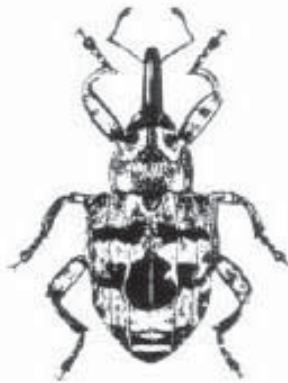


PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

MAY 9, 2006



Plum curculio
Source: Ohio State University Extension

INSIDE

Fruit IPM 1

Weather and Apple Thinning in 2006 4

Consider Controlling the Tops of Your Overly Vigorous Dwarf Apple Trees 5

Grape and Berry Pest Management and Production Guides 5

Robson Farms Site of Twilight Meeting 6

Calendar of Events 6

Fruit IPM

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

Peach

✓ **Oriental Fruit Moth (OFM):** Spray dates for first generation OFM are past in southern and central counties. Timing for the first application in northern counties was late last week, and the timing for the second application in those counties will be about 5/19-21.

County / Region	1 st Spray Date	2 nd Spray Date
Gloucester – Southern	past	past
Monmouth – Central	past	past
Hunterdon - Northern	past	5/19-21

Growers who wish to employ mating disruption for OFM should begin placing ties or including sprayable pheromone in cover sprays anytime within the next two weeks in southern and central counties. See the production guide for more information regarding mating disruption for OFM.

✓ **Green Peach Aphid (GPA):** Aphid colonies are more noticeable in problem orchards, however few problem orchards are being found. Aphid colonies are present throughout the state, with colonies just getting started in northern counties. Please see last newsletter for thresholds and treatment options.

✓ **Stink Bugs and Other Catfacing Insects:** Some plant bug activity is present but levels are low in most orchards. These pests will become more of an issue as temperatures warm and mowing and other ground cover activities become more common. General spray timing at this time of year should still be targeted for **Oriental Fruit Moth and/or Plum Curculio (PC)**. PC are very active and at peak egg laying activity. PC egg laying activity usually begins about early to mid-May (see scouting calendar below), and lasts into mid to late June.

✓ **Peach Diseases:** Growers can now safely switch to sulfur based programs for brown rot control. Where peach scab has been a problem, coverage with captan or another very effective scab control material should be continued. Where rusty spot has been a problem, fungicide applications targeting this disease should continue until pit hardening (see scouting calendar below). Please note that last week's newsletter also referred to the integrated rusty spot program. The integrated rusty spot program is alternating Nova with either **Armicarb** or Kaligreen, both being potassium bicarbonate. While Serenade was mentioned in the

SEE IPM ON PAGE 2

previous article, and is just as effective as potassium bicarbonate, its cost would likely be prohibitive.

Apple

✓ **Apple Scab and Cedar Apple Rust (CAR):** Primary scab infections are still possible as we pass through the peak spore discharge period. CAR galls are still being found on wild cedar trees. Therefore, sporulation and spread of the disease into neighboring apple orchards is still a concern. Growers should maintain the use of materials effective for CAR control.

✓ **Fire Blight:** Blossom sprays using antibiotics should be applied on a 3-7 day schedule or anytime temperatures are 65°F or above and the relative humidity is 60% or above even where most bloom is over. Blocks of particular concern now are Rome, Gala and other cultivars that have a propensity to produce “rat-tail” blooms. Refer to the production guide for recommended materials and rates.

✓ **Plum Curculio (PC):** See peach section above.

✓ **Green Apple Aphid (GAA); White Apple Leafhopper (WALH); Spotted Tentiform Leafminer (STLM):** These pests are usually not a problem this early, but may be present. Here are some considerations as these insects begin to build. STLM should be treated if .5-1 mine per leaf can be found. A treatment threshold for WALH is 3-4 leafhopper nymphs per leaf. WALH and STLM have not been a significant problem for sometime, and early generations are often controlled by applications targeting GAA. Aphids are now beginning to colonize new termi-

nal shoots, but treatment is usually not warranted until 50% of the terminals become infested. The neonicotinoids are the materials of choice for all of the above. Calypso can stand alone as an aphid, leafminer, and leafhopper treatment, and will also control PC, OFM, and EAS. Actara is effective against the above pests as well as PC and plant bugs. Provado will control aphids leafminer and leafhopper only. Remember that when using these materials application rates must be adjusted based on the primary pest targeted. Refer to the production guide for more information and application rates.

✓ **Codling Moth (CM):** The CM first sustained catch or biofix was set at 4/30 in the Richwood area. The first sprays are due at 250DD after biofix with standard insecticides (Avaunt, OP’s, or carbamates), or at 150DD with Assail, Calypso, and Intrepid. In southern counties 250DD is predicted to fall on or about 5/21. However, if using Assail, Calypso or Intrepid, the first treatments should be applied at 150DD predicted to fall on or about 5/14. Other East Coast growing regions have been experiencing difficulty controlling codling moth due to suspected resistance to OP’s. Several South Jersey growers are also experiencing this problem. It is strongly recommended that growers rotate chemistries for CM control even if OP’s are still working fine. Other “non-insecticide” control options include mating disruption and biorational controls such as Cyd-x (codling moth granulosis virus). Contact your agent or this program for more information regarding these options.

SEE BLUEBERRY ON PAGE 3

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	2005 Observed Date
TABM Biofix	5/4+/-10 days	Not yet observed
CM Biofix	5/4+/-6 days	April 30
GAA colonies	5/5+/-17 days	May 5
1ST WALH	5/6+/-22 days	Not yet observed
Blossom Blight Symptoms	5/8+/-10 days	Not yet observed
375 DD OFM	5/10+/-8 days	May 4
Rusty Spot	5/12+/-10 days	Not yet observed
OFM Flagging	5/13+/-2 days	Not yet observed
first bacteria leaf	5/15+/-21 days	Not yet observed
CM 1st gen 150 DD target	5/19+/-3 days	Not yet observed
WPS Crawlers	5/26+/-11 days	Not yet observed
CM 1st gen 250 DD target	5/28+/-7 days	Not yet observed
2nd Pear Psylla hatch	6/1+/-0 days	Not yet observed

Blueberry

✓ **Leafrollers:** Beating tray samples have shown that 13% of sampled areas have leafroller larvae present at low levels. Most of these are green fruitworm. Although redbanded leafroller (RBLR) larvae should be present, no monitored fields have visible populations as of this writing.

✓ **Gypsy Moth Larvae:** Populations of gypsy moth are increasing, with about 45% of samples being positive. About 6% of these samples were above treatment level, or had larval populations greater than 1 larva per 100 clusters. Those areas that had high populations last week continued with similar populations this week (in some cases, larval populations were slightly lower.) These areas (some with greater than 10 larvae per 100 clusters) need to be treated. Treatments may also need to be repeated, since larvae will continue to blow in from the surrounding woods.

✓ **Plum Curculio (PC):** About 14% of total samples had small numbers of adults. Most of these insects are still being found in traditional “hot spot” areas near woods, and in early varieties. Levels seen were generally lower than those of last week.

✓ **Cranberry Fruitworm (CBFW):** Adults have started to emerge, and are present at low levels. Trap counts should increase rapidly over the next couple of weeks. A single treatment is generally applied just after the flight peak or during the first few days of June for the “average” farm. Farms having traps that show high counts may need two applications, one just prior to, and one just after the peak emergence.

✓ **Mummy Berry:** One location was seen with primary leaf strikes in the Hammonton area. This was very localized but at 3-5 strikes per bush.

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
4/16/06	40	0			4		29	0	0	
4/23/06	50	0			59		67	0	0	
5/1/06	58	0	1		34		32	0	2	
5/6/06	29	0	12		7		18	0	28	

Tree Fruit Trap Counts – Northern Counties

Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
4/9	630									
4/16	815				4		5			
4/23	1250				—		23.2			
5/1	705						12.6			
5/6	580	1.8	1				36.7	2		

Blueberry Trap Counts – Atlantic County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
4/9		184				
4/16		209				
4/24		179				
4/29		64				
5/6		30				

Blueberry Trap Counts – Burlington County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
4/9		54				
4/15		77				
4/24		110				
4/29		32				
5/6		22				

Key: CBFW = Cranberry Fruitworm, RBLR = Redbanded Leafroller, OBLR = Obliquebanded Leafroller, SNLH = Sharpnosed Leafhopper, OB = Oriental Beetle, BBM = Blueberry Maggot

Weather and Apple Thinning in 2006

Win Cowgill, Agricultural Agent

We had several days of good pollination weather in Northern New Jersey, with some sunny days and temperatures in the low 70's, even though most nights have been cool in the 40s and 50s, 35°F last Saturday in Baptistown, Hunterdon County. Most growers got some thinner on at bloom and petal fall stages. At the Rutgers Snyder Farm I applied Sevin XLR to all apple varieties, this past Sunday. Fruit ranged from petal fall to 5mm. Utilizing Sevin at petal fall is one of the best standard practices we can utilize to get some mild thinning at this early stage.

The weather outlook for this week is questionable, cool, cloudy and rainy for most of the week. Not good thinning weather.

Here a few thoughts to keep in mind regarding weather and thinning:

- 1) Three or more days of dark cloudy sky will cause thinning in and of itself. Marini and Beyers have shown this in numerous experiments over the years and I observed in trials at the Rutgers Snyder Farm.
- 2) Thinners applied and followed by 3 days of cloudy weather can thin more.
- 3) Sevin-Rain showers can re-wet Sevin residue and you can get a second absorption when it dries increasing activity.
- 4) Current research and consensus indicates that it takes 7-10 days after a thinner application to tell if it is working. If you go back and apply more thinner before this time you may over-thin. The only way to tell if your thinner has worked is to measure actual fruitlets over time (the same fruitlets). When/if they stop growing the thinner has worked. Dr. Duane Green, UMASS, is working on a system for growers to be able to utilize this technique.
- 5) Thinners applied at 65°F and lower will have reduced efficacy.
- 6) Thinners applied at 65°F and above followed by a warming trend for three days allows optimum thinning.
- 7) If there is no window in the foreseeable future, and you are way over set and have applied no thinner, at least get some Sevin on when the weather window opens even for a few hours, just get it done.
- 8) 6BA is very temperature dependant and fruitlet size dependant. It has very little activity on fruit smaller than 8mm and has little efficacy at temperatures below 70°F. Conversely at temperatures above 85°F we can have over thinning with 6BA.
- 9) Rain fastness of thinners? Hormonal type thinners such as 6BA and NAA are absorbed as they dry. In

my thinning research on sabbatical at Michigan State in 1993 we evaluated the ethylene response of NAA once it is applied to apple leaves and fruit. Ethylene is generated once NAA is absorbed and can be measured. Once hormonal type thinners are absorbed they become active irrespective of subsequent rainfall.

- 10) Sevin is absorbed as it dries and reactivates, so to speak.

There is no one answer or one magic bullet as to how to proceed under these weather conditions. In general doing something is better than doing nothing.

NAA vs. 6BA Maxcel (Valent), Excelis (Fine Chemical Co), RiteWay (Nufarm Americas)

I have been an advocate of NAA used at bloom and petal fall at low rates, 3-5ppm. Research has shown that higher than 5mm rates of NAA at the regular thinning time of 8-15 mm can reduce fruit size even though we do get thinning. On some cultivars, Fuji strains and Spur Red Delicious Strains NAA can cause pygmy fruits. I avoid NAAA on reds and Fuji's after the petal fall window for this reason.

In my work the last year at the Snyder Farm Maxcel was far more effective in returning bloom than NAA. 6BA will be most effective if applied at 8-12MM and combined with Sevin. One pint of Sevin XLR plus 100PPM Maxcel has been consistent.

Multiple Applications

Hopefully all apple growers have already made one to two thinning applications already. We are approaching 8-12 mm in fruit size at the Rutgers Snyder Farm depending on cultivar by the end of the week depending on the temperature.

We have strongly advocated the multiple thinner application approach beginning at petal fall, but we must balance it with how the materials respond to temperatures. This allows us to be more flexible if we get a week of wet cold weather in-between petal fall and the late fruit-thinning window of 20-25MM.

Most thinning materials we have become much less effective after fruit reaches 15mm or larger size.

More on late thinning with Ethephon in the late window in next week's newsletter. □

Consider Controlling the Tops of Your Overly Vigorous Dwarf Apple Trees

Wes Autio, Professor of Pomology, UMASS and Win Cowgill, Agricultural Agent

Over the last several years we have recommended different approaches for reducing growth specifically in the tops of apple trees. Scoring (a knife cut completely around the trunk of a tree through the bark into the wood) and ringing (a saw cut completely around the trunk) can very effectively slow tree growth. Applied near the top of a vigorous tree at about a week after petal fall will increase fruit set for this season and increase flower-bud formation for next season. Reduced shoot growth will be seen for the next couple of years. These physiological changes will shift a tree from vigorous vegetative growth in the tree top to more fruit production and weaker growth in the top. The down side of ringing and scoring is the amount of time required to perform the treatment.

We have been working on alternative top-control procedures for the last two years. One of the approaches uses high concentrations of NAA to slow growth in just the top of the tree. At this point the most effective treatment appears to be on 1-year-old wood and is applied as Sucker Stopper Concentrate (Monterey Chemical) mixed in pruning/grafting compound at a rate of one part Sucker Stopper to nine parts pruning/grafting compound (1.5% NAA in the application solution). Paint a 3-inch wide band completely around the trunk near full bloom. To be effective, you must treat your trees before they reach the desired height, probably when they have been in the orchard for a year or two.

Apogee also can provide excellent control if directed just at the top of the tree. Our research has only used the 12-ounce/100 gallon rate. Multiple applications of lower doses may also be effective, but since the treatment is directed only at the tree tops, special trips into the orchard will be required for each application. Remember that you should apply Apogee with a non-ionic surfactant and with a water conditioner (equal weight of spray-grade ammonium sulfate to the amount of Apogee added). Apogee also may increase fruit set, but this may be advantageous if the trees are excessively vigorous in the top. Treat with Apogee near bloom to begin controlling growth early.

We established 7 experiments at the Rutgers Snyder Farm in New Jersey last week to further evaluate materials and methodology. □

Grape and Berry Pest Management and Production Guides

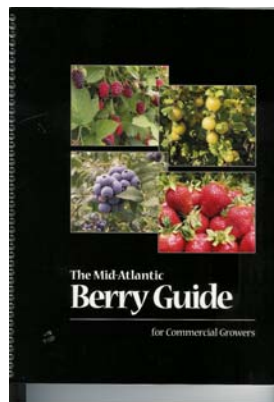
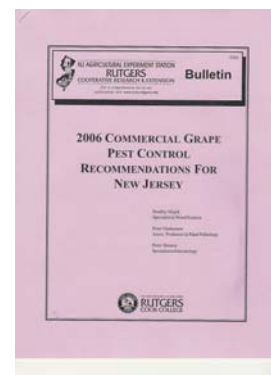
Jerome L. Frecon, Agricultural Agent

The 2006 Commercial Grape Pest Control Recommendations for New Jersey are available from any RCRE County Extension Office. This RCRE Extension Bulletin 383 is also available from the office of Rutgers Cooperative Research and Extension of Gloucester County 1200 North Delsea Drive Clayton, N.J. 08312 for \$5.00 payable to NJ Extension. Copies can also be mailed by calling 856 307-6450 Ext 1.

This 14 page publication written by Rutgers Cooperative Research and Extension Specialists Bradley Majek, Peter Oudemans and Peter Shearer contains insect, disease, and weed control pest management strategies for wine grapes.

These include descriptions of some of the more important insects and diseases as well as a handy chart summarizing bactericides and fungicides labeled for grapes. Dr Majek also has detailed some of the important controls for weed control in bearing and non-bearing vineyards. He and Dr Shearer also have a pesticide use restriction chart for easy reference. All wine grape growers should have a copy of this publication specific to New Jersey.

The 2006 Mid Atlantic Berry Guide is also for Commercial Growers and is available from selected County Offices in New Jersey and throughout the Mid Atlantic Region. This 205 page guide is also available for \$16.00 from the office of Rutgers Cooperative Extension of Gloucester County. Coordinated by Kathy Demchak of Penn State Cooperative Extension, it includes contributions by 39 other agents and specialists in the Mid Atlantic area. The guide includes recommendations and suggestions for strawberries, blueberries, brambles, gooseberries and currants. It contains appendixes on diagnostic services, nursery sources of berry plants, production supplies and services and additional sources of berry information. This is a great investment for any grower of small fruit crops. □



Robson Farms Site of Twilight Meeting on May 17, 2006

Jerome L. Frecon, Agricultural Agent

A twilight tree fruit and small fruit meeting will be held on May 17, 2006 starting at 6:00 p.m. at Robsons Farms near Wrightstown, New Jersey. A walking and riding tour of tree and small fruit plantings will start near the farm market and greenhouse along Route 537 at 555 Monmouth Road. Specialists from Rutgers Cooperative Research and Extension will discuss and demonstrate the latest technology in pest management and culture. Dr Warren Stiles, Professor Emeritus, Cornell University will share his experience with test and growing the newest bramble varieties in New Jersey. Dr. Mark Robson of UMDNJ and Mr. Ray Samulis of RCRE of Burlington County will focus their presentations on Farm Safety, Pesticide Health and Safety. Two CORE and 3 Category units will be given for New Jersey Pesticide Units.



View of Robson's Market and Greenhouses from Raspberry Field

Robson Farms was started by Neil and Mark's grandfather in 1930. Grandfather's farm evolved from a poultry and dairy farm to a fruit and vegetable farm by son Art Robson who started a farm market on the property in 1954. In 1980, Neil and his wife started a greenhouse business growing bedding plants and hanging baskets. Today they farm has over 1500 acres of fruit, vegetables, grain and ornamentals including asparagus, peas, squash, Brussels sprouts, pumpkins, peaches and strawberries.

Robson Farms is a multi-generation farm located in a rapidly developing region of New Jersey. The operation's farm market sells fresh produce in addition to a selection of bedding plants and bakery goods. The farm offers customers pick-your-own strawberries and peaches as well as a vast range of produce for the farm stand. Hayrides, Halloween pumpkin picking, corn mazes, and farm events are all offered at Robson Farms. Two additional farm markets opened recently in addition to marketing done at various community farm markets.

Information on the meeting and directions are featured at <http://gloucester.rcre.rutgers.edu> or by contacting Jerome L. Frecon at 856 307-6450 Ext 1 or Ray Samulis at 609 265-5050. □

Calendar of Events

May 17, 2006 - 6:00 P.M. - Twilight Tree and Small Fruit Meeting, Robson Farms, 555 Monmouth Rd., Wrightstown, N.J. Contact Jerry Frecon at 856 307-6450 Ext 1, or go to <http://gloucester.rcre.rutgers.edu>.

May 30, 2006 - 6 to 8:30 pm - Small Fruit and Tree Fruit Twilight Meeting, Terhune Orchards, 330 Cold Soil Road, Princeton, NJ. Farm tour will include a recently installed Haygrove Tunnel over sweet cherries in addition to plastic culture strawberries, caneberries, blueberries, apples, peaches and nectarines. Contact: Bill Tietjen at RCRE of Warren County at 908-475-6505.

May 31, 2006 - 6:00 p.m. - Twilight Wine Grape Meeting, Halpern's Engine One Vineyard, Bridgeton, N.J. Contact Jerry Frecon at RCRE of Gloucester County at 856 307-6450 Ext 1 or go to <http://gloucester.rcre.rutgers.edu>.


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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