

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

SEPTEMBER 13, 2005

## Fruit Variety Showcase at Adams County Nursery

*Jerome L. Frecon, Agricultural Agent*



*Left to Right Saturn, NJ D51-270, NJ D91-134 (back) and NJ D91-120. Another NJ yellow-fleshed selection can be seen behind Saturn*

Approximately 280 people attended the fruit variety showcase last Thursday, September 8<sup>th</sup>, celebrating Adams County Nursery's 100th anniversary in the nursery business. The Baugher family opened their facilities in Aspers, Pennsylvania to a showcase of 350 fruit varieties in their warehouse and a tour of apple variety and rootstock plantings and systems on their farms.

Dr. Steve Miller, fruit scientist at the USDA-ARS Appalachian Fruit Research Station in Kearneysville, West Virginia, presented an interesting talk on the management of pillar and upright trees in high-density peach plantings. Dr. Miller emphasized the difficulty of managing standard bearing and shaped trees in high density planting because of the problem of getting uniform and complete light exposure. Dr. Miller stated trees that are upright or pillar-shaped require minimal training or pruning in close spacings. This allows well exposed trees for high yields on narrow training systems. Dr. Ralph Scorza, fruit geneticist at Kearneysville, discussed a number of these pillar and upright selections. Crimson Rocket is an attractive mid-season, yellow fleshed variety on an upright tree. Sweet N Up is a very large, firm yellow-fleshed peach ripening after Loring. Dr. Scorza feels both peaches have good commercial potential.

Gail Lokaj and I displayed 120 varieties of peaches, nectarines and plums ripening from July 30 to September 7 from our variety blocks in southern New Jersey. We and Adams County displayed various NJ selections of flat peaches including NJ D51-270, NJ D91-134 and NJ D91-120 all targeted for introduction. Each cultivar is slightly different in skin and flesh color with excellent flavor, but clingstone. We also had NJ D101-162 and NJ K40-34 both of which will be introduced by the NJAES Fruit Breeding program in Cresthaven season, and was discussed in last week's newsletter. The samples of NJD101-162 picked in Adams County were gorgeous while the samples of NJD K40-34 provided by Gail and I were picked over a two week period with little deterioration in quality. We also displayed various plums including Vanier from Vineland which is the number one oriental plum in Ontario. It has been producing well during the midseason and has good quality and flavor.

Ken Slingerland, Tender Fruit and Grape Specialist with the Ontario Ministry of Agriculture, displayed pear and peaches from the Ontario

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# Raspberry Fall Check-List

Sonia Schloemann, Small Fruit  
Extension Specialist, University of  
Massachusetts Extension

Reprinted from *Berry Notes Newsletter*, August 18, 2005, UMass Extension

**General:** Encourage hardening off of canes in summer bearing varieties of red and black raspberries and blackberries by avoiding nitrogen fertilizers and supplemental watering at this time. Do not remove spent floricanes until later in the winter unless they are significantly infected with disease. Fall bearing raspberries can still benefit from irrigation in dry weather to help maintain fruit size.

**Nutrition:** Based on soil and tissue test results, apply non-nitrogen containing fertilizers and lime as needed. For example, Sul-Po-Mag or Epsom Salts can be applied now so that fall rains can help wash it into the root zone for the plants.

**Weeds:** Now is a good time to do a weed survey and map of problem areas, so that you can use this information to develop an effective management strategy. A late fall application of Casoron (dichlobenil) for preemergent control of broadleaf weeds next spring should be made only when temperatures are below 40° F, preferably just before rain or snow.

**Diseases:** Fall bearing raspberries can suffer fruit rot problems due to increased moisture present in the planting (more frequent precipitation, longer dew retention, longer nights) late in the growing season. The majority of this fruit-rot is **Botrytis cinerea, gray mold**. Captan 70 WDG is now labeled for use on brambles. In addition Elevate®, Switch®, and Pristine® are additional materials available for this use. Frequent harvesting and cull-harvesting are the best practices, but are expensive and impractical in many cases. Thinning canes in dense plantings can also help. Scout summer bearing brambles to look for **powdery mildew** and treat it necessary. See the New England Small Fruit Pest Management Guide for recommended

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## VARIETY SHOWCASE FROM PAGE 1

program. Ken is very high on the Ontario cling peaches; Vinegold, Virgil, Venture, and Vulcan as better adapted for Ontario's cold climate. We have tested the first three and they are all large, very flavorful and have no bacterial spot like the Babygold clingstones. They have surprisingly good red overcolor and hang on the tree very well.

Mr. Paul Friday, private breeder of the Flamin Fury peaches from Coloma, Michigan, discussed some of his best selections. He is very high on PF Lucky 13 which looked great in southern New Jersey this year. Paul stated that he beat his "largest peach" world record with Flamin Fury PF24-007. Both this peach and Flamin Fury PF 20-007 were very large in our blocks and were displayed in the showcase. Other outstanding cultivars in our block discussed by Paul were Flamin Fury PF 15B in Loring season and Flamin Fury PF 14 Jersey in Redhaven season.

Dr. Richard Bell, USDA-ARS Pear Breeder, brought some beautiful new pear varieties including OHUS 66170-047, Potomac, Shenandoah and Blake's Pride. OHUS 66170-047 had superb buttery flavor and quality, the best tasting of the group ripening in September. All are European pears with buttery to crisp texture ripening after Bartlett. The trees are resistant to fire blight. Dr. Chris Walsh, Horticulturalist from the University of Maryland, displayed many oriental pear selections. He prefers cultivars with the cinnamon russet overcolor as having the best quality. Walsh said we must grow big fruit to market it profitably.

Large selections of plums from the USDA in Byron, Georgia and from Zaiger Genetics in California were displayed by us and Adams County Nursery. Some of the new pluot selections were on display, and have been productive in Adams County and Catacton Mountain Orchard in Maryland. Dapple Dandy, Flavor Grenade, and Flavor Heart all have excellent quality. We have them in our test plantings but they have not fruited. We had a nice selection of white-fleshed, low acid peaches from Zaiger genetics including Klondike, Sugar Giant, SnoFire, Snow King, and Yukon King. Yukon King - the latest selections always crop well but are not quite as large as SnoFire, or SnoKing. Phil Baugher, Vice President of Adams County, also discussed the French varieties of white-fleshed peaches and nectarines. We had on display Zephyr nectarine and Opale and Benedicte peach. In 2005 all of these varieties had moderate infections of bacterial spot and a lighter than normal crop due to low temperature injury in the spring.

Wanda Heuser Gale, of Summit Sales discussed some of the Stellar series peaches. Autumn Star, a late season, yellow-fleshed peach was on display as a replacement for Encore. Autumn Star appears to have slightly more red color on a spreading tree.

Mr. Richard Meister, Chairman of Meister Publishing, finished up the program by discussing the history of fruit growing in North American, and the role Adam County and its founder, H.G. Baugher, had in the industry's successes. Mr. Meister gave a glowing tribute to the Land Grant University System and its accomplishments in fruit science technology. □



# Apple Maturity Update for North-Central New Jersey

Win Cowgill, Agricultural Agent, and Meredith Compton, North Jersey IPM Program Associate

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. Stop drop sprays do not work as well on trees that are stressed. Some varieties are maturing sooner than others due to this stress. Honeycrisp matured ahead of Gala and McIntosh this year as an example. Jonagold is maturing on the early side as well. I observed one block of Jonagold that had been Retained but was still quite loose.

## 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.

**Gala-** in Central Jersey is all but done except for Retained blocks and 3 to 4<sup>th</sup> pickings.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Brookfield	Snyder Farm	9/11	1/2Rate	23	12	3

## McIntosh

Macintosh harvest is winding down in Central Jersey and in full swing in Northern New Jersey. Macintosh harvest is well underway throughout New England and the Champlain Valley.

Warren	Location	Date	Retain	Pressure	Brix	Starch
McIntosh	Blairstown	9/10	no	15.6	12	6
Morris	Location	Date	Retain	Pressure	Brix	Starch
Red Max	Harding Twp.	9/10	yes	15	12.2	5.8
Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
RogersRed	Snyder Farm	9/12	yes	15	11	5.3

## HoneyCrisp

Honeycrisp has been harvested in Central and North Jersey with excellent red color and harvest in the Hudson Valley is well underway as well.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Snyder Farm	9/11	yes	13.7	12	7.1
Morris	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Harding Twp.	9/10	yes	17	13.7	5.6
Warren	Location	Date	Retain	Pressure	Brix	Starch
Honeycrisp	Blairstown	9/10	no	13.3	11	8

SEE APPLE MATURITY ON PAGE 4

# Deer Fence Installation Seminar

There will be a second Deer Fence Installation Seminar at the Rutgers Agricultural Research & Extension Center (RAREC) in Upper Deerfield, NJ. The seminar will be held on October 4<sup>th</sup> from 10:00 a.m. to 2 p.m. Lunch will be provided.

The seminar provides an excellent opportunity for farmers to learn the ins and outs of installing high tensile woven wire deer fencing from the leading experts in the country. Farmers that did not apply or qualify under the New Jersey Department of Agriculture Fencing Program are also welcome to attend.

To RSVP for lunch count and get directions to RAREC, call or e-mail Pat Lobb at 908-730-9419 or [lobb@aesop.rutgers.edu](mailto:lobb@aesop.rutgers.edu). □

## RASPBERRY CHECKLIST FROM PAGE 2

materials and rates. If **Phytophthora root rot** has been identified in a field, treat the affected area with Ridomil Gold™ or Alliette™ in September or early October. This timing is important to get the material in place in the root zone before the onset of cool wet weather (and soil) in the fall.

**Insects:** Now is the time to check plantings for **crown borers**. Adults of this pest look like very large yellowjackets, but is actually a moth. They are active in the field in August and September laying eggs. Scout the fields for crown borer damage by looking for wilting canes. This symptom can also indicate Phytophthora root rot, so when you find a plant with a wilting cane (or two), dig up the plant and check the roots for brick red discoloration in the core of the roots (Phytophthora) or the presence of a crown borer larvae in the crown. Rogue out infested crowns and eliminate wild bramble near the planting, since they will harbor more of this pest.

Submitted by Jerome L. Frecon, Agricultural Agent. □

# Spray Cherries for Bacterial Canker

Win Cowgill, Agricultural Agent

Bacterial Canker is a serious bacterial disease of cherry in New Jersey, and all other regions where the climate is humid. Bacterial canker has been very active this season in New Jersey in both sweet and tart cherry blocks.

**Bacterial canker** or bacterial gummosis of sweet cherry is caused by several *Pseudomonas* bacterium. This disease infects flower buds and spurs. It can completely kill new spurs and leaves and then move into the trunk on cherry. This is especially problematic with our new Geslia Dwarf cherries as losing a scaffold or getting infection into the trunk will limit production as the tree rapidly declines.

## Control Now

Begin spraying now to control Bacterial Canker. Cankers get started mainly in the fall after most of the leaves have fallen and the trees are beginning to go dormant. The only effective way to control this disease is to reduce the number of bacteria before the trees enter their susceptible period, avoid large, dormant pruning cuts, and use summer pruning to minimize the impact of the disease. The bacteria that start these cankers are found on the surfaces of mature leaves and other green tissues, and *do not* come from existing cankers.

The only successful control we have found is repeated applications of the old Bordeaux mixture in September, October, and November and repeated again in the spring. Bordeaux Mix consists of hydrated lime and Copper Sulphate. The rates and methods of mixing are important. We began our sprays the first week in September. Note, however that sprays of Bordeaux applied to green leaves must be *saftened* with vegetable oil (canola) to avoid burning the foliage. *The rate is three quarts of canola oil per 100 gallons.* The four additional sprays 14 days apart will be applied. Bordeaux mix will also be applied in the spring with several applications before bud break.

SEE CHERRIES ON PAGE 5

## Jonagold

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
JonaGoRed	Snyder	9/11	yes	16	12	4
Jonagold	Oldwick	9/12	yes	21	14.5	5
JonagoldPattenburg		9/12	no	18	12	3.2

**Macoun-** Macouns are starting to color, note no samples tested were mature enough for harvest.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Oldwick	9/12	Yes	17	13	2.3
Macoun	Pittstown	9/11	No	16	10.6	2
Macoun	Snyder	9/11	yes	16	11.2	1.7
Warren	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Blairstown	9/10	no	15	12	3

**Cortland** is an apple that has increased in popularity with newer strains being highly colored. Cortland is usually picked one week after Macs (remember Macs can be picked over 3 weeks if stop drop is used. Normally around mid-September at the Rutgers Snyder farm. They do not starch test well but SI testing can be used as a guideline. For Cortland target a starch of 5-6.

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
Cortland	Pittstown	9/11	no	17	11.5	1
RedCort	Snyder	9/11	no	18.2	12	1
Cortland	Pattenburg	9/12	no	17	12	1
Warren	Location	Date	Retain	Pressure	Brix	Starch
Cortland	Belvidere	9/12	no	16	11.5	1.5
Morris	Location	Date	Retain	Pressure	Brix	Starch
Cortland	Harding Twp	9/10	yes	18	10	1.6

**Jonathan** is an old time favorite apple popular in the Midwest. It has colored nicely.

Morris	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Harding Twp	9/10	yes	16	13.4	6.2

**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, and empire and red delicious in the northern counties.

**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 and Cathy Kloetzili research assistant at the Rutgers Snyder Farm. Most importantly thank you to the growers for allowing me to sample their blocks. □

It would be my recommendation that in all cherry blocks a program of Bordeaux Mix applications should be made this September. Careful observation and scouting of older blocks should be done now to determine if this bacterial disease is present and control warranted. It is my observation to date that if any Bacterial Canker is observed in sweet cherry I would plan a spray program of Bordeaux mixture.

### Other Coppers

In a research trial at the Rutgers Snyder Farm, Champ DP copper was also evaluated against Bordeaux mix for phytotoxicity on cherry. The oil equally softened Champ DP as it did Bordeaux. Caution, Champ2 Flowable may not be compatible with the vegetable oil.

For additional information please do not hesitate to contact me at 908-788-1339 or [cowgill@aesop.rutgers.edu](mailto:cowgill@aesop.rutgers.edu).

**Note:** In our humid climate in New Jersey the cankers can continue to develop in lateral branches and the central leader. In some cases the cankers have grown to girdle and kill two-year wood. I have observed central leader dieback as a result. In older wood the canker looks very much like a fire blight canker in apple. In most cases the canker begins to ooze a brown to amber exudate. It appears that under our humid conditions this disease is very hard to control and can be devastating if control measures and the proper horticultural practices are not followed. Many growers who did not think they had bacterial canker are beginning to see it on three and four year old trees.

The source of inoculum may come from wild cherry trees in our hedgerows, Black Cherry, *Prunus serotina* may be one source of inoculum for the *Pseudomonas* during wind and rainstorms in the spring and summer months. Removal may be beneficial.

### Fact sheets on Bacterial Canker

Overall, the best information on this disease is from a fact sheet from Ontario Canada written by W.R. Allen "Bacterial Canker of Sweet Cherry" NO. 88-0886.

You can find it online at <http://www.gov.on.ca/OMAFRA/english/crops/facts/88-086.htm>. It has good color plates and lists control measures, however, it appears that under our humid conditions this disease is very hard to control and can be devastating. This bacterial disease is most troublesome in young plantings where it can cause losses of up to ten percent of the trees. On mature trees it can reduce yields from 10–50%.

There are numerous fact sheets online for Bacterial Canker; many include color photographs for reference. Below are the listings for several:

Ontario Canada written by W.R. Allen "Bacterial Canker of Sweet Cherry" NO. 88-0886.

<http://www.gov.on.ca/OMAFRA/english/crops/facts/88-086.htm>

West Virginia University

[http://www.caf.wvu.edu/kearneysville/disease\\_descriptions/bactcank.html](http://www.caf.wvu.edu/kearneysville/disease_descriptions/bactcank.html)

Comparison of healthy trees vs. diseased trees:

[http://www.caf.wvu.edu/kearneysville/disease\\_descriptions/disease\\_images/fig129c.jpg](http://www.caf.wvu.edu/kearneysville/disease_descriptions/disease_images/fig129c.jpg)

University of California

<http://www.ipm.ucdavis.edu/PMG/r105101511.html>

## NOFA-NJ Twilight Schedule

**Thursday, September 15**

**Cover Cropping & Crop Rotation with Bob Muth**

Forget about off-farm inputs! The key to the organic soil fertility puzzle can be found in effective crop rotations and cover cropping systems. Come hear what Bob Muth swears by! For this workshop, he will demonstrate a variety of techniques for seeding cover crops such as sudex, hairy vetch, and rye. And maybe see his five new high tunnels! **Begins at 5pm.**

**Wednesday, September 28**

**Transitioning to Organic – Twilight & Pasture Walk**

Gerry Lyness has been transitioning his family's 106-acre Hunterdon County livestock operation for 3 years. Eventually, he would like the farm to include cattle, hogs, vegetables, and honey. For this combined Twilight and Pasture Walk, learn why he's transitioning, who is helping, and how it's coming together.

**Begins at 5pm**

**Saturday, November 12**

**Season Extension and CSA's at Genesis Farm**

The Community Supported Garden at Genesis Farm in Blairstown, NJ supplies share-holders for 50 weeks of the year by utilizing both high tunnels and a storage cellar for root crops. Held jointly with the Foodshed Alliance of Ridge and Valley, this workshop will explore the mechanics of Community Supported Agriculture programs and the basics (and potential) of the season extension. **1pm – 4pm.**

All meetings are rain or shine.

To register or for more info: call (609) 737-6848, email [mazzara@nofanj.org](mailto:mazzara@nofanj.org) or visit [www.nofanj.org](http://www.nofanj.org). □

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