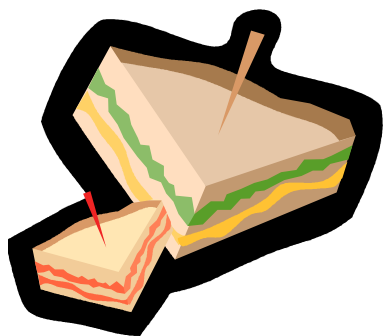


PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JUNE 24, 2008



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Food Safety Series

Wesley Kline, PhD – Agricultural Agent, Rutgers Cooperative Extension of Cumberland County

Q - Can a worker eat or drink on the packing line?

A – No, workers are not permitted to eat, drink or sample on a packing line since they may contaminate the product being graded. For example, an employee has hepatitis A and samples product from the line. As the person places the fruit or vegetable in his mouth, he contaminates his fingers with the virus. As he continues grading, any product touched can be contaminated with the virus. Soon the FDA is reporting an outbreak of hepatitis A and a nightmare begins. A designated area should be set aside where employees can eat lunch and take breaks. A picnic table set up outside the building is a good solution. If the facility is being audited and the auditor sees an employee eating on the line or sampling product off the line it can result in automatic “Unsatisfactory” which means the audit will immediately stop. After the problem has been corrected, the audit would need to be rescheduled. There are three main reasons for an automatic “Unsatisfactory”:

1. “An immediate food safety risk is present when produce is grown, processed, packed or held under conditions that promote or cause the produce to become contaminated.”
2. “The presence or evidence of rodents, an excessive amount of insects or other pests in the produce during packing, processing storage.”
3. “Observation of employee practices (personal or hygienic) that have jeopardized or may jeopardize the safety of the produce.”

Q – Our company is required to taste the product during packing. How can this be done if there is no eating on the line?

A – You should set up a quality control area where tasting and other factors can be evaluated. This can be as simple as a table in the corner of the packing area. Samples can be collected from the packing line or from the finished packed product and taken to the designated area.

Q – We keep hearing and seeing reports about the Salmonella outbreak on television, on radio and in newspapers. Where can we get official information in more detail?

A – There are two websites which provide information on food-borne illness alerts, recalls, etc. The U.S. Food and Drug Administration: <http://www.fda.gov> and the Center for Disease Control and Prevention: <http://www.cdc.gov>. The FDA website will allow you to

SEE FOOD SAFETY ON PAGE 5

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 second brood is about 30% hatched in southern counties, 15% hatched in central counties, and just starting to hatch in northern counties. Degree day spray timings are as follows for the second generation, updated since last week:

Oriental Fruit Moth Degree Day Spray Timing 2 nd Brood		
Area	Application and Insecticide Type	
	Standard Insecticides	IGR's - Intrepid
Gloucester Co.	1 st past, 2 nd 6/27-28	2 nd 6/24-27
Monmouth Co.	1 st past, 2 nd 6/28-30	2 nd 6/27-28
Middlesex Co.	1 st past, 2 nd 6/30-7/1	2 nd 6/28-29
Hunterdon Co.	1 st 6/22-24, 2 nd about 7/2-4	1 st 6/20-23, 2 nd about 7/2-4

✓ **Tufted Apple Budmoth (TABM):** Treatments for the first brood are over throughout the state. TABM hatch is 98% complete in southern counties and about 90% complete in northern counties. The next treatments will be due for the second generation by the end of July in southern counties and the beginning of August in northern counties.

✓ **Catfacing Insects (Tarnished Plant Bugs-TPB and Stink Bugs-SB):** As we move into summer heat, catfacing insects become a primary target, especially in dry seasons. Many orchards have ground covers composed of flowering weeds and clover, which makes an ideal habitat for catfacing insects. These insects breed and multiply in the ground cover, and then find their way to the peach fruit. Damage may appear as water soaked areas, bleeding spots on the fruit, or depressed calloused tissue. Because there are pit injury and bacterial spot symptoms present in some orchards, be sure to distinguish between those symptoms and catfacing. Fresh catfacing injury will appear as single or multiple bleeding sites on the fruit surface. Cutting into the bleeding area will reveal a shallow injury. Injured pits will appear similar to catfacing injury, however if the fruit is cut the injured area will appear as a "water-soaked" area extending through to the pit. Bacterial spot often begins with multiple bleeding spots that will eventually heal over leaving blackened spots.

✓ **Brown Rot, Anthracnose:** Thundershowers and overhead irrigation that is done around periods of warm temperatures and high humidity can provide good opportunities for brown rot infection, particularly in blocks with damaged fruit or blossom blight. An improved fungicide schedule should be initiated 2 to 3 weeks prior to the first picking. Pristine (a combination of strobilurin and boscalid chemistries) and Adament (a combination of strobilurin and sterol inhibitor chemistries) along with the SI's, Elite, Orbit/Propimax/Bumper and Indar are rated the best for brown rot control on ripening fruit. Rotating different chemistries is the best strategy for resistance management. If anthracnose is a problem, Captan is the best material for control in cover sprays, while strobilurins have often given good control in plot work and in other crops.

✓ **European Red Mites (ERM):** Mites have not yet been a problem in most orchards. However this is the time of the year when populations typically begin to build. If mites become an issue most growers will want a quick knock down material. Be aware that Apollo and Savey can be slow acting and they have long REIs (21 and 28 days). Envirodor is a new chemistry that is very effective for mites and is a product that should be included for resistance management. It works faster than Apollo or Savey, but like those products it is best used before mites build up large populations. Nexter and Acramite are the two best options for quick knockdown of large mite populations. Make sure to alternate these materials, use enough spray volume, and apply to both sides of the tree. Make sure the spray mix is neutral or slightly acidic when using Acramite.

✓ **Thrips:** Thrips populations are still present, mostly on early ripening peaches and nectarines. These include Sentry, Garnet Beauty, PF 15, and Easternglo. Where thrips are present, preharvest applications of Spintor or Delegate are suggested. Spintor @ 6-8 oz./ac is suggested for control at 2 weeks prior to harvest on peaches, and 1 to 2 weeks prior to harvest on nectarines (PHI: 14 days on peach and 1 day on nectarines). Delegate @ 6-7 ozs./ac is also effective for thrips (PHI: 14 days on peach and 1 day on nectarines).

✓ **Bacterial Spot:** While Bacterial spot has been common over the years in southern counties, it is not usually an issue in northern counties. Last week the first fruit infections were seen this season in Warren and other northern counties. Therefore, growers in northern counties should be aware that as long as the foliar phase is present, fruit should be protected up through 2-3 weeks prior to harvest.

SEE IPM ON PAGE 3

Apple

✓ **European Red Mites (ERM):** Mites have been showing up in apple blocks over the past few weeks. The treatment threshold for mites in apples for late June/early July is 5 motile mites/leaf. In addition to the miticides mentioned above for peach, miticides labeled for use in apples include two additional products: Zeal, and Fujimite. Nexter (formerly Pyramite) has begun to lose efficacy over the past few seasons, presumably due to building resistance. Fujimite is a similar chemistry to Nexter. If Nexter has performed poorly in your orchard then Fujimite may not be the best choice. Be sure to rotate chemistries by not using the same material more than once per season.

✓ **Codling Moth (CM):** Since we are between 1st and 2nd generations, very little activity is present except in orchards with a history of CM problems. We expect that the first sprays for the second generation will be due in southern counties by around 7/9 with standard materials, or around 7/5-6 with Intrepid. The following chart updates timings outlined in last week's newsletter.

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 st about 7/9	1 st about 7/5-6
Monmouth Co.	1 st about 7/12	1 st about 7/6-7
Middlesex Co.	1 st about 7/13	1 st about 7/8-11
Hunterdon Co.	1 st about 7/17	1 st about 7/13-15

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

✓ **Summer Diseases – Sooty Blotch and Fly Speck:** In addition to sooty blotch and fly speck; white rot, black rot and anthracnose, these are critical diseases to control at this time. Captan, Topsin-M, Sovran Pristine or Flint can be included for control. Good coverage is essential for control.

✓ **Fireblight:** The epidemic has slowed and appears to have ceased spreading. Now through July is a good time to cut out the strikes. Make cuts into wood that is at least two years old and leave 4 to 6 inch naked stub in 2-year-old or older wood. The stub can be cut off with any remaining cankers during the normal winter pruning. Sterilizing tools is not necessary. Potato leafhopper (PLH) is the only insect present at this time that is known to transmit fireblight. PLH should not be tolerated where fireblight is present.

✓ **Aphids: Spirea and Apple (green) Aphids; Potato Leafhoppers (PLH):** Aphid populations are stable or dropping statewide, either from treatment or biological control. PLH are present in a number of orchards. The neonicotinoids, (e.g. Provado, Calypso, Assail, and Actara) will control both leafhoppers and aphids at this time.

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	2008 Observed Date
2nd Pear Psylla hatch	May 30 +/- 02 Days	June 4
SJS Crawlers-first generation	June 02 +/- 08 Days	June 3
TABM 1st gen. 475 DD target (start)	June 02 +/- 07 Days	June 2
CM 1st generation 450 DD target	June 04 +/- 08 Days	June 7
CM 1st generation 550 DD target	June 09 +/- 07 Days	June 10
Peach Scab symptoms	June 14 +/- 13 days	June 9
TABM 1st gen. 910 DD target (end)	June 18 +/- 10 Days	June 8
CM 2nd generation 1250 DD target	July 15 +/- 10	Not yet observed

Blueberry

✓ **Blueberry Maggot:** This is the primary insect of concern at this time. Trap captures are "0" at most sites, but have increased over the past few days. Where traps do have catches, only 1 – 2 flies are captured per trap. Growers who are not trapping need to be on a calendar schedule. Growers who are on an IPM/Trapping program should be spraying according to trap captures.

✓ **Scale (Putnum and San Jose Scale):** Scale fruit injury has started to show up on ripening fruit. About 8% of fruit samples have been positive with 2.3% being the maximum level seen. Any time that scale is present on fruit, then high infestation levels can be expected on the canes. Since crawlers were seen the previous week at one site, which had severe scale problems in 2007, tape traps were set out on 6/19 to monitor crawler emergence. By 6/23 many crawlers were caught. This indicates that we are well into our emergence period, and that controls should be applied if scale is present. These applications would include either Diazinon or Esteem. In addition to timing, the key to controlling scale crawlers is coverage. Since many growers will find it difficult to use a ground sprayer at this time of year, immediate post harvest applications may be sufficient on Duke and other early varieties.

SEE APHIDS ON PAGE 4

✓ **Aphids:** Aphid levels have decreased since last week with 25% of samples positive and only 3% over the 10% infestation level. Most aphids are still being found as single insects. Predators have been seen in several sites.

✓ **Oriental Beetle (OB):** Adults have continued to emerge. Some locations are now seeing several hundred to even 1000 adults per trap per week. While we continue to work out the best methods for control using mating disruption, Admire and soil applied generic imidacloprids are the ONLY registered controls at this time. These ideally should be applied prior to mid-July, and certainly no later than the end of the month.

✓ **Plum Curculio (PC):** No adults have been seen in several weeks and fruit injury is now present in 23% of our samples. As expected, this is a reduction since the last newsletter, since most of the old injury is falling off. However, some Bluecrop fruit was field collected on 6/19 with PC scars and internal live larvae were present. Observations on a packing line on Monday also indicated that PC was a common injury on one large field of Duke, sometimes well away from the woods. Particular care should be taken to remove these fruit from the pack.

✓ **Leafroller Larvae:** Almost no worm activity has been seen throughout our sampling. Less than 1% of all tray, shoot and fruit samples have been positive for live worms. No fresh worm injury has been seen on fruit.

✓ **Diseases:** (Mummy Berry, Anthracnose): Some mummy berry is present, and fruit infection is being seen in 6% of fruit samples. Anthracnose is present at low levels on Duke, seen at 2 sites.

Trap Counts

Tree Fruit

Southern Counties

Weekend	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
5/31	4	13	8		0	3	0	9	13	
6/7	174	26	11		1	3	0	28	59	
6/14	445	33	8		1	32	0	31	46	0
6/21	514	22	9		4	71	1	26	54	0

Northern Counties

Weekend	STLM	TABM-A	CM	AM	DWB	OFM-P	TABM-P	LPTB	PTB	OBLR
5/31	79.4	5.8	3.7		8.7	12.9	5.4			
6/7	235.6	16.5	8.0		20.1	7.1	18.7	69.4	0.0	
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

Blueberry

Atlantic County

Week End	CBEW	RBLR	OBLR	SNLH	OR BEET	BBM
5/31	2.0		0.1	0.6		
6/7	1.9		1.0	9.5	0.0	
6/14	1.9		23.4	12.1	0.4	54.5
6/21	0.6		45.4	7.0	0.6	276.8

Burlington County

Week End	CBEW	RBLR	OBLR	SNLH	OR BEET	BBM
5/31	0.4		0.0	0.2		
6/7	1.6		0.0	7.4	0.0	
6/14	1.1		3.7	15.1	5.9	22.2
6/21	1.3		20.0	21.3	9.7	278.0

You, Your Products, and the People that Consume Them

Jhilson Ortiz, Sr. Program Coordinator Agriculture Marketing

Have you ever wondered what benefits marketing can give you, if you are already doing what most people understand as marketing activities?

Measuring marketing success in a post production/pre sale environment tramples on all the original objectives of what marketing is good for; after all, marketing is indeed the link between you, your products, and the people that consume them; and hence, should faithfully reflect a sale of a *wanted product* at a *needed time*.

The time and the conditions for a product to sell itself are long gone with the increased competitiveness of other companies to most likely position products at a better time, with better presentations, and even an improved perceived quality ranking. After taking care of becoming competitive on all those aspects, what applies now is more an idea of "our best customers are informed consumers"; yet agriculture businesses fail to address such an important topic.

But what kind of information is needed, and when? The information to be shared has to match the needs and concerns of the clients. The first trade line, the wholesale client, needs to know what social, ecological, and bottom line impact it has for them to do business with you. The second trade line, the client consumer, needs to know what the product is good for, and how their participation as clients in your line of business affects their own welfare.

Case in point: A couple of years ago while on a marketing research visit to a local farm market, we noticed how consumers were attracted to a beautiful plant arrangement that was offered for sale at the farm stand. Busy as they day was, there was no one to explain to several interested people what the plant was good for, how to use it, how long it will last, what kind of recipes can be prepared from it, and how to take care of it to extend its "garden life". An uninformed consumer has no tools to make a purchasing decision when they like a product and most likely shy away from buying it; which translates to lost sales and a lost opportunity to gain a happy and loyal consumer. □



Programs for NJ Fruit Growers

July 24 through 27, 2008 – New Jersey Peach Festival and Gloucester County 4-H Fair, Rt 77, Mullica Hill, NJ. Contact: Jerome L. Frecon at 856-307-6450 Ext 1 or at <http://gloucester.njaes.rutgers.edu/fairfest/>

Cooperative Extension faculty and staff in Maryland, New Jersey and Pennsylvania primarily sponsor these programs. There are other educational programs run by non extension organizations. □

FOOD SAFETY FROM PAGE 1

subscribe for all recalls and safety alerts to be received by email.

If you have questions about food safety on the farm check out our website at <http://njveg.rutgers.edu/html/2-r-5foodsafety.html>. There is a copy of the "Developing a Plan for third-Party Audits" manual on line which can be downloaded with all the logs and checklists needed to help develop a food safety plan. There is also a section on frequently asked questions and a place to post questions which will be answered directly to your email. □

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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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