

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JULY 1, 2008



## Food Safety Series

Wesley Kline, Ph.D., Cumberland County Agricultural Agent

**Q – My port-a-johns have a hand-washing sink inside. I have been told this is not acceptable for third party audits. Why?**

**A –** That is correct, there must be a hand washing station outside all toilet/restroom/field sanitation facilities. A supervisor must have the ability to see if workers are washing their hands. This does not mean that the supervisor records each time someone washes his or her hands. The best type of handwashing station is one that has a foot pump. This way the worker does not touch a faucet which may contaminate the faucet. The station must have a supply of single-use towels, toilet paper, hand soap or antibacterial soap and potable water for hand washing.

**Q – Is a handwashing station needed in the packinghouse?**

**A –** Yes, there should be a wash station in the packinghouse or just outside the packinghouse. One of the main sources for cross contamination is from workers who do not wash their hands prior to returning to work.

**Q – The Port-a-Johns are being cleaned by a service, but the log inside the units is not filled out. Is this a problem?**

**A –** Yes, the service must fill out the log inside the unit. The date and person's name must be listed. I have seen several situations where the units were clean, but no one filled out the log. The log is your proof that the facilities are being cleaned on a scheduled basis. Remember it is the grower's responsibility to ensure the facilities are clean at all times. Even with a weekly servicing, the units should be checked daily by someone on the farm.

**Q – I heard that "Country of Origin (COOL)" regulations are being implemented this year. How does this fit with a Good Agricultural Practices Third Party Audit?**

**A –** The COOL regulations are separate from the third party audit. However, the information required by COOL will help with a trace-back program for a third party audit. COOL was included in the 2002 farm bill, but the implementation was delayed until September 30, 2008. The USDA will be releasing the rules for implementation in late July. Until those rules are published, we do not have the final word on what will be required. It appears, if a grower has 'Product of the USA', 'Product of New Jersey', or 'Jersey Fresh' along with the grower name and address on the box they will be in compliance. This means wood crates need to have the same information. The individual product i.e. peaches could be stickered which would also comply. The same information should be listed on the bill of lading and all records are to be kept for two years. □

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# Prune Cherries Right after Harvest

Win Cowgill, Agricultural Agent

**P**runing sweet and tart cherries right after harvest helps prevent **Bacterial Canker**, a serious bacterial disease of cherry in New Jersey, and all other regions where the climate is humid.

We learned from the Europeans that the first line of control for this disease is to **prune** immediately following harvest. Avoiding dormant pruning lessens the chance of infection in the pruning wounds. On infected branches, **leave stubs** of 6-8", this will prevent the canker from entering the trunk and scaffolds. The canker will not move down the stub. See the other control measures outlined below.

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 Gisela Dwarf cherries as losing a scaffold or getting infection into the trunk will limit production as the tree rapidly declines.

This spring I observed a number of sweet cherry trees on Gisela stock that were infected last fall and collapsed this May after some heat and stress.

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.

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.

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 at: <http://www.omafr.gov.on.ca/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%.

## Control

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.

**First, prune** in the summer immediately following harvest.

**Second**, 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 to avoid burning the foliage. Four additional sprays 14 days apart will be applied. Bordeaux mix will also be applied in the spring with several applications before bud break.

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 Flowable* copper was also evaluated against Bordeaux mix for phytotoxicity on cherry. The oil equally saftened Champ as it did Bordeaux.

For additional information please do not hesitate to contact me.

## Fact sheets on Bacterial Canker

**There are numerous fact sheets online for Bacterial Canker; many include color photographs for reference:** Ontario Canada written by W.R. Allen "Bacterial Canker of Sweet Cherry" NO. 88-0886.

<http://www.omafr.gov.on.ca/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> □

# Fruit IPM

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

## Peach

✓ **Tarnished Plant Bug (TPB) and Other Catfacing Insects:** TPB and stink bugs are common in sweep net samples in southern counties. Hot and dry weather often translates into increased catfacing pressure as groundcovers dry up and insects seek moisture. Increased levels of fruit injury have not been observed however, and many of the insects found are in the juvenile stage. Growers with a history of catfacing injury should maintain coverage with effective materials.

✓ **Anthraxnose:** This disease is not a regular problem, but has been seen during the past few years on Harrow Beauty, Sugar Giant, White Lady, and Klondike. It is the same disease that causes anthracnose on blueberries and bitter rot on apples. Captan and Ziram are two of the most effective anthracnose materials used on tree fruit. For blocks in the preharvest period (1-3 weeks prior to anticipated harvest) Gem and Pristine should be very effective. Since the mid-summer period just prior to ripening can be a critical period for anthracnose infection, keeping an effective material in the spray tank is recommended for at least the sensitive varieties.

✓ **Thrips:** Adult thrips were found in weedy groundcovers and were feeding on ripening fruit in southern counties over the past week. Spintor and Delegate are the most effective materials for quick knockdown of thrips populations. Both materials have a 1 day PHI for nectarine and a 14 day PHI for Peach. Lannate at the full label rate may also be effective. Coverage is most important for thrips control since they are often found feeding in protected areas. In past years thrips have been troublesome on highly colored peach varieties from early July through mid-August.

✓ **June Bug; Japanese Beetle:** June bugs and Japanese beetles are now flying. These insects can be troublesome on ripening fruit and usually peak around Redhaven season. Sevin is the most commonly recommended material and is effective even at low rates. Provado is also effective and has a 0 day PHI.

✓ **European Red Mites (ERM):** Mites have been building in apples for several weeks, and were seen in a few peach blocks this week. Beneficials are present in a few orchards. If beneficials are present in your orchard avoid pyrethroid use. The use of Topsin should also be avoided if predatory mites are present. There are three species of predatory mite commonly found on tree fruit in the northeast: *Z. mali*; *T. pyri* and *N. fallacis*. *N. Fallacis* and *T. Pyri* appear almost identical. These can often be found feeding on ERM and other phytophagous mites and can be easily seen with a hand lens. A good reference for identifying these beneficials can be found at: <http://www.ces.ncsu.edu/fletcher/programs/apple/entomology/insects-mites/NFact.html>

## Apple

✓ **Codling Moth (CM):** In southern counties, the time to treat for codling moth will be on or about 7/9. If using Intrepid, applications need to go on 1-2 days earlier than if using standard materials. Do not use trap counts as a guide for this second generation degree day timed spray. Treatments should be completed at the optimum timing with the correct rate and volume. After 2 complete CM treatments have been applied, then trap counts can be used as a guide to help determine the need for supplemental applications. Use the following chart to time applications:

Codling Moth Degree Day Spray Timing - Brood 2		
Area	Application and Insecticide Type	
	Standard insecticides - OP's, Carbamates, Pyrethroids, Avaunt, Assail, Calypso	IGR's Esteem, Intrepid, Rimon
Gloucester Co.	1 <sup>st</sup> - 7/8; 2 <sup>nd</sup> - about 7/18-7/20	1 <sup>st</sup> - 7/4-7/6; 2 <sup>nd</sup> - about 7/15-7/17
Monmouth Co.	1 <sup>st</sup> - 7/10; 2 <sup>nd</sup> - about 7/22-7/24	1 <sup>st</sup> - 7/6-7/8; 2 <sup>nd</sup> - about 7/18-7/20
Hunterdon Co.	1 <sup>st</sup> - about 7/16; 2 <sup>nd</sup> - about 7/29-7/31	1 <sup>st</sup> - 7/10-7/12; 2 <sup>nd</sup> - about 7/24-7/26

✓ **Summer Diseases – Sooty Blotch and Fly Speck, Rots:** The potential for rot diseases, anthracnose in particular, is high the year due to the amount of dead and dying wood from fire blight. Topsin-M, Sovran, and Pristine are among the best rot control materials. Anthracnose is of concern (see peach section above) whenever where much dead wood is present. Captan, Ziram (rated good) and Pristine (rated excellent) are effective bitter rot materials. Good coverage and open canopies are essential for control. If possible removal of blighted limbs and shoots is a good cultural control to lower rot pressure.

## Scouting Calendar

The following table is intended as an aid for orchard scouting. It should **not** be used to time pesticide applications. Median dates for pest events and crop phenology are displayed. These dates are compiled from observations made over the past 5-10 years in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

SEE IPM ON PAGE 4

Pest Event or Growth Stage	Approximate Date	2007 Observed Date
CM 2nd generation 1250 DD target	July 15 +/- 10 days	Not yet observed
SJS Crawlers-second generation	July 21 +/- 05 days	Not yet observed

**Note: There is no Blueberry information this week.**

## Trap Counts

### Tree Fruit

#### Southern Counties

Weekend	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
6/14	445	33	8		1	32	0	31	46	0
6/21	514	22	9		4	71	1	26	54	0
6/28	217	11	3		0	69	1	10	46	12

#### Northern Counties

Weekend	STLM	TABM-A	CM	AM	DWB	OFM-P	TABM-P	LPTB	PTB	OBLR
6/14	919.6	18.1	4.6		14.1	1.8	19.1	67.6	2.5	29.5
6/21	1017.9	23.5	3.9		10.4	1.0	26.4	52.3	2.3	19.5
6/28	680	13	2		11	2	9	34	2	2

### Blueberry

#### Atlantic County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
6/14	1.9	23.4	12.1	0.4	54.5	0.0
6/21	0.6	45.4	7.0	0.6	276.8	0.01

#### Burlington County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
6/14	1.1	3.7	15.1	5.9	22.2	0.05
6/21	1.3	20.0	21.3	9.7	278.0	0.18

## ReTain® for PYO Apple Blocks and Summer Apple Considerations

*Win Cowgill, Agricultural Agent*

ReTain® is a harvest management tool that slows the maturation process. It is an excellent stop drop material that can delay fruit maturity from 7-10 days and give growers a longer picking window on many cultivars. ReTain® works by retarding the development of ethylene, the chemical that causes ripening. ReTain® will increase fruit firmness, decrease watercore and allow for longer cold storage. ReTain may also indirectly enhance fruit size and color by allowing the fruit to remain on the tree longer.

The downside is that it will affect fruit quality in that it delays maturity and the onset of sugar development, which will affect eating quality. This is especially true in apple blocks that will be harvested for PYO and apple varieties harvested prior to Macintosh such as Paulared and Gala. A full rate of Retain on Gala cultivars may delay maturity too long on this cultivar to hit the normal marketing window.

New Jersey growers focus management strategies on harvesting a crop of optimum fruit quality. Consumer demand, market, storage requirements and labor availability all influence harvest decisions. One tool that allows for increased flexibility in management decisions is the ReTain Plant Growth Regulator from Valent BioSciences.

## Summer Apple Varieties

To obtain some of the stop drop benefits and fruit firmness enhancements on summer cultivars we have observed some growers using Retain applied at 1/2 the label rate on JerseyMacs with good success. **Retain was applied at the normal 30 days before anticipated harvest** following all other label directions. At the Rutgers Snyder Farm we used Retain for many years at one half rate on Gala cv. Treeco#2 with out delaying the maturity excessively and gaining fruit firmness. Fruit was able to hang and additional few days gaining color and size.

For PYO blocks growers may consider treating part of a block (cultivar) with Retain and using NAA for stop drop on the other half to manage the harvest window.

If you have a specific question on use of ReTain feel free to contact me directly at cowgill@njaes.rutgers.edu. □

## Michigan Cherry Web Site

*Source: Dr. Rob Crassweller, PSU, Dept. of Horticulture, Cooperative Extension Service, Fruit Times Vol. 27, No. 6.*

Michigan State Extension has recently updated their cherry web site. The site: [www.cherries.msu.edu](http://www.cherries.msu.edu) is a comprehensive site for information on the production of cherries. It has information from several different sites and experts including Oregon State's Lynn Long and Washington State's Matt Whiting. The site was designed to be a "one-stop shopping" location for information on cherries. Information on pruning and training and new sweet cherry varieties maybe especially useful.

*Submitted by: Jerome L. Frecon, Agricultural Agent. □*

## 2008 Peach Buyers Guide Now Available

Jerome L. Frecon, Agricultural Agent

The 2008 edition of the New Jersey Peach Buyers Guide is now available from the New Jersey Peach Promotion Council. This year's guide is 80 pages with information for prospective wholesale buyers on where and how to buy and handle New Jersey peaches and nectarines.

The guide lists in alphabetical order growers and shippers of New Jersey peaches including their brands, and general information on what and how they ship. This section has been completely rewritten for easier use and placement on the New Jersey Peaches web site at [www.jerseypeaches.com](http://www.jerseypeaches.com).

Over the years the guide has been an important source of information for the media because it provides details and statistics on the peach industry. Color pictures of some of the most important varieties are highlighted along with details on when they are available for buyers. A multi color availability chart explains this in detail.

Information is included on the Jersey Fresh Promotional program for peaches and the Quality-grading program run by the New Jersey Department of Agriculture. Details on officers and directors of the New Jersey Peach Promotion Council are listed along with an outline of plans for the 2008 promotional program on peaches.

For merchandisers the guide contains information on how to store and handle New Jersey peaches. The opening page of the guide explains why everyone should buy New Jersey Peaches. Buying New Jersey peaches helps to preserve peach farms and open space in the Garden State.

This year's guide is dedicated to Mr. Francisco Allende, General Manager of Sunny Valley International and the major marketer of New Jersey peaches. The guide outlines what the industry feels he has done to promote and market New Jersey peaches and other agricultural products.

The guide is available by contacting me at [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu) or by writing the New Jersey Peach Promotion Council at 1200 North Delsea Drive, Clayton, N.J. 08312. Major portions of the guide are also featured on the New Jersey Peach Promotion Council Web site at [www.jerseypeaches.com](http://www.jerseypeaches.com). □

## New Rutgers NJAES Fact Sheets

Jerome L. Frecon, Agricultural Agent

Five technical bulletins on peach, nectarine and plum varieties were recently written and published by Jerome L. Frecon and Dan Ward, Rutgers New Jersey Agricultural Experiment Station, Cooperative Extension. The fact sheets contain detailed descriptions of fruit varieties to supplement information published in the 2008 New Jersey Commercial Tree Fruit Production Guide and the 2008 Pennsylvania Tree Fruit Production Guide. Each fact sheet also includes recommendations for home garden fruit plantings.

The following is a breakdown of each technical bulletin or fact sheet: YELLOW-FLESHED PEACH VARIETIES FOR NEW JERSEY - FS1072 is 6 full color pages of detailed descriptions of 64 yellow fleshed peaches. A few color pictures of important varieties enhance the publication along with a comparison chart to all varieties; WHITE-FLESHED PEACH VARIETIES FOR NEW JERSEY - FS1073 is a 4 page technical bulletin with detailed descriptions of 21 white fleshed varieties. A comparison chart of all varieties is included along with color pictures of a few important varieties; NECTARINE VARIETIES FOR NEW JERSEY - FS1071 is a four page fact sheet with detailed description of 24 white and yellow-fleshed fuzzless peaches, A comparison chart is also included plus colored pictures of some of the most important varieties; FLAT PEACH VARIETIES FOR NEW JERSEY - FS1074 includes detailed descriptions of promising flat or "peento" peaches. Some of the freestone types are also called doughnut peaches. Six promising varieties are described in detail with white and yellow flesh. Color picture of some of the most important are included along with a comparison chart with all peach varieties; PLUM VARIETIES FOR NEW JERSEY - FS1083 has also been written and published. Twenty two detailed descriptions are included of Asian and European types and hybrids of the former. The 4 page fact sheet includes colored pictures of some of the most important selections.

Copies of these fact sheets are available by contacting Jerome L. Frecon, Rutgers NJAES, Cooperative Extension, 1200 North Delsea Drive, Clayton, N.J. 08312 or e-mail to [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu). Copies can also be downloaded at the Rutgers Peach Science web site at [www.njaes.rutgers.edu/peach/](http://www.njaes.rutgers.edu/peach/). □

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## 2008 Summer Horticulture Tour

*Sponsored by the University of Maryland Cooperative Extension (UMCE) and Maryland State Horticultural Society (MSHS)*

**July 8, 2008** - Touring farms, markets, and research facilities in Virginia and West Virginia. A bus will pick up at two locations, 9:30 a.m. at Catoctin Mtn. Orchard in Thurmont, and 9:50 a.m. at the Jefferson Street Shopping Center in Frederick, MD. The first three tour stops are in Winchester, Virginia, and the last one is at the USDA Agriculture Fruit Research Station in Kearneysville, WV. The bus will return to Catoctin Mtn. Orchard at 8:10 p.m. \$50 will cover the bus ride, lunch, dinner, and beverages throughout the day. Payment only by check or money order.

E-mail [cmason@umd.edu](mailto:cmason@umd.edu), or call 301-432-2767 x301 or 301-271-7491. □

**RUTGERS**

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Cindy Rovins, Agricultural Communications Editor

**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.

**Use of Trade Names:** No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

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