

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JULY 6, 1999



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## Mounding Peach Trees is Harmful

*Jerome L. Frecon, Agricultural Agent*

**M**ounding peach tree trunks with 6 to 8 inches of soil is one of the more **undesirable** practices observed in southern New Jersey peach orchards over the past 15 years. I am not sure where the practice originated but some growers believe it improves anchorage, and protects trees from winter injury. I have not seen any research data to support these beliefs, nor have I observed any benefits.

Mounding has a number of disadvantages. All research on planting has demonstrated that trees should be planted approximately the same height they grew in the nursery row. The reason is that many feeder roots are developed and planting deep may reduce further root growth because of lack of soil, oxygen and the poorer structure and texture of the subsoils. Mounding soil also reduces soil aeration. Occasional buds may exist above the bud union and develop roots. However, peach trees do not have many adventitious buds so additional roots are not developed above the graft union. I recently uncovered 50 trees that had been mounded and only found one that had developed a root above the union.

Mounding soil around trees after planting may help stabilize the tree if there are high winds that can loosen the tree. However, staking and tying the tree would be better, and more cost effective. When I have seen poor anchorage on young peach trees it is usually because short growth is pushed too much with heavy early season nitrogen application. Root growth is slower to develop on peach trees under these conditions.

With the mild winters we have had over the past 10 years, I have frequently noticed bad infestations of peach tree acres followed by Leucostoma canker on mounded trees. An experiment was conducted on mounding trees that showed mounded unsprayed trees had **more** peach tree borers than unmounded unsprayed trees. (See picture) The microclimate during the dormant season in the mound is ideal for overwintering peach tree borers. It is also more difficult to trunk spray peach trees with soil mounded around the trunk.

Dr. Brad Majek has also shown that mounded trees affect the distribution of herbicide penetration. Some herbicide applied to mounded trees will run off the mound and collect at its base. Shallow

*SEE MOUNDING PEACH TREES ON PAGE 2*

*MOUNDING PEACH TREES FROM PAGE 1*

feeder roots at the normal soil level may take up this greater count of herbicide resulting in injury to the tree.

Late fall mounding may offer some protection to a peach tree if low temperatures occur in December because the peach tree trunk is the last area of the tree to acclimate. It's best to wait until late November, early December to build the mound around the trunk. The mound should be removed in early spring. Painting with a white water based latex paint is a better all around practice for winter protection than mounding.

Planting trees on a low berm (6 to 9 inches) is a better practice than planting a peach tree too deep or mounding it up with 9 to 18 inches of soil. □

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**The microclimate during the dormant season in the mound is ideal for overwintering peach tree borers.**

**Painting with a white water based latex paint is a better all around practice for winter protection than mounding.**

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**Infected, Mounded Tree**

*This picture shows borer infections on a tree that had mounds kept on year round. Here the mound is cut away to expose the infection.*

# Fruit IPM

Dean Polk, Fruit IPM Agent

## Peach

✓**Oriental Fruit Moth (OFM):** The second adult flight is near a peak. Trap counts average almost 13 moths per trap. Insecticide applications are needed on most farms at this time. Please be aware that pre harvest intervals and reentry intervals for peaches have changed for several insecticides. Guthion still has a 21 day PHI and a 48 hr REI for mowing, irrigating and scouting, but a 14 day REI for thinning. Imidan has a 14 day PHI and a 24 hr REI. Lannate has a 4 day PHI and a 4 day REI. Sevin has a 3 day PHI and a 12 hr REI, and Ambush has a 14 day PHI and a 12 hr REI. Asana still has a 21 day PHI.

✓**Mites:** European red mites are increasing in a number of sites, but predator populations have kept up in many cases. On one farm last week over 300 *S. punctum* were counted in a 3 minute time period. The red mite population crashed and no miticide was needed.

✓**Japanese beetles and June beetles:** We have seen an increase in these insects over the past week, but mostly on ripening varieties. These insects have not been a problem on green fruit, even though they may be seen around the orchard. Sevin (3 days) and Lannate (4 days) can both be used on ripening fruit.

✓**Brown Rot:** Some brown rot is present on ripening fruit, mostly on split pits or other injured fruit. Thunderstorms and hot humid weather provide favorable conditions. Therefore growers should not wait until the last few days before picking before dropping the sulfur in favor of the more effective brown rot materials. SIs plus Captan should be used at 2 weeks pre-harvest and again at 1 week pre-harvest. Please see the Tree Fruit Production Guide for a complete listing of brown rot materials.

## Apple

✓**Spotted Tentiform Leafminer (STLM):** Many adults are in flight and are laying eggs. Eggs started to hatch in the last week to 10 days, but mine counts are still mostly below treatment levels. Treatments were suggested on one farm in South Jersey last week. Be aware this week of sap feeding mines appearing on the undersides of leaves. This is the stage that must be treated if insecticides are to be used for this pest. Treat if counts average 1 mine per leaf or more. Do not treat the tissue feeding stage mines which are visible from the top sides of the leaves. They cannot be controlled with insecticides. Provado and Vydate are the two best materials to use.

✓**Tufted Apple Budmoth (TABM):** All first generation larvae have emerged. Therefore, we anticipate that no sprays will be needed for this pest for the next several weeks.

✓**European Red Mite:** Isolated populations are building in both southern and northern counties. *Stethorus punctum* beetles are not as common in apples as they have been in peaches in southern counties. However, two species of predatory mites are common in orchards in northern counties. In some cases, predatory mites have been found at up to 1.25 mites per leaf. This represents a very high population, and is good for any grower who doesn't want to use a miticide. Anytime predatory mites are present at over 1/4 mite per leaf, a significant biological control exists in the orchard.

✓**Potential Rot Pressure:** A number of stress factors that may provide favorable conditions for white rot, and to some degree black rot

are present in orchards. Earlier fire blight infections have left numerous strikes and dead wood which both the black rot and white rot organisms will colonize. Hot, dry weather will also put additional stress on the trees, providing favorable rot conditions. Periods of high humidity and thunderstorm activity may also help to spread the disease organisms. Therefore, fungicide programs should be maintained and spray intervals not be excessively stretched. Maintain full rates of Captan or Captan/Ziram combinations. Given the time and resources: Prune off dead wood and fire blight strikes when possible, and irrigate to reduce tree stress and help size the fruit.

## Blueberry

✓**Aphids:** Aphid activity increased again since last week, although the extremely hot weather should not be particularly favorable for aphid development. Mixed results have been seen with Lannate used for aphid control. Ground sprays of Provado have worn out, and aerial applications of any material are not as effective as those applied from the ground.

✓**Cranberry Fruitworm (CBFW):** Injury from CBFW remains at the same levels as last week (all egg laying stopped weeks ago). One site was seen in Burlington County with 4.5% of clusters infested.

✓**Blueberry Maggot (BBM):** Maggot flies are active on many commercial farms. However, trap counts still remain at "0" on many sites, especially around Hammonton. Active adults were seen this past week in several fields.

✓**Oriental Beetle:** Traps show a continued heavy flight, with high numbers of beetles being trapped on both Atlantic and Burlington County farms. Trap counts have been over 2000 per trap on some sites. A treatment threshold can be considered at 200 to 300 per trap.

✓**Disease:** Anthracnose is starting to show up in commercial fields and is present in about 4% of our samples. *Alternaria* is also becoming visible and is present in about 2% of samples. One field was examined last week which had been hit by hail earlier in the season. *Alternaria* infected berries were easy to identify in this field.

## Insect Trap Captures

### Tree Fruit - Southern Counties

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-PLPTB	PTB	
7-May	2.00	947	1.06	0.58		35.41	0.91	0.26	0
14-May	8.00	954	19.24	5.66		29.49	22.12	18.83	0
21-May	0.33	515	43.55	4.22		17.92	39.63	47.96	0
28-May	0.50	265	61.63	6.17		10.19	57.90	57.49	0
4-Jun	0.00	184	58.71	5.94		4.00	59.89	47.47	1.33
11-Jun	2.00	830	55.48	5.61		4.55	79.75	50.13	2.75
18-Jun	11.00	1458	62.94	5.79		5.37	87.58	50.17	5.33
25-Jun	20.67	1481	46.65	2.00	0.00	9.07	65.05	46.20	5.31
2-Jul	51.33	1755	31.51	2.21	0.00	12.62	44.34	37.30	7.00

### Tree Fruit - Northern Counties

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-PLPTB	PTB	
7-May	48.99	1062	0	0.30	0	32.51	0		
14-May	48.09	843	1.78	3.53	0	40.13	1.66		
21-May	23.51	381	6.83	3.18	0	15.90	8.47		
28-May	8.39	124	19.89	9.00	0	19.68	16.03		
4-Jun	1.64	82.39	27.05	8.92	0	24.23	30.22		
11-Jun	1.31	589	39.24	5.89	0	18.12	37.09	1.00	
18-Jun	17.50	997	54.56	5.03	0	11.05	44.57	0.44	1.54
25-Jun	36.20	974.81	33.65	2.27	0	6.47	24.92	0.11	1.08
2-Jul	42.21	1599	15.10	2.86	0	18.31	12.00	0.06	1.76

### Blueberries -

WEEK END:	Atlantic County						Burlington County					
	RBLR	OBLR	CBFW	SNLH	BBM	OB	RBLR	OBLR	CBFW	SNLH	BBM	OB
7-May	11.8						20.8					
14-May	20						20.5					
21-May	3.07	0.00	0.14				5.40	0.00	0.00			
28-May	4.86	4.91	0.69				0.33	3.00	1.25			
4-Jun	0.72	20.31	1.12				1.00	22.17	0.38			
11-Jun	45.79	16.93	1.50				6.30	16.33	3.56			
18-Jun	83.71	5.57	0.24	0.50	0.00	47.50	26.20	7.00	1.56	4.00	0.00	
25-Jun	45.41	1.78	0.12	0.87	0.10	96.4	26.40	3.71	0.33	0.89	0.03	255.3
2-Jul	42.21	0.24	0.04	0.86	0.02	325.5	48.70	1.17	0.00	1.06	0.41	588.8

**Insect Key:** RBLR-redbanded leafroller, STLM-spotted tentiform leafminer, TABM-tufted apple budmoth, CM-codling moth, LAW-lesser appleworm, AM-apple maggot, OFM-oriental fruit moth, LPTB-lesser peachtree borer, PTB-peachtree borer, OBLR-obliquebanded leafroller, CBFW-cranberry fruitworm, SNLH-sharpnosed leafhopper, BBM-blueberry maggot, OB-oriental beetle.

# Tree Fruit Grower Field Day

*Reprinted from the Penn State Cooperative Extension, Fruit Times Newsletter, Vol. 18, No. 8, June 1, 1999.*

Tree fruit growers in Pennsylvania and neighboring states are invited to a field day July 20 from 1:00 p.m. at Penn State's Fruit Research and Extension Center located at 290 University Drive, just off Route 234 west of Biglerville in Adams County. Parking and admission are free. A barbecued chicken dinner will be offered to those making reservations in advance of the July 13 deadline (\$5/person). Visitors will tour orchard research plots and hear presentations highlighting new research and extension programs.

## Entomology

Presentations will involve the latest research on new control tactics for various pests and their effects on natural enemies including both registered and near registered chemicals, the newest technologies in pheromone mating disruption (i.e., hand-applied dispensers, sprayables and puffers), and the effect of Apogee for tree growth control on certain insect populations.

## Extension Entomology

Presentations will discuss the latest tools and technologies in orchard pest monitoring and forecasting. The discussion will include the application of the newest weather prognosis system for the control of orchard pests. Living and preserved specimens of fruit pests as well as various types of insect traps will be on display.

## Horticulture

Information from research and demonstration plots will be presented on the following topics: apple rootstocks and varieties, reflective ground covers to enhance the red color of apples and peaches, the soon-to-be labeled growth control PGR, Apogee, and factors influencing thinning of apples.

## Nematology

Presentations will cover information on the management of plant-parasitic nematodes in orchards including the use of chemicals and cultural practices. Recent work on the use of green manure cover crops will be highlighted. Included in the presentation will be a discussion of the pros and cons of different methods and the future of nematode control for tree fruit production.

## Plant Pathology

Presentations will be made that cover the latest data on efficacy and application timing of new fungicides for control of apple diseases. Special emphasis will be placed on managing fire blight including the selection of apple rootstocks, usage of new copper compounds, and efficacy of the plant growth regulator, Apogee, for the prevention of shoot blight. An update on disease resistance management and minimum fungicide usage tactics for stone and pome fruits will be presented. □

*Submitted by Jerome L. Frecon, Agricultural Agent*

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**Note: Pesticide Credits Will Be Available and Will Be Given at the End of the Meeting.**

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**Mail meal reservations prior to July 13 by check payable to:**

**Peg Shaffer  
Fruit Research and Extension  
Center  
PO Box 330  
Biglerville, PA 17307-0330**

**For further details, please call  
(717) 677-6116.**

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