliustown Road, Jobstown, NJ) on Wednesday, September 21, 2005, from 6 to 9 p.m.

This meeting is intended for the entire farm family since safety is everyone's concern.

Attendees will hear talks and see demonstrations on subjects such as equipment safety, fire prevention, skin/sun protection, chainsaw safety, and many other topics. We will also have a special breakout session for the children. A special new feature for this year's meeting is a "Personal Protection Equipment Fashion Show", to demonstrate the latest gear for pesticide applicators.

The meeting will be **free of charge** to farm families and will include **pesticide credits, a pig roast, spectacular home made desserts, take home safety items**, and much more.

Registration is required by September 14, 2005. Please call Rutgers Cooperative Research & Extension of Burlington County at (609) 265-5050 to reserve your seat today! □

NJ Drought: Need for Statewide Water Conservation and Ag Burning Permits Suspended

Source: NJDEP press release, September, 13, 2005

Department of Environmental Protection (DEP) Commissioner Bradley M. Campbell is urging residents and visitors of New Jersey to practice water conservation due to continued hot and dry weather conditions. Additionally, DEP's Forest Fire Service has restricted recreational fires in most of the state.

"If existing trends continue we may need to invoke the state's non-emergency drought options. Clearly the adage 'waste not, want not' applies here," said Commissioner Bradley M. Campbell.

The DEP's tracking of the six drought regions in New Jersey indicates particular vulnerability in the northern and central part of the state with decreased ground water levels and reduced reservoir levels. Southern New Jersey has fared somewhat better with near-normal levels recorded for stream flows and ground water due to relatively higher amounts of rainfall; however, due to substantially dry conditions in recent weeks, this area also remains under close scrutiny.

Under the new fire restrictions, fires directly on the ground and in wooded areas are prohibited. Agricultural burning permits also are suspended. These restrictions will remain in place until adequate rainfall is received or until additional measures are needed.

DEP's internal drought monitoring group assesses drought indicators and water levels and evaluates water supply management options to reduce the likelihood of a water emergency.

Options DEP would consider, if conditions do not improve, include ordering the water purveyors to develop alternative water supplies, to conduct flow tests and to activate water supply interconnections and water transfers. Before moving forward with any of these requirements, the department will schedule a public hearing.

Over the summer, New Jersey received below average rainfall throughout central and northern New Jersey. DEP is asking the public to take voluntary actions to conserve water, including:

- Limit lawn watering to 20 minutes twice per week through the fall.
- Fix leaky faucets and pipes in the home, along with turning off the faucet while brushing teeth and shaving.
- Turn off faucets when not in use.
- Install water conserving faucet and shower heads.
- Run washing machines and dishwashers only when full.

For additional water conservation information visit www.njdrought.org. For additional information on fire restrictions visit www.njwildfire.org. □

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NJ AGRICULTURAL EXPERIMENT STATION
RUTGERS
COOPERATIVE RESEARCH & EXTENSION
Plant & Pest Advisory
Rutgers' Cook College
18 College Farm Road
New Brunswick, N.J. 08901-8551



PLANT & PEST ADVISORY

FRUIT EDITION - CONTRIBUTORS

Rutgers Cooperative Extension Specialists and Program Associate

George Hamilton, Ph.D., Pest Management
Norman Lalancette, Ph.D., Plant Pathology
Bradley A. Majek, Ph.D., Weed Science
Peter W. Shearer, Ph.D., Entomology
Gail Lokaj, Program Associate in Pomology

NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding

Rutgers Cooperative Extension 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 F. Barbour, Agric. Assistant (973-305-5740)
Warren County, William H. Tietjen (908-475-6505)
Fruit IPM, Dean Polk (609-758-7311)
Meredith Compton, 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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