

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JUNE 13, 2006



*Bacterial spot lesions on Redgold nectarine. Note pitting and gum exudation.*

## Mid-Season Bacterial Spot Management on Peach

*Norman Lalancette, Ph.D., Specialist in Tree Fruit Pathology*

The critical phase of fruit susceptibility to **bacterial spot** infection is ending for most peach and nectarine cultivars. This phase, which encompasses the 4- to 6-week period following shuck-split, is when most severe fruit infections occur. Typically, severe fruit symptoms consist of blackened, sunken lesions that range from minute specks to ¼ inch or more in diameter. Lesions can occur alone, but are more often observed in groups. Unlike **peach scab** lesions, bacterial spot lesions are pitted or depressed. Sometimes gum exudes from these deep lesions. We have observed such infections this year in our non-treated susceptible blocks here at the RAREC (see figure).

Since the high susceptibility period is ending, can we relax our spray program? Well, not exactly. Foliar infection, which has also been occurring, can continue to occur throughout the summer. If environmental conditions remain highly favorable (warm, wet, and windy), then significant defoliation can occur. And while some defoliation may help the fruit to color better, a lot of leaf drop prior to harvest would not be good. A key factor is the rate at which foliar infection occurs relative to the production of new leaves. We know from our studies on the phytotoxicity of copper bactericides on middle-aged, moderately vigorous trees that one-third (and sometimes more) leaves can be lost without influencing fruit quality or size. The same holds true for leaf drop from bacterial spot infection; low or moderate amounts of defoliation are not detrimental to the crop on otherwise healthy trees.

Another reason for remaining vigilant is the potential for superficial lesion development on fruit later in the season. In our bacterial spot studies last year on twelve different peach cultivars, we examined fruit during the mid-season period between 1 July and harvest in late July through August. Although a 5.7% increase in disease incidence during this period was not significant, we did observe a significant increase in lesion density (# lesions/fruit). Unlike lesions formed during the early season, these lesions were not deep and were generally small in size. However, clusters of these shallow lesions would nevertheless lower fruit quality. We are continuing our studies this year to determine the overall importance of this mid-season fruit infection.

In general, several types of bacterial spot control programs can be followed depending on cultivar susceptibility, inoculum level, and

*SEE BACTERIAL SPOT ON PAGE 6*

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# Nematode Management in Grape Vineyards

Jerome L. Frecon, Agricultural Agent

Certain broad-leaved weeds and other fruit trees can be alternate hosts for **nematodes** that carry viruses infecting grape vines, or even feed on roots. It is important to test most sites for nematodes, particularly those previously planted in fruit (including grapes), forest trees, and on-site in pasture or land that has been heavily infested with weeds. The Rutgers Cooperative Extension Plant Diagnostic Laboratory can run an assay to determine levels. Levels at various nematode thresholds trigger treatment recommendations in some situations. Each situation has specific criteria that must be analyzed. Information sheets are available from your local county agricultural extension office on how to take samples and get them through the agricultural agent to the laboratory. The web site for the plant diagnostic and nematode detection service is: <http://www.rcrc.rutgers.edu/plantdiagnosticlab/> All forms are available on this site or from a county agricultural extension office.

Samples should be taken at random across the site to be planted, or in the root zone near the vines in established vineyards. The depth of sampling should be focused on the area of the soil where most of the roots will be growing in the vineyard. The time for sampling should be when the soil is continuously moist to get the maximum reading on nematode levels. Poor representation of sampling comes when the soil is dry or the field and vineyard is sampled incorrectly. Good sampling times are early spring or in the fall unless the soil is dry. Once samples are taken they should be kept moist and cool until they are delivered for assay at the laboratory.

Nematodes are small worm-like parasites. There are many different species. *Xiphinema americanum* (dagger) is one of the most important because it transmits **tomato and tobacco ringspot viruses** both damaging diseases to grapevines. Any level of dagger nematode will trigger a recommendation for treatment. Mark Chien of Penn State mentioned at our recent twilight meeting that tomato ringspot virus is becoming a serious problem in Pennsylvania vineyards. Both viruses can be introduced by purchasing infected stock. However, even when virus-clean plants are purchased, the disease can be picked up by nematodes feeding on alternate host previously mentioned. On some wine grape varieties many symptoms can be observed. On interspecific varieties like Vidal Blanc and Chelois symptoms may include sparsely filled fruit clusters and smaller berries than normal. On other varieties there may be shoot stunting and poor fruit set. Leaf yellowing, leaf distortion and light leaf margin may also be observed. Light circular spots are on the foliage of some hosts (thus the name ringspot). Vines can die in three to four years but with mild winters may

persist in the plants for many. In states like New York, Cornell has set up a testing program to serologically identify the virus in established vineyards.

*Mesocriconema xenoplax* (ring) can reduce yields in young vineyards. *Pratylenchus vulnus* (lesion) nematode can be a problem in New Jersey soils planted with grapes. *Meloidogyne hapla* (root knot) causes know on the roots and depending on severity can trigger loss of vigor, yield, and kill the plant. Information is conflicting on how bad a problem this is in the Eastern United States on grapes but it is more common in California and Oregon. Surveys need to be undertaken. Root knot is found on peach roots so vineyards planted on old peach sites should be sampled. Stubby, lance, spiral, cyst, sheath, stunt, pin, and sting nematodes are all found in New Jersey soils.

Nematode control will be more of a problem if vineyards are not sampled and treated prior to planting. As we lose registrations on some of our best chemicals for control post plant treatment may be obsolete. Prior to planting it is important to sample and then if levels are above thresholds immediately implement cost effective treatments. Start with clean and possible virus indexed nursery stock. Use nematode resistant rootstocks if available. See Table 1 for listings of rootstocks with resistance.

Soils can be fumigated prior to planting. Fumigation treatments are both costly and to some environmentally questionable. Cover crops with non-host grasses, cereal grains, and nematode suppressing dwarf Essex rape seed can be planted and cropped prior to planting. Weed control is very important in established vineyards to manage host weeds for viruses that are carried by nematodes.

**Table 1. Characteristics and performance of major rootstocks reported from various viticultural regions. Source: Howell (1987), Galet (1979), Kasamatis and Lider (1980), Pongracz (1983), Wolpert et al. (1992)**

Rootstock	Vitis species parentage	R-K	DG
Gloire	Riparia	3	v
St. George	Rupestri	1	
3309 C	Riparia x Rupestris	2	4
3306C		3	1
101-14		3	2
5 BB	Berlandieri x Riparia	3	2
5 C		4	4
SO4		4	4
20 A		2	2
99 R	Rupestris x Berlandieri	4	v
110 R		3	2
140 Ru		2	v
1103 P		4	2
44-53 M	Riparia x Rupestris x cordifolia	2	3
Gravesac	Riparia x Berlandieri x Rupestris	2	v

z 1 = sensitive (or susceptible); 5 = resistant (or tolerant); R-K = Rootknot nematode; DG = Dagger nematode v = Data not available

#### Footnotes

1 Adapted from Table 1 on rootstocks on page 3 Commercial Grape Varieties for Virginia VCE Publications 463-0190

# Foliar Calcium Benefits in Apple

Win Cowgill, Agricultural Agent and Jeremy Compton, Fruit Grower

It is time to consider adding foliar calcium to your apple cover sprays in fruiting blocks. With the light apple crop in many blocks, remaining fruit is more susceptible to calcium deficiencies.

Calcium-related disorders such as **cork, bitter pit** and **senescent (internal) breakdown** are common in New Jersey. These disorders cut into grower returns by making the affected fruit unsaleable. Some cultivars, such as Jonagold, Cortland, Enterprise and most early season varieties can be highly sensitive to calcium deficiencies in the fruit.

Correction of calcium deficiencies begins with maintaining adequate soil calcium levels through regular liming with high calcium lime only. However soil applied calcium does not easily translocate within the tree, and many factors, such as nutrient imbalance, soil moisture, pH, crop load and pruning may all effect how well the tree utilizes the calcium that is available in the soil. The quickest and most effective short-term corrective treatment for the control of these calcium-related disorders is the implementation of a foliar calcium spray program.

Calcium sprays have been a hot research topic over the past three decades. And although major advancements have been made in the reduction of calcium related disorders, no universal "cure" has been found. The most important aspect of a foliar calcium program is the total amount of calcium that ends up in the orchard. Pennsylvania recommends 4 to 14 pounds of total calcium per acre per season, while Massachusetts recommends their growers apply between 21 and 22.5 pounds of actual calcium per season, with up to 10 lb/spray of calcium chloride (CaCl<sub>2</sub>) later in the season.

The cooler climate of the New England states allows them to apply such an intensive spray schedule without any significant leaf burn. In work conducted at the Snyder Research Farm over the past 7 years on Enterprise, we have sprayed over 11 pounds of actual calcium per acre per season without any significant leaf burn. Our standard recommendations in New Jersey are to apply 2-3 lb/100 of CaCl<sub>2</sub> per spray before August 1<sup>st</sup> and 3-5 lb/100 of CaCl<sub>2</sub> per spray after August 1<sup>st</sup>.

This will allow for sufficient absorption of calcium by the fruit with minimal leaf burn on most cultivars. Research has shown that late season foliar applications of calcium are more effective in reducing calcium related disorders than early season sprays, but total applied calcium by harvest is the most significant factor. Reduced

SEE FOLIAR CALCIUM ON ON PAGE 7

# Fruit IPM

Dean Polk, Fruit IPM Agent and David Schmitt and Eugene Rizio, Program Associates, Tree Fruit IPM

## Peach

✓ **Oriental Fruit Moth (OFM):** The second flight is just beginning in southern orchards and the first flight has ended in northern orchards. The first of 2 treatments will be due in southern counties on 6/14 for standard insecticides, and on 6/12-13 if using Intrepid. Application dates are about 3 days later in central counties. The first second brood OFM larvae will start to emerge around 6/14 in southern counties.

### 2<sup>nd</sup> Gen. OFM Timings and Insecticide Type (Full Cover)

County Area	OP's, Carbamates, Pyrethroids	Intrepid
Southern	1 <sup>st</sup> – 6/14	1 <sup>st</sup> – 6/12
Central	1 <sup>st</sup> – 6/17	1 <sup>st</sup> – 6/14
Northern	About 6/26	About 6/24

### ✓ Catfacing Damage, Stinkbugs (SB) and Tarnished

**Plant Bugs (TPB):** Catfacing insects are a key pest as Summer begins. If using Intrepid or Spintor for TABM include an effective plant bug material such as Lannate, Imidan (3#/ac) or Diazinon. Diazinon will also control scale crawlers emerging now. Lannate, if used under low TABM pressure will control light populations. In recent years, Lannate has not worked well when used alone in TABM problem areas. Do not use OP's to control TABM in problem blocks. Pyrethroids may also be used and will control TABM and other insects, but will kill predators and other beneficials. *Captan/Diazinon combinations are known to cause phytotoxicity.*

✓ **Bacterial Spot:** Bacterial spot leaf infections continue to be present in southern counties. Copper sprays should be maintained and reapplied after heavy rains. Coppers are protectants only and are not systemic. If significant new growth occurs between a copper application and an infection period, then that new growth is not protected. The best protection is when fresh copper is applied 24 to 36 hr prior to an infection period. Mycoshield also may be used. It is systemic and will provide about 3-5 days protection, and possibly 24 hours "back action" to suppress new infections.

✓ **Tufted Apple Budmoth (TABM):** See paragraph above for materials. Timings for TABM control are in the following table, updated since last week. Larvae are still emerging and eggs are about 30% hatched in southern counties.

SEE IPM ON PAGE 4

County Area	Spray Type		
	AM	EM	Intrepid - EM
Southern	3 <sup>rd</sup> 6/13-14, 4 <sup>th</sup> 6/18-19	2 <sup>nd</sup> 6/15-18	2 <sup>nd</sup> 6/15-18
Central	3 <sup>rd</sup> 6/11-12, 4 <sup>th</sup> 6/16-17	2 <sup>nd</sup> 6/13-15	2 <sup>nd</sup> 6/13-15
Northern	2 <sup>nd</sup> 6/14, 3 <sup>rd</sup> 6/19-20	1 <sup>st</sup> 6/10-12	1 <sup>st</sup> 6/8-15

✓ **Thrips:** Thrips have not been seen in orchards to date. If your farm has a history of thrips problems, Spintor @ 6-8 ozs. applied now for TABM control will also provide thrips control.

✓ **Peach Tree Borer (PTB):** While adults have been found for several weeks in southern counties, they have started to emerge in northern orchards. This insect has one generation per year, and is normally treated after most of the eggs have been deposited, or around the beginning of September. Mating disruption can also control these insects, but is usually more effective in young blocks with low insect pressure, or if the block has been under mating disruption for several years, and pest pressure has been kept at low levels. Most growers using mating disruption should have already applied the dispensers. Growers in northern counties can still achieve control with mating disruption if dispensers are applied immediately.

✓ **Anthracnose:** Wet seasons are favorable for anthracnose infections. This is a disease we rarely have a problem with, but it has been showing up on a more frequent basis. The varieties Harrow Beauty, Snow Giant, and Sugar Giant seem to be particularly susceptible. Growers may find it useful to protect against anthracnose, especially in blocks that have a history of the disease. For all practical purposes this means avoiding the use of sulfur in those blocks, and continuing using Captan for the next several weeks.

✓ **Peach Scab (PS):** About mid-June peach scab symptoms begin to appear. Nothing can be done now to prevent peach scab symptoms from early infections from appearing. Norm Lalancette reports that active twig lesions are still present in his plots at RAREC. Therefore, infections can still take place in orchards that have high inoculum. Captan is the principal material of choice at the present time. One early season fruit infection was seen this week.

### 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	2006 Observed Date
2nd Pear Psylla hatch	5/31+/- 1 days	May 29
SJS Crawlers-first generation	6/3+/- 7 days	May 26
Bacterial Spot-fruit symptoms appear	6/7+/- 20 days	May 30
Pit Hardening	6/16+/- 8 days	Not yet observed
Peach Scab Symptoms	6/14+/-13 days	June 9
3rd Pear Psylla hatch	6/29+/- 0 days	Not yet observed

### Apple

✓ **Apple Scab and Other Diseases:** Scab is present in very few orchards statewide at present. Summer diseases, including black rot and white rot are the key diseases to control at present. Combinations with Topsin and Captan have been the most economical, and give broad spectrum control. Sovran is also effective on the rots as well as sooty blotch and fly speck. Use higher rates of Sovran where scab is present. Growers should begin to shift away from EBDCs, which have a limit of 21 pounds/acre and a 77 day PHI.

✓ **Codling Moth (CM):** Degree day based spray timings are now past in all growing regions. If after about 7-10 days after an insecticide application, trap counts remain above 5 moths per trap, then additional sprays may be required.

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

✓ **Aphids: Spirea and Apple (green) Aphids:** Populations continue to build, and are below or at treatment levels in many southern orchards. Our treatment threshold is set at 50% of the terminals infested with healthy colonies. Since this is a critical time for mite predators to build up, try to avoid the use of Lannate. The best aphicides include Actara, Assail, and Provado. Of those, Assail has activity on both Codling Moth (CM) and Oriental Fruit Moth (OFM) when timed correctly. Be aware though, that achieving broader spectrum control comes at the cost of increased rates. However, even with the increased rates, a higher rate of a single material may be more economical than a combination of 2 materials. Assail rates (oz/Ac) for various pests are as follows: Aphids: 1.1-1.7, Leafminers: 1.1, Leafhoppers: 1.1-1.7, Codling Moth: 1.7-3.4, Oriental Fruit Moth: 2.3-3.4, Apple Maggot: 3.4.

✓ **European Red Mite (ERM):** Mites have been found at treatment level in several Red Delicious orchards in southern counties. Treatment level for May-early June is an average of 2 mites/leaf. In late June the treatment level will increase to an average of 5 mites/leaf. There are several miticides available for use on apple. With many options to choose from growers should opt to rotate chemistries to avoid resistance. See the production guide for recommended materials and rates. One pear orchard was also found to have mites building. Treatment thresh-

SEE ERM ON PAGE 5

olds for mite in European pear varieties are much lower than for apples. Miticides should be applied if any mites are found since European pear varieties cannot tolerate mites. Asian pears can tolerate low levels of mites so the apple threshold can be used to determine the need for treatment.

✓ **Spotted Tentiform Leafminer (STLM):** The second adult flight is well underway in all counties. While trap counts can be very high at this time of year, they should not be used as spray decision tools. Eggs will be deposited on the undersides of the leaves, and as the larvae hatch, the sap-feeding miners can be counted. Treatment is justified if there are more than .5 – 1 mine per leaf. Treatments are only effective if applied to the young sap-feeding stage, which is visible only from the underside of the leaf surface.

**Blueberry**

✓ **Leafrollers (Redbanded and Obliquebanded)**

**(RBLR and OBLR):** The second RBLR flight has started in both Atlantic and Burlington Counties. Counts are higher in Atlantic County. Adults are laying eggs at the present time, and larvae are starting to emerge. We are seeing that those few growers who had leafroller problems in 2005, also have high trap counts for RBLR this year. While very few larvae have been seen overall, 12% of shoot searches have found low levels of larvae, with 2% of shoots positive being the highest level seen. Growers with high leafroller adult counts, or larvae present should use insecticides that are effective for ‘worm’ control, and use higher volume ground applications as late as possible. The summer flight of OBLR has also started. Adults will lay eggs and produce one summer generation that feeds on blueberries. The standard OP insecticides have been used for years to control leafrollers. However, with the few problems we saw in 2005, it may be time to revisit what materials we use and how we use them. OBLR and RBLR are not created equal when it comes to insecticide susceptibility. OBLR has been a problem for years in the New York apple industry, and Guthion, Imidan, Diazinon, malathion, and the carbamate, Sevin are no longer very effective for that pest. Pyrethroids, Lannate, Intrepid and Spintor are more effective. Most

OP’s still work in New York for control of RBLR. While we have not done resistance testing here, alternating the materials being used is still a prudent approach.

✓ **Miscellaneous Injured Fruit:** About 70 % of fruit samples have been positive for low levels of fruit injury. This includes cherry fruitworm, plant bug, and various worm injuries. About 10% of fruit samples were over the 1% injury level.

✓ **Cranberry Fruitworm (CBFW):** Adults are still being found in traps, but all insecticide applications should have already have been applied. Multiple applications are needed (2) where counts have been high. Although most trap levels are lower this week, one or two sites are still catching over 100 adults in traps. About 14% of fruit samples were positive for injury. Thusfar, injury levels have all been under 1%.

✓ **Aphids:** About 61% of samples were positive for aphids during this past week. Aphid populations are increasing, with 20% of samples over the 10% infestation level. Provado, Actara, and Lannate are being used for aphid control. Provado and Actara have no activity against leafrollers.

✓ **Plum Curculio (PC):** Adult activity is over in most blueberry growing areas. However, significant activity was seen on one farm in Burlington County last week. Overall, about 47% of samples were positive with about 11% being over the 1% injury level. No injury was fresh except at the one site in Burlington County. This was an “on” year for PC activity, and it was comparatively widespread.

**Cranberry Weevil:** A second flush of adult activity was seen this past week on several farms. At least 6 sites were seen that appeared to be in need of treatment for weevil. Levels over the past few days have been lower.

**Mummy Berry:** This is practically a non-issue this year. Fruit infections have been seen at only one farm to date. Levels were less than 1%.

**Blueberry Maggot (BBM):** Trap captures of adults are just getting underway. Growers producing fruit under the calendar schedule for export to Canada, should have had their first treatments on by last Saturday. Growers under the IPM program can wait until 5 days after they capture the first adults on their farms.

**Insect Trap Counts**

**Tree Fruit Trap Counts – Southern Counties**

Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
6/3/06	32	22	12		3		3	32	88	5
6/10/06	766	34	5		12		9	42	104	8

**Tree Fruit Trap Counts – Northern Counties**

Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
6/3	148.5	16.5	16.8			19.5	49.1	17.1	73.1	0.0
6/10	357.3	25.5	6.5			20.0	17.9	30.6	33.5	0.8

**Blueberry Trap Counts – Atlantic County**

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
6/3	1.6	1.7	31.4			
6/10	2.3	59.7	39.2	0.16	7	0

**Blueberry Trap Counts – Burlington County**

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
6/3	10.1	0.2	15.6			
6/10	19.1	4.0	35.3	12.8	11.7	0.025

*BACTERIAL SPOT FROM PAGE 1*

favorableness of the environment: (1) sole application of the organometallic copper bactericide Tenn-Cop 5E; (2) application of Tenn-Cop with substitution of the antibiotic oxytetracycline at key timings/infection events; or (3) alternation of Tenn-Cop and oxytetracycline. The antibiotic is available as either Mycoshield or FlameOut and is best applied within 24 hours of an infection (rain) period, preferably prior to infection. Successful use of the antibiotic also requires high volume, full sprays (no alternate rows), and evening applications to allow slow drying for best absorption by plant tissues. The *2006 New Jersey Commercial Tree Fruit Production Guide* provides the necessary details concerning rates and timing. And, as always, follow label directions for safe and effective use. □

## Twilight Tree Fruit and Wine Grape Research Meeting, Tour and Picnic

Wednesday, June 28, 2006, 5:00–9:00 p.m.

Rutgers Agricultural Research &  
Extension Center

121 Northville Road, (Upper Deerfield Twp.), Bridgeton, NJ

*Sponsored by Rutgers Cooperative Extension in cooperation with the New Jersey State Horticultural Society*

The program below will be followed while the attendees travel throughout the farm observing research trials and plots. A picnic supper will be provided after the tours and demonstrations. Please call Jerry Frecon at 856 307-6450 Ext 1 or e-mail [frecon@aesop.rutgers.edu](mailto:frecon@aesop.rutgers.edu).

**Agenda:**

**5:00 p.m.** Welcome and Introduction *Dr. Bill Nicholson, Director, Rutgers Agricultural Research and Extension Center*

**5:10: p.m. Current Peach and Apple Disease Research** by *Dr. Norman Lalancette, Specialist in Tree Fruit Pathology, Rutgers Cooperative Research & Extension*

**5:30 p.m.** Overview of Current Tree Fruit Entomology Research by *Dr. Peter Shearer, Specialist in Fruit Entomology, Rutgers Cooperative Research & Extension*

**5:50 p.m.** Pesticide Recordkeeping and Storage Handling Facilities by *Dr. George Hamilton, Specialist in Pest Management, Rutgers Cooperative Research & Extension*

**6:20 p.m.** Peach Rootstock and Other Peach Tree Research *Dr. Dan Ward, Extension Specialist in Pomology, Rutgers Cooperative Research & Extension*

**6:30 p.m.** Wine Grape Research by *Dr. Dan Ward and Dr. Bill Nicholson*

**6:45 p.m.** The IR-4 Fruit Program and Current Projects by *Melissa Zimmerman and Larry Rossell, IR-4 File Researchers, Rutgers Cooperative Research & Extension*

**7:00 p.m.** Impact of Ground Cover Management and Mulching on Peach Tree Growth and Performance by *Dr. Brad Majek, Specialist in Weed Science, Rutgers Cooperative Research & Extension*

**7:15 p.m.** Fruit Cultivar Display by *Jerome L. Frecon, Rutgers Cooperative Research & Extension of Gloucester County. Other educational displays and posters will be on display.*

**7:30 p.m. or earlier.** Dinner at RAREC Picnic Pavilion

PROGRAM WILL GO ON RAIN OR SHINE

NJ Pesticide Units will be given in CORE, Category 1A, 10, and PP2

This meeting is not totally accessible to the physically impaired. Please contact Jerome L. Frecon at 856-307-6450 Ext 1 prior to the meeting to make arrangements for the meal.

Directions have been mailed or are available at

<http://gloucester.rcrc.rutgers.edu> or by calling Jerry Frecon.

# NOFA-NJ Summer Twilight Meeting Schedule

## **Wednesday, June 21, 5:00pm - Organic Tree Fruit Production Terhune Orchards, Princeton, NJ.**

Join us for a tour of Terhune Orchards and expert discussion of what it takes to grow tree fruit organically in the Northeast. Host Gary Mount will share his experience growing apples, peaches and pears conventionally and discuss the challenges of going and growing organic. Learn the latest of what works and what doesn't to grow high quality organic fruit from experts Emily Brown-Rosen of Organic Research Associates, Jim Travis, Penn State Plant Pathologist and Don Jantzi from The Rodale Institute. To register: call NOFA-NJ at (609) 737-6848 or email [mazzara@nofanj.org](mailto:mazzara@nofanj.org). For directions: [www.terhuneorchards.com](http://www.terhuneorchards.com)

## **Monday, July 17, 5:00pm - Bio-diesel and Waste Vegetable Oil as Fuel. North Slope Farm, Lambertville, NJ.**

Thinking about alternative fuels for your personal vehicle or farm? Come learn about converting a diesel engine to run on waste vegetable oil. Dave Rosenstrauss of Fossil Free Fuel will share 4 years of experience converting diesel engines and collecting and filtering used oil. We will look at a converted car and talk about how to apply the system to tractors and other diesel engines to save money and reduce pollution. To register: call NOFA-NJ at (609) 737-6848 or email [mazzara@nofanj.org](mailto:mazzara@nofanj.org). For directions: [www.nofanj.org](http://www.nofanj.org)

## **Thursday, August 3, 5:00pm – A Behind the Scenes Look at Managing a Large CSA**

### **Honey Brook Organic Farm, Pennington, NJ**

Join Farm Managers Jim Kinsel and Sherry Dudas of Honey Brook Organic Farm as they discuss the nuts and bolts of managing a large CSA program in Central New Jersey that includes Boxed Share distribution as well as on-farm pick up. Topics to be discussed include mailing/membership list database management, public relations, marketing, farm market and harvest management, equipment upgrades and employee management and recruitment. If time allows, farming techniques will also be discussed, but this is primarily a discussion of practices not related to production. Please bring a lawn chair or blanket.

To register: call NOFA-NJ at (609) 737-6848 or email [mazzara@nofanj.org](mailto:mazzara@nofanj.org). For directions: [www.honeybrookorganicfarm.com](http://www.honeybrookorganicfarm.com)

## **Tuesday, August 8, 5:00pm – Heirloom Tomato Trials and Tasting Muth Family Farm, Williamstown, NJ**

Bob Muth is growing approximately 20 different heirloom tomatoes varieties this year. Join his CSA members for a blind taste test and practical discussion on production techniques, varying yields, and overall favorites. Special guests include Joe Cavanaugh from the Garden State Heirloom Seed Society, as well as Wes Kline and Peter Nitzsche, both Rutgers Cooperative Research & Extension Agents, who will share their experience with over 100 varieties.

To register: call NOFA-NJ at (609) 737-6848 or email [mazzara@nofanj.org](mailto:mazzara@nofanj.org). For directions: [www.nofanj.org](http://www.nofanj.org). □

## Calendar of Events

**June 28, 2006 - 5:00 p.m.** - Twilight Fruit Research Meeting, Tour and Picnic, Rutgers Agricultural Research and Extension Center, Northville Rd., Bridgeton, N.J. Contact Jerry Frecon at RCRE of Gloucester County at 856 307-6450 Ext 1.

**July 27-30, 2006** - New Jersey Peach Festival, 4-H Fairgrounds Rt. 77 South of Mullica Hill, N.J. Contact Jerry Frecon at RCRE of Gloucester County at 856 307-6450 Ext. 1 or go to: <http://gloucester.rcre.rutgers.edu/fairfest>.

**August 3, 2006, 10:00 a.m. - 7:00 p.m.** - Agricultural Innovations Day, Rutgers Agricultural Research and Extension Center, Northville Rd, Bridgeton, N.J. Contact Bill Nicholson at RAREC at 856 455-3100.

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### *FOLIAR CALCIUM FROM PAGE 3*

rates of  $\text{CaCl}_2$  should be applied if there was no rain between applications, or if we are experiencing hot and humid conditions.


Care should be taken when applications are occurring in temperatures above 80°F. Since foliar applications of calcium do not translocate through the leaves readily, it is important to get thorough spray coverage to allow for calcium to contact the fruit directly. Increased water volume or the addition of a surfactant may provide better coverage and increased absorption while reducing the chance of any leaf injury.

### **Form of Calcium for Foliar Sprays**

There are many calcium products promoted by industry as substitutes for Calcium Chloride ( $\text{CaCl}_2$ ). However extensive research and comparison of these products has yet to show an advantage over Calcium Chloride because it is one of the richest forms of calcium at the cheapest price. Calcium nitrate ( $\text{CaNO}_3$ ) can be substituted for  $\text{CaCl}_2$  but only on trees that do not contain low nitrogen levels as measured by leaf analysis. Vigorous trees should not receive Calcium nitrate. Growers opting to use  $\text{CaNO}_3$  as their calcium source should be aware that  $\text{CaNO}_3$  does not contain as much available calcium as  $\text{CaCl}_2$ , so they should adjust their rates accordingly. □

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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 RCRE in your County.

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