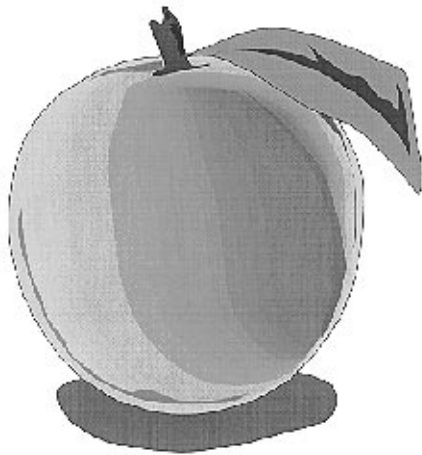


PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JUNE 3, 1997



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Peach Crop and Thinning in Southern New Jersey

Jerome L. Frecon, Gloucester County Agricultural Agent

Peach thinning is well under way in southern New Jersey. Most fruit has sized nicely. While there is a difference in fruit size due to our prolonged bloom, it is obvious that some of the smaller fruit will continue to hang if not thinned out to the normal spacing of 6 - 10", depending on variety. *Early thinning is critical to the development of good fruit size* since cell division occurs before the onset of pit hardening. The earlier thinning occurs, the better the fruit size.

Fruit should not necessarily be thinned according to date of ripening, however, some of the earlier-maturing varieties are the hardest to size so these must be thinned first. Don't overlook early thinning of late-maturing varieties that set very heavily. A heavy early set can be exhausting to the tree particularly during periods of hot dry weather. Those growers that did not have the courage to thin during the blossom stage should consider using some type of "shaking or batting" device to go over the trees and then come back to do hand thinning later. Many different types of bats are used, however one grower is using a firm "nerf bat" featured in toy stores. This seems to do less damage to the trees and fruit.

Thinning is one of the most expensive management practices in a peach orchard, yet one of the most important since we have difficulty selling less than 2 1/2 inch and up fruit.

Last year we picked approximately 80 million pounds of fruit in New Jersey. I've had at least that many requests for guesstimates on how many peaches we expect to have in 1997. In Southern New Jersey we have replanted many older orchards. Many of these young plantings are not old enough to bear fruit. Even many of the three and four year old plantings have not set fruit. On older plantings yield estimates vary from farm to farm and variety to variety. We have plantings with few peaches on them; some that will not produce 50% of a crop; others that don't need thinning; and many that have a full heavy crop of fruit.

We also have a long growing season ahead of us. We were fortunate in 1997 to have a relatively wet season with a high percentage of fruit 2 1/2 inches or larger. Will we thin hard enough and get enough moisture to size our fruit this well? Big fruit means good yields.

My best guesstimate is a crop about 75% of what we harvested in 1997. This crop is going to have to compete against a peach crop of similar size (to New Jersey) in the Appalachian states, of substantially larger size (than 1996) in South Carolina and Georgia, and only slightly smaller (than 1996) in California. Our crop maturity is just about normal but this may change if we continue to have cool weather. □

Fruit IPM

Dean Polk, IPM Agent, Fruit

◆ Peach

Oriental Fruit Moth (OFM): Timings for first generation treatments have passed in all counties. No additional treatments should be needed until the second flight adults start laying eggs. This will occur later this month.

Green Peach Aphids (GPA): (or Use of Lannate alone) In most cases, Lannate applied for GPA control has worked very well. Growers who still wish to apply insecticide for this pest should note that treatments for OFM first generation have already been made, and that Lannate also does a good job on tarnished plant bug and other catfacing insects. Therefore there is no need to add Guthion or other O.P. insecticide to the tank for these pests.

Catfacing Insects: Nymphs of tarnished plant bugs are maturing, with more adults being seen this week than last week. Some orchards with weedy ground covers have high catfacing insect populations. While most blocks reflect samplings of 0 to 1 or 2 tarnished plant bugs (TPB) per 50 sweeps (with an insect sweep net), one orchard with considerable broadleaf weeds and clover had 21 TPB/50 sweeps. While insecticide can be skipped in many blocks, it has to be included under this type of pest pressure.

Growers may recall that Peter Shearer is leading a demonstration project comparing three types of ground cover - 1) bare soil, 2) fescue only, and 3) volunteer or whatever weeds grow. This is being done at 3 farms and monitored by this program. So far the plots on 2 of the farms have reflected similar plant bug populations. However, this week the plots on 1 farm showed that the TPB population in the volunteer plot were 9 times that in the fescue only and bare soil plots.

Tufted Apple Budmoth (TABM): One exception to the above discussions concerning skipping insecticides would be if you are in a traditional TABM hot spot area. This includes most of the southwestern part of the state from Burlington County south through Gloucester County, and the western part of Cumberland County. Growers in these areas should also target TABM. Because of bee toxicity problems, we can no longer suggest the use of PennCap. While TABM shows a general resistance to phosphates (O.P.s), some still work better than others. In order to achieve any control with O.P.s, do not cut the rates. Lorsban 50W is *not* labeled in peaches, and Imidan is almost useless for this pest. Lannate and pyrethroids (especially pyrethroids) will work but will build mites. Suggestions are to use at least 50 to 80 gal of water per acre during the first generation, and use 1) Guthion at a full rate alone (1.5-1.75 lb/A), 2) Guthion @ .5-.75 lb + Lannate LV @ 1.5 pt/A, or 3) Lannate alone @ 3 pt/A. Choice #2 will not build as many mites as choice #3. When comparing Lannate LV

and SP remember that 1 lb of SP = 3 pt of LV, or 8 oz of SP = 1.5 pt of LV. Pyrethroids and more liberal Lannate use should be saved for the more critical second generation, and after mite build-up is no longer a problem. See degree day chart and apple discussion below for timings.

Rusty Spot: Rusty spot lesions are becoming visible on susceptible fruit. Rusty spot is most likely caused by the same organism that causes powdery mildew on apple. The same conditions that are favorable for the spread of powdery mildew in apple help spread rusty spot in peach. Nova is the best material we have that is labeled for this disease. Infections have stretched out through June and early July in past years when infection conditions have been favorable. Given the fact that we have high inoculum (powdery mildew) levels in apple, growers are advised to maintain Nova sprays for rusty spot in sensitive peach varieties (Rio, Jefferson, Jerseyqueen, Biscoe, Loring, Redskin, Jerseyglo, and Garnet Beauty), especially if planted near apples.

◆ Apple

Tufted apple budmoth (TABM): The first egg masses were found on 5/23 in Gloucester County, and eggs close to the blackhead stage were seen on 5/29. The first spray targets for TABM in southern counties will fall on 6/4-5 in Cumberland and Gloucester Counties, and 6/6-7 in Atlantic and Camden Counties. Timing will be about 1 week later in central and northern counties. Alternate middle applications should be made at 0-5% egg hatch (about 490 DD after biofix), 25-30% egg hatch (about 625 DD), 50-55% egg hatch (about 763 DD), and at 75-80 % egg hatch (about 898 DD). See last newsletter for insecticides and rates. Lannate should be used at slightly higher rates in apples than peaches, since trees are generally larger and are a more favorable host for the insect.

Codling moth: As of 6/2, treatments should be applied in Camden/Atlantic counties on 6/2, 6/3 in central counties, 6/7 in Warren County, and 6/8-9 in Hunterdon County. A second treatment should be applied 2 weeks after the first treatment (or 2 alternate middle treatments 7 to 10 days apart).

Apple scab: The current wetting period will most likely register as a scab infection before it is over. With the current forecast, we may see multiple scab infection periods this week. If over 1.5" of rain falls during the first infection period, and growers cannot spray again until after additional infections take place (perhaps at the end of the week), SI materials for back action will be required.

Powdery mildew: This disease is present at a number of locations on both cultivated and wild hosts. SI's, Benlate/Topsin, and Sulfur should be included for control. Benlate/Topsin can build mite populations when used at this time of year.

◆ Blueberry

Leafrollers and other Lep's: The past week's sampling indicated similar infestation levels as found during the previous week. Most larvae were green fruitworm with only 2 samples above treatment level.

Cranberry fruitworm (CBFW): CBFW trap catches increased again this past week. This probably represents a flight peak. Under these conditions, treatment should start this week where trap counts have already peaked.

Aphids: Aphid infestation levels increased again this past week. While 10% of our samples showed aphid activity 3 weeks ago, 20% of the samples showed activity 2 weeks ago, and 36% of the samples showed activity this past week. In many cases, aphids were seen only as single insects, but colony growth has also increased. Since this is a virus vector for blueberry **scorch disease**, treatment is suggested any time colonies are present. Scorch disease has been very common this year, and has been present in all monitored areas.

Tree Fruit Pest Degree Day Accumulations Since 1 st Catch - 6/02/96						
Site	Biofix/1 st Catch Date & DD - OFM		Biofix/1 st Catch Date & DD - TABM		Biofix/1 st Catch Date & DD - CM	
Hammonton - At. Co.	3/25	720	5/2	438	5/9	251
Hardingville - Glou. Co.	3/30	674	4/30	468	4/30	320
Bridgeton - Cumb. Co.	4/7	623	5/1	465	5/2	306
Princeton - Mercer Co.	4/17	520	5/12	317	5/5	248
Oldwick - Hunt. Co.	4/21	491	5/17	242	5/16	166
Hackettstown - War. Co.	4/28	426	5/22	171	5/9	209
Spray target after biofix/1st catch	200, 400 DD after biofix (1 st generation)		Alt Mid Appl. at 490, 625, 763, 898 (1 st brood), and 2228, 2415, 2605, 2795 (2 nd brood)		250 DD plus 2 weeks later (1 st generation), 1250-1300 DD plus 2-3 weeks later (2 nd generation)	

◆ Trap Averages

South Jersey Tree Fruit

Week Ending

Week Ending	RBLR	STLM	TBM-A	CM	AM	OFM	TBM-P	LPTB	PTB
4/5	293.0	2650	—			3.56			
4/11	271.5	983	—			16.0			
4/18	168.0	845	0.00			13.77			
4/25	46.8	808	0.00			27.0			
5/2	30.8	885	0.06	0.04	—	56.9	0.08	—	—
5/9	25.3	1177	4.5	1.0	—	39.5	3.0	—	—
5/16	7.0	822	30.2	2.6	—	12.9	50.6	0.7	—
5/23	2.8	478	33.8	9.3	—	18.3	40.4	28.1	0.02
5/30	0.8	270	43.4	3.7	—	9.6	50.2	19.1	0.05

North Jersey Tree Fruit

Week Ending

Week Ending	RBLR	STLM	TBM-A	CM	AM	OFM	TBM-P	LPTB	PTB
4/25	34	255	—			.75			
5/2	40.2	1080	0.0	0.01	—	3.3	0.0	—	—
5/9	22.2	980	0.0	0.3	—	26.2	0.0	—	—
5/16	10.7	902	1.0	1.3	—	6.0	0.1	0.1	—
5/23	2.0	157	1.9	1.2	—	4.1	0.6	0.9	—
5/30	2.4	252	5.8	2.6	—	6.7	2.6	0.5	0.1

Blueberry

Atlantic Co.

Week Ending

Week Ending	RBLR	OBLR	CBFW	SNLH	BBM
4/5	120.1				
4/11	163.7				
4/18	133.0				
4/25	157.7				
5/2	107				
5/9	27.5	0	0	—	—
5/16	7.4	0	0.5	—	—
5/23	1.5	0	2.6	—	—
5/30	0.5	0.5	12.0	—	—

Burlington Co.

Week Ending

Week Ending	RBLR	OBLR	CBFW	SNLH	BBM
4/5	32.0				
4/11	60.0				
4/18	51.0				
4/25	43.0				
5/2	33.4				
5/9	14.0	0.2	0	—	—
5/16	5.6	0	0.3	—	—
5/23	1.8	0	0.9	—	—
5/30	0.06	0.4	5.6	—	—

Boron Needs of Fruit Crops

Joseph R. Heckman, Ph.D., Soil Fertility

The majority of New Jersey soils do not supply enough Boron (B) to fruit crops which have relatively high requirements for this micronutrient. Crops are more likely to need B fertilizer when grown on sandy soils that are typically quite susceptible to B deficiency. Foliar applications of B applied to fruit trees and to blueberry in the spring or the fall may improve fruit set.

Soil testing and plant analysis should be used to evaluate the need for B fertilization. While B fertilization can improve crop yield and quality, it is also important to avoid excessive application of B. Too much B fertilizer applied to sensitive crops can cause toxicity.

<u>Crop</u>	<u>Boron-Deficiency Symptoms</u>
Apple	Pitting, skin discolored, cracking, corking.
Pear	Blossom blast, pitting, internal corking, bark cankers.
Grape	"Hen & Chick" symptom, dead main shoots.
Apricot	Twigs die back, fruit fails to set.
Plum	Fruit cracked, beads of gum internally/on skin.
Walnut	Die back from shoot tips, leafless branches.
Strawberry	Pale chlorotic skin of fruit, cracking, die back.

For complete information on B fertilizer recommendations, obtain Fact Sheet 873 from Rutgers Cooperative Extension. □

Educational Summer Orchard Tour in Pennsylvania

Jerome L. Frecon, Gloucester County Agricultural Agent

In recent years both Cooperative Extension and the New Jersey Horticultural Society have had difficulty in conducting a summer tour. Many of you are too busy or involved in other activities, so we try to work with other organizations that have regular successful summer tours. Two tours open to fruit growers in New Jersey are:

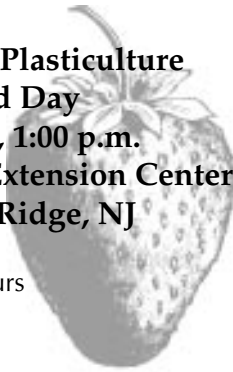
The International Dwarf Fruit Tree Association Tour in Massachusetts (see meeting calendar), and the State Horticultural Association of Pennsylvania Tour on June 25th and 26th, 1997. The Pennsylvania Tour should be of interest to Southern New Jersey Growers because it is in Berks County, only about 75 miles from Glassboro, and because it has some interesting peach orchards. While it is a two day tour, the hosts would be happy to have any growers that wanted to come for the second full day in the Boyertown area. An air-conditioned motor coach will leave from the Morgantown Holiday Inn (Exit 22 on the Pennsylvania Turnpike). You can also go on both days and stay at the Holiday Inn by making reservations at 800 339-0264. The tour will feature tour guides, refreshments, a chicken and pig roast, picnic dinner on Wednesday evening, and a lunch on Thursday. The cost per person is \$45 payable to S.H.A.P.

The tour on Wednesday will leave promptly at 12 p.m. from the Morgantown Holiday Inn while the tour on Thursday will leave promptly at 8:00 a.m. Everyone will have to go on the bus which will return to the Inn after the tour.

Some items of interest include: the study of intensive double and triple row plantings of apples and peaches; some innovative training systems and long term experiences with central leader peaches; year-round and seasonal farm markets; experiences with using the "Off Limits" deer protection system; trickle irrigation systems on apples and peaches; strawberry plantings; extensive plantings of Fuji and Gala apples on size controlling rootstocks; one of the oldest Gala plantings in the Eastern United States; experiences with new varieties like White Lady and the Flamin Fury series of peach varieties; visits to a modern peach and apple packing line with CA storage, and an orchard supply business.

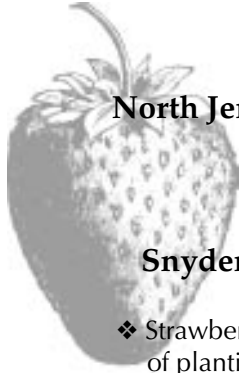
S.H.A.P. Secretary Maureen Irvin, 697 Mountain Road, Ortanna, Pa. 17535 needs to hear from you as soon as possible. Please call her at (717) 677-4184 and send your check for \$45.00, to firm up your reservation. □

**Cream Ridge Strawberry Plasticulture
and Breeding Field Day**
Thursday, June 5, 1997, 1:00 p.m.
Rutgers Fruit Research and Extension Center
283 Route 539, Cream Ridge, NJ



- ❖ Plasticulture Research Plot Tours
- ❖ Eastern Variety Trials
- ❖ Organic Nutrition
- ❖ Runner Removal
- ❖ Vegetable Double Cropping
- ❖ NJAES Strawberry Breeding and Variety Showcase
- ❖ Plasticulture and Matted-row
- ❖ Field Equipment Demonstrations
- ❖ Weed, Disease and Insect Diagnostics

For further information, contact Dr. Joseph Fiola, Specialist in Small Fruit and Viticulture, (609) 758-7311.



North Jersey Strawberry Research Trials
Open House
June 12, 1997
6:00 pm - 8:00 pm
Snyder Farm, Pittstown, New Jersey

- ❖ Strawberry plasticulture trials examining the influence of planting date, row cover removal date, and double cropping on yield, earliness, fruit quality, and returns per acre.
- ❖ Matted row variety trial with recent commercial releases from the USDA, Cornell University, and Italian breeding programs.

Please contact Peter Nitzsche to get further details, or schedule an appointment to view the trials at a different date and time.
(201) 285-8300 or 285-8307
(201) 605-8195 FAX

Directions to Snyder Research and Extension Farm (908) 730-9419:
FROM NORTH - Take I-78 to Exit 15. Go left at bottom of ramp (Rt. 513/Pittstown Rd). Go 4 miles into Pittstown - Do not turn on Rt. 513 or 579. Stay straight for 1.5 mile on Pittstown Rd. (Rt. 615). Turn left on Locust Grove Rd. Farm is 1/2 mile on left.
FROM SOUTH (Trenton Area) - Take Rt. 202 & 31 North to Flemington traffic circle. Take Rt. 12 West at circle. Go 8 miles to Pittstown Road (airport sign). Turn North (right), and go 3.5 miles to Locust Grove Road. Turn right, farm is 1/2 mile on left.

Weed Control in Strawberries

Bradley A. Majek, Ph.D., Weed Science

Strawberries: A SPECIAL LOCAL NEEDS label for Sinbar use on established strawberries is available in New Jersey and certain other states. The rates have been reduced compared to the old label, and are now in line with Rutgers' original recommendations. The label limits application to plants established for a minimum of 6 months, and limits the total rate per acre to 8 ounces per year.

Use 2-6 ounces per acre per application at renovation, in late fall, and/or in early spring before the berries break winter dormancy. Do *not* exceed 8 ounces per year. Consult your Cooperative Extension Office and the new product label for additional information. □

Fruit Meeting Calendar

June 5, 1997 - "Cream Ridge Strawberry Plasticulture and Breeding Field Day, 1:00 p.m., Rutgers Fruit Research & Extension Center, 283 Route 539, Cream Ridge, NJ. Contact: Dr. Joe Fiola 609-758-7311.

June 12, 1997 - NJ Strawberry Research Trials Open House, 6:00 p.m., Snyder Farm, Pittstown, NJ.
Contact: Dr. Joe Fiola 609-758-7311.

June 22-24, 1997 - "International Dwarf Fruit Tree Summer Orchard Tour", Leominster, Massachusetts. Contact: Mr. Charles Ax, 14 South Main Street, Middleburg, PA 17842, 717-837-1551.

June 25-26, 1997 - "State Horticultural Association of Pennsylvania Summer Educational Orchard Tour"— Orchards in Berks County, PA (approx. 65 miles from Southern NJ). Contact: Maureen Irvin, 697 Mountain Road, Ortana, PA 717-677-4184. Call to register by June 2.

New Brunswick, N.J. 08903-0231
Cook College
P.O. Box 231

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PLANT & PEST ADVISORY

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The user is responsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact Rutgers Cooperative Extension of your County.

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