

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JULY 31, 2007



Secretary of Ag Charles Kuperus, NJ Peach Queen Tara Weeast and Governor's Cup Winner Carmen Adamucci

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## Winners of the New Jersey Peach Festival

*Jerome L. Frecon, Agricultural Agent*

**A**damaucci Farms in Bridgeton, NJ was the winner of the Governor's Cup at the New Jersey Peach Festival. Carmen Adamaucci Jr. was presented the cup by Secretary Charles Kuperus, Senior Associate NJAES Dean Art Brown and District 3 legislators on Friday evening, July 27th, at the awards ceremony and growers reception. Approximately 81 entries were displayed in the commercial peach pack competition from New Jersey growers and packers. Technically, only the entries in the commercial competition are eligible for the cup because they represent random selections collected from packing house and storages by Rutgers Cooperative Extension.

All judging is done by New Jersey Department of Agriculture quality grading inspectors.

Ms Tara Weeast sponsored by JerZee Orchards, was selected New Jersey Peach Queen; Tara will be representing the industry at peach promotional events throughout the year.

Many other peach events and educational displays were conducted and capped by a visit from Governor Jon Corzine on Sunday afternoon at the Peach Festival main tent. Approximately 25,000 people attended this year's event, which kicks off the heavy volume peach season.

### **Class – Specialty**

#### **Category – White Fleshed Peaches**

1<sup>st</sup> place JerZee Orchards, JerZee label, Richwood, NJ also best of this Class.

2<sup>nd</sup> place Zee Orchards, JerZee label, Richwood, NJ

3<sup>rd</sup> place Heilig Orchards, Jersey Fruit label, Richwood, NJ

#### **Category – Nectarines or fuzzless peaches, white or yellow fleshed**

1<sup>st</sup> place Circle M. Farms, Circle M label, Mullica Hill, NJ

2<sup>nd</sup> place JerZee Orchards, JerZee label, Richwood, NJ

3<sup>rd</sup> place Larchmont Farms, Just Picked label, Elmer, NJ

#### **Category – largest peach**

1<sup>st</sup> place JerZee Orchards, 430 grams, Richwood, NJ

2<sup>nd</sup> place, Zee Orchards, 390 grams, Richwood, NJ

3<sup>rd</sup> place, Mt Pleasant Orchards, 350 grams, Richwood, NJ

*SEE PEACH FESTIVAL ON PAGE 2*

**Class – Select =peaches that are hand selected by the grower shipper for the competition**

**Category – Peaches that are between 2 ¼ to 2 ½ inches in diameter**

- 1<sup>st</sup> place Mt Pleasant Orchards, Jersey Fruit label, Richwood, NJ This box was also selected the best of this class.
- 2<sup>nd</sup> place Holtzhauser Farms, Holtzhauser Farms label, Mullica Hill, NJ
- 3<sup>rd</sup> place A.L. Gaventa & Sons, Jersey Fruit label, Logan Township, NJ

**Category – Peaches that are between 2 ½" to 2 ¾" inches in diameter**

- 1<sup>st</sup> place Holtzhauser Farms, Holtzhauser Farms label, Mullica Hill, NJ
- 2<sup>nd</sup> place Mt Pleasant Orchards, Jersey Fruit label, Richwood, NJ
- 3<sup>rd</sup> place A.L. Gaventa & Sons, Jersey Fruit label, Logan Township, NJ

**Category – Peaches that are between 2 ¾ inches and up in diameter**

- 1<sup>st</sup> place Holtzhauser Farms, Holtzhauser Farms label, Mullica Hill, NJ
- 2<sup>nd</sup> place A.L. Gaventa & Sons, Jersey Fruit label, Logan Township, NJ
- 3<sup>rd</sup> place Mt Pleasant Orchards, Jersey Fruit label, Richwood, NJ

**Class – Commercial = peaches that are pulled of the packing house line to symbolize peaches as they would be sold to supermarkets and specialty stores. These peaches are not hand selected.**

**Category - Peaches that are between 2 ¼ to 2 ½ inches in diameter**

- 1<sup>st</sup> place Adamucci Farms, Sunglo label, Bridgeton, NJ This box was the best box in this class and also the best box in the show and the winner of the Governors Cup
- 2<sup>nd</sup> place Heilig Orchards, Jersey Fruit label, Richwood, NJ
- 3<sup>rd</sup> place A.L. Gaventa & Sons, Jersey Fruit label, Logan Township, NJ

**Category Peaches that are between 2 ½" to 2 ¾" inches in diameter**

- 1<sup>st</sup> place Holtzhauser Farms, Holtzhauser Farms label, Mullica Hill, NJ
- 2<sup>nd</sup> place A.L. Gaventa & Sons, Jersey Fruit label, Logan Township, NJ
- 3<sup>rd</sup> place Heilig Orchards, Jersey Fruit label, Richwood, NJ

**Category. Peaches that are between 2 ¾ inches and up in diameter**

- 1<sup>st</sup> place GALA Orchards, Just Picked label, Elmer, NJ
- 2<sup>nd</sup> place Heilig Orchards, Jersey Fruit label, Richwood, NJ
- 3<sup>rd</sup> place Fralinger Farms, Cohansey Valley label, Bridgeton, NJ

The best of each class also receive a \$50 gift certificate and dinner for two and a local restaurant in Gloucester and Salem County. The winner of the Best of the Show also receives a smaller cup and the Governor's Cup with his name on it for one year to display and show. □

## Painless and Efficient Apple Maturity Testing

*Win Cowgill, Agricultural Agent, and Jon Clements, Extension Tree Fruit Specialist, UMASS*

Starch Iodine testing is among the best and easiest indicators of apple maturity that a grower can use to plan their harvest and storage regimes. But, our observation has been that few growers utilize the Starch Index (SI) method of determining harvest maturity. Perhaps SI testing is perceived as time consuming and difficult to properly judge?

Why is it important to perform SI testing? First, as mentioned, the SI method is probably the best way to judge fruit maturity without expensive equipment. The SI technique, wherein the starch to sugar ratio is measured, is correlated with ethylene evolution. In fact, ethylene synthesis occurs as fruit ripens. Therefore, the SI index is an inexpensive way to assess the degree to which fruit has converted starch to sugar, and is indicative of the onset and progress of ethylene production.

Secondly, because SI is a reliable indicator of relative fruit maturity, SI testing can help you determine if harvested fruit should be placed in early CA, late CA, or regular cold storage. Remember that, as a rule, fruit with SI readings of 3-4 are suitable for late CA, apples measuring 4-6 on the SI scale are best for early CA, and any fruit reading 6 or above should be placed in regular cold storage or marketed immediately. Of course, reliability in using the SI method for determining apple maturity is predicated on good sampling techniques, i.e.; looking at fruit that has sufficient size and color. Or, in other words, sample apples that you expect are approaching harvest readiness.

Note: Apples going into late CA (available in April-June, etc.) should not average less than 15 pounds firmness.

### Guides

Cornell University has developed a universally accepted chart that is useful for all varieties. Cornell has this publication available with a maturity chart to help you use the starch-iodine test and to develop an apple maturity program. The publication also contains a laminated starch iodine chart to aid in interpreting the tests. I strongly suggest that anyone seriously interested in harvesting high quality apples with good storage potential buy a copy of this publication, "Predicting Harvest Date Windows for Apples (1992)" Information Bulletin 221.

Full-color plates show how to use and interpret

SEE MATURITY TESTING ON PAGE 3

the starch-iodine test for determining maturity and the best harvest dates for quality, especially important for apples going into storage. Covers McIntosh, Cortland, Empire, Delicious, Mutsu/Crispin, and Idared; dates for other varieties can be interpreted from the information presented. 20 pages.

Note: This publication can be ordered directly from Cornell University by calling 607-255-2080 and using a Master Card or VISA credit card to pay for the publication.

Specific starch charts have also been developed for Gala, Empire, and Liberty for use in the Northeast. On the West Coast they have also been developed for Fuji and Braeburn. Jon Clements and I have posted these charts on the web that can be downloaded and printed for your use at:

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

Wilson Irrigation located in Washington State also has Maturity Photo Charts for sale for Gala, Fuji, Braeburn, Golden Delicious, Granny Smith, and D'Anjou pear. Call 1-800-232-1174 or order from their web site at <http://www.wilsonirr.com>.

### Testing Method

Having tested tens of thousands of apples over the years, per numerous experimental protocols, we can now suggest a simple, quick and efficient method for evaluating orchard-by-orchard or block-by-block SI apple samples. Here is our quick and simple testing technique:

- Equipment consists of a one quart hand-operated spray bottle filled with SI solution, a pocketknife, and a Starch Index chart. The most important thing is to just use the chart and begin sampling and testing the fruit two weeks before anticipated harvest to get a baseline on the maturity.
- The procedure is simple - pick a sample of apples that appear ready to harvest, based on size, color, days after full bloom, and taste. Spray the SI solution on longitudinally halved fruit, wait one to one and one-half minute and make your readings based on the SI chart. The whole process is portable, quick, simple, and saves SI solution compared to dipping individual apples in a solution-filled pan.

It is important to keep good records on your maturity determinations by cultivar and block. You will start to build a good database of harvest maturity information for your orchard.

### SI Caveats

Although the SI test is a reliable gauge of many cultivars, such as McIntosh, Empire, Jonathan, Golden Delicious and Macoun, some cultivars do not respond as well to the SI test, and should be monitored using other methods. Maturity of cultivars such as Gala, Fuji and Honeycrisp should also be gauged using background color, soluble solids, and flesh firmness.

Background color is a particularly good maturity indicator on Gala and will provide the grower with an accurate maturity reading. Red skin color, flesh firmness and sugar content are not as reliable indicators of fruit maturity as background color on this cultivar. Fruit should be harvested for optimum long-term storage quality when the background color of the fruit is changing from a green to yellow color. After that, the background color changes from yellow to cream. It is at this stage that the fruit is ready for immediate sale or short-term storage. Galas will require multiple pickings for optimum fruit quality. Background color is also a good indicator of maturity for Fuji. □

## How to Make Starch Iodine Solution for Apple Maturity Testing

*Win Cowgill, Agricultural Agent and George Green, Professor Emeritus, Penn State University*

A solution of iodine and potassium iodide is used to make the starch turn black and this pattern is the basis for the test.

Dr. George Chu, of the University of Guelph - Dept. of Plant Agriculture in Ontario has developed a publication on this test entitled: Evaluating Maturity of Empire, Idared and Spartan Apples (Factsheet No. 00-027.). It is available on the Web at: <http://www.omafra.gov.on.ca/english/crops/facts/00-027.htm>

For those wanting to make their own Dr. Chu gives these instructions:

### Preparing the Test Solution

Always use a freshly prepared solution at the beginning of every season. This solution is sensitive to light and should be stored in a dark container. A dark-colored bottle or a glass jar wrapped in aluminum foil will serve the purpose. Chemicals needed for this test are potassium iodide and iodine crystals. A pharmacist or a chemist can use the following recipe to make up the iodine solution.

### Recipe

1. Dissolve 8.8 grams of potassium iodide in about 30 ml of warm water. Gently stir the solution until potassium iodide is properly dissolved.
2. Add 2.2 grams of iodine crystals. Shake the mixture until the crystals are thoroughly dissolved.
3. Dilute this mixture with water to make 1.0 litre of test solution. Mix them well.

### Warning

Iodine is a very poisonous chemical. The iodine solution should be properly labeled and kept away from children and pets. Apples used in the test should not be fed to any animals or used in composting. In case of ingestion of either iodine, or iodine treated apples, induce vomiting and consult a physician immediately.

Starch iodine can be purchased from Wilson Irrigation in Washington State at: <http://www.wilsonirr.com/> or call them at 1-800-232-1174. They have an Apple Fruit Maturity Kit with charts and iodine solution.

Wilson Irrigation also has maturity charts for Gala, Fuji, Braeburn, golden and red delicious, Granny Smith, and D'Anjou pear. □

# Fruit IPM

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

## Peach

✓ **Oriental Fruit Moth (OFM):** The first treatment window for OFM has now closed in southern and central counties. Growers should be applying the second spray in central counties, and should have just finished that application in southern counties. The first application should be going on in northern counties now, with a second application about a week later. Of course all of this should be tempered with actual population pressure. Growers who have very low moth counts can get by with no sprays. Any captures above an average of 6 moths/trap indicates the need for insecticide. Late treatments for OFM (third brood stragglers and 4<sup>th</sup> brood) should be based on trap counts and any presence of flagging. Degree day spray timings are as follows, updated since last week:

OFM Treatment Timings – 3rd Brood, 2 Sprays/Generation		
Application and Insecticide Type		
County Area	Standard Insecticides	Intrepid
Southern	1 <sup>st</sup> past, 2 <sup>nd</sup> trt 7/31-8/1	1 <sup>st</sup> trt past, 2 <sup>nd</sup> 7/29-31
Central	1 <sup>st</sup> past, 2 <sup>nd</sup> trt 8/2-4	1 <sup>st</sup> trt past, 2 <sup>nd</sup> 7/31-8/2
Northern	1 <sup>st</sup> 7/29-8/1, 2 <sup>nd</sup> trt 8/8-12	1 <sup>st</sup> trt 7/27-29, 2 <sup>nd</sup> trt 8/6-9

✓ **Tufted Apple Budmoth (TABM):** Pressure as indicated by trap counts has raised slightly but overall remains lower than normal. Most growers in northern counties should not need to target TABM, unless they have a prior history of TABM damage in either apples or peaches. Timings are updated in the following table:

TABM Treatment Timings – 2 <sup>nd</sup> Generation				
Spray Type				
County Area	AM	EM	Intrepid - EM	Bt-EM
Southern	1 <sup>st</sup> 7/30-8/1, 2 <sup>nd</sup> 8/5-6	1 <sup>st</sup> 8/3-5	1 <sup>st</sup> 8/5-8	1 <sup>st</sup> 8/5-8
Central	1 <sup>st</sup> 8/1-3, 2 <sup>nd</sup> 8/7-8	1 <sup>st</sup> 8/3-5	1 <sup>st</sup> 8/6-9	1 <sup>st</sup> 8/6-9
Northern	1 <sup>st</sup> 8/7-9, 2 <sup>nd</sup> 8/13-15	1 <sup>st</sup> 8/10-13	1 <sup>st</sup> 8/13-16	1 <sup>st</sup> 8/13-16

✓ **Catfacing Insects:** Intrepid or Spintor will not control catfacing insects so an effective plant bug material should be included. There may still be time on late maturing varieties for O.P.s or Pyrethroids. In blocks less than 2-3 two weeks to harvest, Lannate will provide some control.

## Apple

✓ **Tufted Apple Budmoth (TABM):** See peach section above.

✓ **European Red Mite:** Mites have been problematic in a number of orchards. While in most cases, the newer materials have worked well, growers should be aware that Envirdor may take several days to reduce mite populations. Do not use any one miticide or the same class of miticide more than once during the season.

✓ **Summer Diseases:** Summer diseases are the main target(s) at this point. Please see the last newsletter for information from Cornell and UMass. Regular applications should be applied throughout mid to late summer with a Captan/Topsin mix or other material such as Sovran, Flint, Pristine, or Ziram. Be sure to maintain coverage and renew with effective materials after 1.5-2" rain, depending on the material used. Summer pruning and keeping the groundcover mowed will also help to prevent new infections by allowing the canopy to dry out quickly, and provide good air drainage.

## Blueberry

✓ **Leafrollers and Other Leps:** Low levels of larval activity are present in about 15% of our samples. Only 1 farm had a site of any concern. No larvae are present on the fruit that remains.

✓ **Blueberry Leafminer:** Leafminer larvae are maturing and constructing tents. While tents are being seen in about 52% of samples, most levels are very low. Some sites were seen where over 10% of shoots had at least 1 tent. There is NO ASSOCIATION with the presence of tents and fruit feeding. However, some growers can start to get nervous about an increasing leafminer population, and what the implications are to leaf drop in the NEXT generation. Treating this generation while the majority of larvae are protected in folded leaves is probably not wise, since they will not be contacted with insecticide. It may be better to wait until the next generation for adults and emerging larvae.

✓ **Aphids:** Population levels continue to decrease, with only 18% of samples showing any aphids. Only 4% of samples exceeded 10% of terminals infested. Aphids are no longer a problem in most fields.

✓ **Japanese Beetles, Oriental Beetle:** No significant presence or fruit injury was seen this past week from Japanese Beetles. The Oriental Beetle flight is over, with just a few late adults present. All applications of Admire should have already been applied.

✓ **Anthracnose:** Disease incidence is rare, with only 3 sites seen this week with low levels of disease.

SEE TRAP COUNTS ON PAGE 5

## Trap Counts

### Tree Fruit Southern Counties

Week End	STLM	TABM-A	CM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
7/7	126	2	1	3	58	1	2	68	1
7/14	70	0	1	4	9	1	1	75	2
7/21	415	1	2	1	6	2	2	54	1
7/28	502	3	4	3	13	1	4	32	3

### Tree Fruit Northern Counties

Week End	STLM	TABM-A	CM	DWB	OFM-P	TABM-P	LPTB	PTB	OBLR
7/7	453.1	3.6	0.8	0.0	10.1	4.3	18.0	2.0	
7/14	635.7	0.9	0.2	1.2	6.9	1.0	21.8	1.9	0.0
7/21	513	0.5	0.9	0.0	6.5	0.8	13.8	1.4	0.5
7/28	849.3	1.1	1.3	0.0	3.1	1.1	8.1	0.7	0.3

### Blueberry

#### Atlantic County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
7/7	0.02	13.59	1.94	0.59	569.80	0.31
7/14	0.07	5.70	0.63	0.40	613.88	0.36
7/21	0.09	1.45	1.88	0.13	329.44	0.31
7/28	0.00	1.64	3.7	0.19	62.11	0.31

#### Burlington County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
7/7	0.31	3.04	1.79	0.76	605.00	0.24
7/14	0.00	0.75	1.21	0.68	628.50	0.36
7/21	0.00	0.00	1.93	0.41	128.89	0.79
7/28	0.00	0.00	1.00	0.78	55.00	0.73

## Tomato Tasting Events

Growers are invited to attend our annual tomato tasting events and join New Jersey chefs and the public in identifying tasty varieties of classic round tomatoes. This year we have selected a number of varieties that have been traditionally known for their flavor to see if we can recapture that Jersey Tomato taste that consumers are clamoring for.

### Jersey Tomato Taste Testing Wednesday, August 8, 2007

1 - 3:00 p.m.

Rutgers Agricultural Research &  
Extension Center  
121 Northville Road  
Bridgeton, NJ 08302-5919

We will also have heirloom tomato tasting and a wagon tour of vegetable and fruit projects at our research farm. Bring your business cards for a drawing of (proud to be NJ's winning football team) Rutgers apparel.

This event is free.! Please pre-register online at:  
<http://www.cookce.rutgers.edu/courses/current/1f0602cb.html>  
or call 732-932-9271, ext. 630  
For online directions go to:  
<http://njaes.rutgers.edu/centers/quickinfo.asp?RAREC>



### Annual Open House and Tomato Tasting Snyder Research and Extension Farm, Pittstown, Hunterdon County, NJ Wednesday, August 29, 3pm - dusk (Rain or Shine)

The event will include opportunities to taste approximately 80 varieties of tomatoes suitable for New Jersey farms and gardens, along with a sampling of tomatillos and sweet to mildly hot peppers. The Melda C. Snyder Teaching Garden will showcase culinary herbs, ways to "down-size" vegetable gardens with container varieties, and a children's garden alongside perennial beds of deer tolerant plants and plants that attract beneficial insects, among many other demonstration garden beds. Wagon tours will be available throughout the event, highlighting NJAES and Rutgers agricultural research.

Registration - \$4.00 per person, children under 10 are free. Please RSVP Rutgers Snyder Research Farm at 908-713-8980. Further information is available at:  
<http://snyderfarm.rutgers.edu/>.



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**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

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