

PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

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Fruit IPM

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Peach

✓ **Tarnished Plant Bug (TPB) and Other Catfacing Insects:** Catfacing pressure increased slightly in southern counties last week. Stinkbugs were commonly found in beating tray samples. Catfacing insects will be very active during the current hot spell.

✓ **Oriental Fruit Moth (OFM):** Trap counts indicate a continued low pressure on most farms, especially those that have augmented their program with mating disruption. Moderate pressure was found in a few southern orchards with trap counts of 30 or more. Old flagging was found in several non-bearing blocks. Treatment of non-bearing orchards when eggs are hatching is an important part of overall OFM control and should not be overlooked. The 3rd brood will begin to hatch by mid-week. 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 st 7/18-21, 2 nd trt about 7/30	1 st trt 7/16-17, 2 nd about 7/28
Central	1 st 7/20-23, 2 nd trt about 8/1	1 st trt 7/18-21, 2 nd about 7/30
Northern	About 7/28	About 7/27

✓ **Anthracnose:** 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), be aware that Ziram has a 14 day PHI, and visual residues could pose a marketing problem. Gem, Abound and Pristine are very effective during this period, and Pristine has very good brown rot activity. 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 for sensitive varieties is suggested.

✓ **Thrips:** Adult thrips are present in many peach and nectarine blocks. The current heat wave will increase activity. Spintor is the most effective material for quick knockdown of thrips populations. Spintor has a 1 day PHI for nectarine and a 14 day PHI for Peach. In past years

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thrips have been troublesome on highly colored peach varieties from early July through mid-August.

✓ **Japanese Beetle and Green June Beetles:** Japanese beetle pressure remains high. Most problems occur around Redhaven season and shortly after on ripening fruit. Sevin 4F at 2 qts./Ac is usually sufficient to knock down populations. Provado has also provided very quick knock down @ 6-8 oz/Ac. Provado has a 12 hour REI and a 0 day PHI.

✓ **San Jose Scale (SJS):** Third Generation crawlers were observed active last week. Effective materials include Diazinon, Esteem, and Centaur. See the Production guide for rates. Diazinon is limited to one application per season.

Apple

✓ **Codling Moth (CM):** The next application timing for second brood codling moth will be on or about 7/20-22 in southern counties, 7/21-23 in central counties, and **(First application)** – 7/16-17 in northern counties. If using Intrepid, applications need to go on about 3 days earlier than if using standard materials. *Do not use trap counts as a guide for this second generation. Use the timed applications, and follow with additional decisions based on trap counts.* Treatments should be completed at the optimum timing with the correct rate and volume. After 2 complete timed CM treatments, 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 2 nd Brood Timing		
County Area	Standard Insecticides – Avaunt, Neonicotinoids, Carbamates, OP's, Pyrethroids	IGR's - Intrepid, Rimon
Southern	1 st trt Done, 2 nd application due 7/20-22	1 st trt 7/6-7 Done, 2 nd application due 7/17-7/19
Central	1 st trt 7/10-11 Done, 2 nd application due 7/21-23	1 st trt 7/6-7 Done, 2 nd application due 7/18-20
Northern	1 st trt 7/16-17, 2 nd application due about 7/28-29	1 st trt 7/11-14, 2 nd application due about 7/24-26

✓ **European Red Mite:** Mites have been troublesome in a number of orchards. Several different miticide chemistries are available and growers are encouraged to rotate materials in order to delay resistance. Nexter (pyridaben) has seen very common use. Nexter, along with Fujimite (fenpyroximate), and Kanemite (acequinocyl), inhibit cellular respiration and are mitochondrial electron transport inhibitors (METI) class chemistries. Therefore use only one application from this miticide class per season. **Do Not Rotate Them**, and consider them as one material as far as resistance management. If Nexter has not provided acceptable control, growers should rotate to alternative miticide classes. Acramite, Envidor, or Zeal are the best choices at this time. Acramite (bifenazate) controls all motile mite stages and has some ovicidal activity, but does not control rust mites. Follow the label instructions for Acramite if you have “hard” water. Zeal (extoxazole) is primarily an ovicide, inhibits molting in immatures, and has some translaminar action. Envidor (spirodiclofen) disrupts the endocrine system, so it is an IGR type of material and **slow acting**, with most of its activity on immatures. Predators are present in many blocks and will help to suppress populations. Predacious mites are the most common predator present and can be seen with a hand lens. Predacious mites are, depending on the species: larger than red mites, whitish in color, smooth and pear shaped, and move very fast. If actively feeding they may display reddish veins.

✓ **San Jose Scale (SJS):** See the Peach section above.

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.

Pest Event or Growth Stage	Approximate Date	2007 Observed Date
CM 2nd gen 1150 DD target (IGR timing)	July 07 +/- 04 days	July 7
CM 2nd gen 1250 DD target (Standard timing)	July 15 +/- 10 days	July 10
CM 2nd gen 1450 DD target (IGR timing)	July 18 +/- 04 days	Not Yet Observed
CM 2nd gen 1550 DD target (Standard timing)	July 21 +/- 03 days	Not Yet Observed
SJS Crawlers-second generation	July 21 +/- 05 days	July 10

Blueberry

✓ **Japanese Beetle Fruit Injury and Presence:** There has not been any increase in activity since last week. Only 1 or 2 sightings have been made showing active beetle fruit feeding. While Japanese Beetle is not a problem on most farms, treatment is needed in some cases. The best materials include: Provado (3D PHI) @ 6-8 oz/A, or Sevin (7D PHI) @ 3-4 pt/A (4L) or 1.5-2lb/A (80WSP), and Danitol (3D PHI) @10.6-16 oz/A. Be aware that pyrethroids such as Danitol may have less activity in hot weather. Pyrethroids may flare other pests, since they are very broad spectrum and kill predators and parasites.

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BLUEBERRY FROM PAGE 2

✓ **Aphids:** Activity has decreased some since last week. Observations made during and after the extreme 3 day hot spell starting on July 9 suggest that heat was the major factor in the aphid reduction. About 55% of samples have been positive for aphids, with 19% of samples over the 10% infestation level.

✓ **Anthracnose:** Only 5% of field samples have been shown disease presence, with the highest level just under 0.5%. Anthracnose incubation tests have just been completed for all farms in the program, and infection levels have been lower than most previous season results. Most samples in the test resulted in less than 2% infection. All of these fruit samples were collected between July 2 - July 9 using Bluecrop only.

✓ **Leafrollers and Other Leps:** Live worms are being seen in 8% of our shoot samples. Two of these samples exceeded 5% infestation. In the past, field levels over 5% have presented a sorting challenge on the packing line. The flights to which blueberries are exposed to (1st and 2nd flight redbanded leafroller and 1st flight obliquebanded leafroller) are over, so these insects should not increase or be an issue for the remainder of the season.

✓ **Cranberry Fruitworm Injury:** Most of our field fruit samples this past week covered 2nd and 3rd pick of Bluecrop. At this point, if there was injury in a field, most berries have already fallen or been picked. Only 2% of fruit samples contained low levels of injury.

✓ **Mummy Berry:** Only about 3% of fruit samples show low levels of infection.

Trap Counts

Tree Fruit Southern Counties

Week End	STLM	TABM-A	CM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
6/16	1062	27	3	1	25	5	34	68	0
6/23	1297	13	4	4	22	3	14	62	0
6/30	1040	9	1	2	53	3	7	95	1
7/7	126	2	1	3	58	1	2	68	1
7/14	70	0	1	4	9	1	1	75	2

Tree Fruit Northern Counties

Week End	STLM	TABM-A	CM	DWB	OFM-P	TABM-P	LPTB	PTB	OBLR
6/16	711.9	25.0	1.9	2.5	1.6	28.0	16.9	0.6	
6/23	597.8	17.0	1.1	1.7	6.9	18.5	14.8	0.6	
6/30	408.3	11.3	0.4	0.2	7.8	9.3	18.5	1.9	
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

Blueberry

Atlantic County

Week End	CBEW	RBLR	OBLR	SNLH	OR BEET	BBM
6/16	0.73	63.34	18.54	0.24	48.05	0.01
6/23	0.45	60.43	13.54	0.27	427.61	0.05
6/30	0.12	34.33	5.50	0.80	804.55	0.06
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

Burlington County

Week End	CBEW	RBLR	OBLR	SNLH	OR BEET	BBM
6/16	1.42	7.92	26.86	6.91	54.00	0.16
6/23	0.61	19.50	7.86	4.29	359.44	0.38
6/30	0.10	16.68	2.25	2.25	838.00	0.05
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

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^o works by retarding the development of ethylene, the chemical that causes ripening. ReTain^o will increase fruit firmness, decreased 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^o Plant Growth Regulator from Valent BioSciences.

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 without delaying the maturity excessively and gaining fruit firmness. Fruit was able to hang and additional few days gaining color.

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@aesop.rutgers.edu. □

Calendar of Events

July 12, 2007 - Penn State University Fruit Research and Extension Center Grower Field Day, Penn State Fruit Research and Extension Center, 290 University Drive, Biglerville, Pennsylvania. Noon to 5:00 p.m. Cost is \$15.00. Contact Dr. Greg Krawczyck at 717-677-6116. Registration required and forms available at: <http://frec.cas.psu.edu/>.

July 26, 27, 28, 29, 2007 New Jersey Peach Festival, Gloucester County 4-H Fairgrounds, Rt. 77 (South), Mullica Hill, N.J. Grower reception on Friday evening July 27 at 7:00 p.m. Information available at: <http://gloucester.rce.rutgers.edu/fairfest/> or by contacting 856-307-6450.

August 21, 2007 – 2007 Succeeding with Cabernet Franc – 9:00 a.m. – 4:30 p.m. at Berks County Extension Office, 1238 County Welfare Road, Suite 110, Berks County Ag Center, Leesport, PA. This seminar offers insight into making the varieties which many believe will come to preeminent red wine in the Eastern US. More information will be posted on the web site shortly.

Farmers Market Establishment Guide

Jhilson Ortiz, Senior Program Coordinator - Agriculture

Every good business endeavor has a mix of good luck and good marketing planning. Luck is something that comes along sporadically and goes away in the same fashion. Your marketing plan, shouldn't. But let's recognize marketing for what it should be, when creating a business management plan.

Marketing is *the whole set of business activities that ensure clients receive their wants and needs at a profit for the grower/manufacturer*. Marketing should never be concentrated solely on sales efforts. What good would sales efforts be if the product offered is the wrong kind, at the wrong time, in the wrong place?

Farmers Markets: As previously discussed in the May 8th, 2007 Plant & Pest Advisory, Farmers Markets are business venues where farmers provide **products and services** that should offer higher quality standards and an exhaustive view of the benefits of preserving farms in the state in contrast to the competition. All these objectives should be reached through staff training in sales and customer service, proper displays at the farm stand, and a competitive assortment of products that satisfy most of the consumer purchasing needs at one place.

As opportunities arise to develop farmers markets in new residential and commercial areas, a clear understanding of farm business operation requirements becomes imperative to ensure economic success. Pre farmer market operation activities should include:

- Location selection
- Target area functional survey
- Competitor and collaborator review
- Prospective consumer review
- Promotion & advertisement plan
- Financial program
- Educational review
- Business operation plan and
- Post opening day review in SWOT approach.

Most farmers already take care of some of these concepts through common sense planning and careful thinking. This guide will help them check off all the important factors that affect sales performance.

Location selection

Consider: Proximity to clients, competition presence, complimentary businesses that attract foot traffic, township regulations, and traffic flow

Functional Survey of Target Area

Review: Number and kind of client groups, number and kind of business competitors, vehicular and pedestrian traffic flow per week day



Competitor & Collaborator Review

Collect and study business profiles of all food establishments that interact directly or indirectly with proposed plan, business profile of all other businesses that can influence the market

Prospective Consumer Review

Analyze: Size and composition of the population, purchasing and entertainment habits, concentration clusters, and daily routines

Business Operation Plan

With detailed information of who and where the clients are, how, when and why do they buy, generate a sales plan based in: Hours or service, location, product offerings, forms of payment collection, sales support, number of sales people required, and local regulations to follow



Promotion & Advertisement Plan

Based on market background information, plan promotional campaigns; choose methods to reach consumers, promotional activities and educational plans for client reach & public relations

Financial Program

Calculate investments and expenses for operational season, product mix acquisition (representational businesses only), and advertisement costs among others

Educational Program

Based on the principle of educating society on the benefits of local food economies, and social & ecological impacts of preserving farms, among others

Farmer Market Operational Review

Not all the business activities chosen for the market will be effective all the time. A performance review twice a year will help management decide what activities should be changed to improve market operations. □

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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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