

# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

AUGUST 3, 1999

## EPA Acts to Reduce Children's Exposures to 2 Widely Used Pesticides

*USEPA Press Release: Monday, Aug. 2, 1999*



The U.S. Environmental Protection Agency announced cancellation agreements and risk reduction strategies to increase protection for American families and their children from risks posed by two of the oldest, most widely used chemical compounds that remain in use as pesticides today. EPA is eliminating specific uses of methyl parathion, and significantly lowering allowable residues for azinphos methyl on a wide variety of produce, including several fruits and vegetables regularly eaten by children. EPA today also laid out a rigorous 18-month schedule for completing its review of all the "organophosphates," a group of 39 older, common pesticides, which include methyl parathion and azinphos methyl. In addition to the organophosphates, the Agency has targeted several other older, widely used pesticides for priority review within the next year and a half, including the pesticides atrazine, aldicarb and carbofuran, among others.

"Our nation enjoys the safest, most abundant food supply in the world," said EPA Administrator Carol Browner. The Agency also is on schedule to meet all deadlines for ensuring safer pesticide use under the new Food Quality Protection Act." EPA's actions are being taken after an extensive scientific review of the risks posed by these chemicals. EPA has worked closely with the U.S. Department of Agriculture and the agricultural community to ensure that our decisions will not disrupt the growing and marketing plans of farmers. As adjustments are made to reduce pesticide risk, EPA and USDA also are working together to ensure that farmers will have alternative pest management tools and substitutes.

The Food Quality Protection Act (FQPA), which was passed unanimously by Congress under the leadership of the Clinton Administration and based on recommendations from the National Academy of Sciences, provides the public, especially children, with unprecedented protection from the risks of pesticide exposure. Under the Act, which the President signed in 1996, EPA is to apply, for the first time, a comprehensive set of new, more protective health-based standards. These standards incorporate the most current scientific knowledge available on pesticide risks, and include an additional 10-fold safety factor to address the special risks of children's exposures to pesticides.

*SEE FQPA ON PAGE 2*

## INSIDE

<b>EPA Acts to Reduce Children's Exposures to 2 Widely Used Pesticides .....</b>	<b>1</b>
<b>Disaster Relief in NJ .....</b>	<b>2</b>
<b>ReTain, Harvest Management Tool for Apples and Pears .....</b>	<b>3</b>
<b>Sevin Label Changes .....</b>	<b>3</b>
<b>Fruit IPM.....</b>	<b>4</b>

The reductions EPA is making today will address the unique risks children face when exposed to pesticides. For example, it is known that some pesticides pose a greater risk to infants and children because their bodies and internal organs are still developing, which makes them much more susceptible to the effects of pesticides. Children also ingest greater quantities of food and drink relative to their body weight, as compared to adults, which increases their exposure to pesticides.

Based on its concerns, EPA is eliminating the continued use of methyl parathion -one of the more potent organophosphates - on apples, peaches, pears, grapes, nectarines, cherries, plums, carrots, certain peas, certain beans, and tomatoes, among other fruits and vegetables. For azinphos methyl, also considered to be a pesticide of concern, the Agency is reducing application rates and requiring practices that will result in significant reductions in allowable residues on apples, pears and peaches.

The major manufacturers to enter into these agreements are, for methyl parathion, Cheminova Inc., Wayne, NJ, and Elf Atochem North America Inc., Philadelphia, PA. For azinphos methyl, the two primary manufacturers are Bayer Corp., Kansas City, Mo., and Makhteshim-Agan, Beer-Sheva, Israel.

In addition to significantly reducing the use of methyl parathion and azinphos methyl on foods popular among children, EPA has taken a number of additional measures to reduce pesticide risks, as called for by FQPA, including:

- completion of a review of one-third of all allowable pesticide residue levels on food by the August 3 deadline, as called for by FQPA;
- requiring hundreds of new studies on neurological and developmental effects of pesticides that will enhance EPA's ability to evaluate pesticides more protectively than ever before;
- new requirements that will provide farm workers with significantly greater protections;
- registration of 47 new, safer pesticides that can serve as lower-risk alternatives to more toxic pesticides, such as the organophosphates;
- EPA is also challenging manufacturers of pesticides to come forward with voluntary risk reduction measures similar to the announced requirements.

By the end of next year, EPA is scheduled to complete its reassessment of the organophosphates and several other older, more commonly used pesticides, and to meet the FQPA's food safety goals. A schedule outlining the review of the organophosphates, and a progress report on FQPA is available at: <http://www.epa.gov/pesticides>.

Submitted by Peter Shearer, Ph.D., Tree Fruit Entomology □

## Disaster Relief in New Jersey

Bruce Barbour, Assistant Director, Rutgers Cooperative Extension

This summer's drought has farmers thinking about the availability of federal aid. Discussions with Farm Service Agency (FSA) officials have helped us determine what may happen and what you must do to be eligible for any aid they offer.

First, what you should be doing right now:

1. Keep records of your expenses, yields and returns.
2. Do not harvest any drought-damaged crops until you contact your FSA office or county agent to document crop loss. Contact your crop insurance agent, if insured.
3. Report your acreage to the Farm Service Agency right away. Expect to pay a \$30 late fee, since July 15 was the filing deadline for most crops.
4. File a loss report (Form 574) with the FSA within 15 days from the time you are able to determine your losses on a given crop. You need to file one form 574 for each crop you have losses on.

Here's what you can expect to happen as data is collected and disaster determinations are made:

The first level of aid follows the declaration of a disaster area that includes your county. Emergency loans are made available to qualifying farms within the area at an interest rate of 3.75%. Threshold loss to qualify is 30% in any of your major farm enterprises.

The next level of aid is the Noninsured Crop Disaster Assistance Program (NAP). NAP aid is a grant that the farmer does not need to repay. NAP aid is available when area yields of a specific crop are 35% or more below normal. To be eligible for benefits the individual farm yield must be less than 50%. You report these losses on Form 574 mentioned above. The NAP compensates farmers for 55% of the crop's established average market price.

The third possible level of drought disaster assistance is the Crop Loss Disaster Assistance Program (CLDAP). This requires special federal legislation. It is potentially the most inclusive, covering all farms and crops. Like the NAP, the assistance is in the form of a grant which, in the 1998 crop year version of this program, covered 60-65% of the market price of the loss. In the past the collection of both NAP and CLDAP payments on the same loss was allowed, thus achieving a greater compensation for loss.

Other forms of stress relief are available from FSA:

1. Refinancing of loans from FSA and other creditors is possible.
2. A one-time write down of FSA debt may be possible without having to declare bankruptcy.
3. Under certain conditions debt can be set aside, which means that overdue payments can be moved to the end of the loan, making your account current.

For the latest word contact your local FSA office. □

# ReTain, Harvest Management Tool for Apples and Pears

*Win Cowgill, Agricultural Agent*

It is time to consider the use of ReTain, a plant growth regulator, as a harvest management tool. Our season is running about normal as to harvest date but the drought stress on many blocks may effect how Retain will perform. The label states that ReTain should not be applied to trees under stress, including drought and heat stress. Please read the label carefully before utilizing ReTain in 1999.

ReTain is labeled for both apples and/or pears. It must be applied at a minimum of 28 days prior to anticipated harvest, therefore it is essential you carefully project your ripening dates. For most growers of Gala the 28 day window is rapidly approaching or is past. Research has shown ReTain to be effective in reducing stem cracking in Gala and Fuji. This may be an added benefit.

ReTain should be considered for use on blocks of apples with high value, blocks prone to drop, and blocks where there is benefit to spreading out the harvest period to manage labor more efficiently. With the cost of treatment around \$250 per acre it is important to use it on blocks where you will receive the most benefit. Gala is one cultivar that benefits by reducing stem cracking and delaying maturity, allowing the fruit to size more. Larger fruit bring a premium.

ReTain works by retarding the development of ethylene, the chemical that causes ripening. The active ingredient is a naturally occurring product, aminoethoxy-vinyglycine (AVG), which is produced by fermentation.

ReTain is a true harvest management tool with multiple benefits. It works as a stop drop material, holding drop prone varieties on the tree as good or better than NAA. It does delay maturity on average from 7-10 days. Fruit treated with ReTain can be picked during the normal harvest period for enhanced retention of firmness in CA or regular cold storage, or harvest may be delayed, allowing the fruit to continue to grow and develop red color for an extended time.

In Washington State growers are excited about ReTain because of its ability to enhance the storage quality of Red Delicious. In a 4000 bin pooled experiment, 2000 treated with ReTain and 2000 untreated, ReTain treated fruit was 2 lbs. firmer allowing it to make export grade. New Jersey grown apples in regular cold storage will see the same firmness enhancement with ReTain treated fruit.

ReTain is a natural product which is very expensive to manufacture. Because of this, it should only be used in blocks with large crops of unblemished fruit.

There are some important considerations to follow with ReTain applications in New Jersey this year:

- Use the full rate of ReTain, 1 pouch or 333 grams/Acre of formulated product with an organosilicone surfactant at 0.10 % (v/v)
- ONLY use one of the following organosilicone surfactant: Silwet L77 at 13 fluid ounces per 100 gallons; Sylgard 309 at 13 fluid ounces per 100 gallons
- Apply 4 weeks before anticipated harvest (28 day PHI), it is better to apply slightly earlier rather than later
- Water Volume- ReTain should be applied with a sufficient amount of water to ensure thorough wetting of the fruit while avoiding spray run-off. Adjust water volume based on tree size and spacing. The label indicates 100 gallons per acre or 2X Tree Row Volume-dilute to be effective.
- For optimum results apply during periods of slow drying weather conditions. No rainfall or overhead irrigation should occur within eight hours of ReTain application.
- Do not tank mix ReTain with other agricultural products.
- Do not apply NAA or ethephon products to ReTain treated blocks.

ReTain is an exciting new harvest management tool for New Jersey growers. If you have specific questions regarding the use of ReTain please feel free to contact me at 908-788-1339.

For additional information consult the label and the Virtual Orchard at <http://www.virtualorchard.net/rce/research-reports.html> □

---

## Sevin® Label Changes

*Peter W. Shearer, Ph.D., Tree Fruit Entomology*

There has been a label change to Sevin® that is not reflected in the Rutgers 1999 Tree Fruit Production Guide. The pre-harvest interval (PHI) for this product is 3 days for both pome and stone fruit. Not all manufactures have completed this label change on their packages so there may be product in your possession that reflects the old PHI's (3 days on nectarines and apricots, and 1 day on other tree fruits). Current use should be based on the labeled product in possession of the applicator. Remember, read and follow the label. □

# Fruit IPM

Dean Polk, Fruit IPM Agent

## Peach

✓ **Oriental Fruit Moth (OFM):** Oriental fruit moth adults are in the middle of the third generation flight. Highest counts are 120 moths per trap, but average about 24 moths per trap. We are suggesting that in at least the southern half of the state, growers use a Lannate or pyrethroid (Asana, Ambush/Pounce) based spray program. Lannate should be used in combination with another insecticide, while Asana (21 day PHI) or Ambush/Pounce (14 day PHI) may be used alone. This is the peak of egg laying and egg hatch. *Do not stretch spray intervals during this time period.*

✓ **Catfacing Insects and Ground Cover:** Low numbers of tarnished plant bugs are being found in the ground cover. These are not a concern now, since they will be controlled with sprays applied for OFM.

✓ **Brown Rot:** Very little disease pressure is present. While light rates of fungicide may be used on late varieties, spray intervals should not be stretched because of OFM pressure.

## Apple

✓ **Spotted Tentiform Leafminer (STLM):** Trap captures of adult moths increased since last week while sap feeding larvae continue to emerge from eggs. Some growers are being challenged by STLM pressure, while trying to decide what to use. Listed below are 4 products that will control STLM, with suggested retail prices. Note Lannate has 2 rates given, in case the lower rate is combined with another product. Also note that while the lowest label rate of Spintor (for STLM) is 4 oz/A, a 5 oz rate is given here. 5 oz/A is the lowest label rate needed for TABM, which is also active at this time. If TABM is not a target (such as the case in many northern counties), then Spintor may be used at the 4 oz rate. Lannate is also effective for TABM. None of these products work well against tissue feeding larvae, and all of them should be applied when there is peak adult activity and miners are just entering the leaves.

✓ **Tufted Apple Budmoth (TABM):** TABM is in the middle of the second flight. The second of 4 alternate middle sprays is due now (8/3-4), with the third spray due around 8/10-11. Confirm sprays should be applied at about 30% egg hatch or around 8/5-6 in southern counties.

FQPA and negative press about organophosphates:

With the recent negative press about Guthion, PennCap and other standard organophosphate (OP) insecticides, growers may wish to move away from these materials where possible. Here are some options:

1) **Confirm** is thought of as one of the newer "soft" materials. Use it where possible (in southern counties), but remember it is primarily for TABM. Although it is also effective for codling moth, timing is different. However, codling moth is more than 60% hatched at this point, and at least 3 alternate middle sprays of insecticide should have already been applied for CM. Confirm should be applied at initial egg hatch for CM, but additional sprays are often needed when there is a prolonged flight. If you use Confirm for the TABM timing, you are in a sense making one of the additional sprays for CM at the same time. As long as the initial 3-4 alternate middle, or 2 full cover sprays of a standard material have been applied for codling moth, then an additional spray of Confirm applied for TABM will also help control CM. Confirm is not effective for oriental fruit moth (OFM), which is also present in some apple orchards.

2) **Spintor** is labeled for apples, is a naturally derived product, and also a "soft" material. It is a good material for STLM control, and also effective for TABM at a slightly higher rate. Growers may wish to use Spintor for STLM control and also achieve control of TABM at the same time. Use a minimum 5oz/A rate for TABM control. More than 1 application is needed for TABM (see above).

3) **Pyrethroids** are another option, but one that has been discouraged in the past, since pyrethroid use will often build mite populations. However, we are late in the season, and mite build-ups are not as much of a concern as they would be in late June or early July. Pyrethroids are effective for many pests, are comparatively less expensive, and do represent another choice.

4) **Bts** such as Dipel and others represent another alternative. These can be used for leafroller and TABM control, but not for CM or OFM. Use a high volume of spray if using Bts, and use at least the same number of applications as you would use with organophosphate compounds.

5) **Provado** can be used for sucking insects, leafminers, and leafhoppers. It is not effective for CM, OFM, TABM, or leafrollers. If STLM is a target at this time, then Provado can be an option.

SEE IPM ON PAGE 5

Product	Spintor		Vydate	Lannate-SP		Lannate-LV		Provado
Rate/A	5 oz	6 oz	3 pt.	5 lb	1 lb	1.5 pt	3 pt	6 oz
Suggested Retail Cost/A	\$22.25	\$26.70	\$20.63	\$9.15	\$18.29	\$8.88	\$17.26	\$21.96

6) Lannate and other carbamates like Vydate and Sevin, are not organophosphates, and are not as much in the negative spotlight at present, but they will be in the near future. They are all familiar to growers, and are effective for many of our key pests.

For Peaches - pyrethroids, Bts, and Lannate are the ONLY options for this season.

✓ **Codling Moth (CM):** The second full cover application of insecticide was due throughout most of the state around 7/25-26. If using alternate middle sprays, they should be continued on a weekly basis through this week under normal conditions. Additional sprays may be needed if trap counts remain above 5 moths per trap by next week.

**Insect Trap Captures**

**Tree Fruit - Southern Counties**

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-P	LPTB	PTB
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		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
9-Jul	98.67	2131	15.63	4.39	0.00	13.41	19.08	42.83	12.27
16-Jul	8.67	1203	12.50	4.81	2.00	11.72	14.94	33.94	10.18
23-Jul	4.00	1547	22.06	4.06	0.10	8.42	17.13	25.05	5.00
30-Jul	9.00	1155	25.13	6.89	0.27	24.12	23.30	23.07	13.40

**Tree Fruit - Northern Counties**

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-P	LPTB	PTB
4-Jun	1.64	82.39	27.05	8.92		24.23	30.22		
11-Jun	1.31	589	39.24	5.89		18.12	37.09	1.00	
18-Jun	17.50	997	54.56	5.03		11.05	44.57	0.44	1.54
25-Jun	36.20	975	33.65	2.27		6.47	24.92	0.11	1.08
2-Jul	42.21	1599	15.10	2.86		18.31	12.00	0.06	1.76
9-Jul	82.66	1677	9.89	1.45		29.12	8.47	0.00	5.38
16-Jul	48.19	810	2.17	2.21	0.00	17.73	1.62	0.00	4.74
23-Jul	12.24	1122	2.24	4.18	0.00	20.06	2.90	0.00	4.25
30-Jul	6.76	1323	2.13	6.98	0.00	23.75	2.43	0.00	2.21

**Blueberries - Atlantic County**

WEEK END:	RBLR	OBLR	CBFW	SNLH	BBM
4-Jun	0.72	20.31	1.12		
11-Jun	45.79	16.93	1.50		
18-Jun	83.71	5.57	0.24	0.50	0.00
25-Jun	45.41	1.78	0.12	0.87	0.10
2-Jul	42.21	0.24	0.04	0.86	0.02
11-Jul	45.86	0.30	0.07	0.55	0.29
18-Jul	11.79	1.36	0.00	0.38	0.88
25-Jul	6.11	0.88	0.00	0.14	0.98
1-Aug	19.52	3.87	0.00	0.02	0.67

**Blueberry**

✓ **Blueberry Maggot (BBM):** Captures of adult flies in commercial fields remained at similar levels as last week, with slight increases in Burlington County. Since most of the farms we are working with in Burlington County produce mainly Bluecrop, this is not much of a concern. However, adults are still flying in Atlantic County where there is still a considerable amount of Elliott in the fields. Trap captures usually increase in these fields during early to mid August. Therefore, growers should maintain sprays for maggot in these areas.

✓ **Leafrollers:** Trap captures of OBLR adults are being seen this week. Eggs will be laid and larvae should emerge after most of the Elliott has been picked.

**Burlington County**

WEEK END:	RBLR	OBLR	CBFW	SNLH	BBM	OB
4-Jun	1.00	22.17	0.38			
11-Jun	6.30	16.33	3.56			
18-Jun	26.20	7.00	1.56	4.00	0.00	
25-Jun	26.40	3.71	0.33	0.89	0.03	255.3
2-Jul	48.70	1.17	0.00	1.06	0.41	588.8
11-Jul	33.33	0.57	0.38	0.49	0.74	621.0
18-Jul	8.20	0.86	0.22	0.43	1.66	120.6
25-Jul	1.50	0.14	0.11	0.10	2.18	90.6
1-Aug	0.50	0.43	0.00	0.00	2.36	10.63

Rutgers Cooperative Extension - NJAES  
U.S. DEPARTMENT OF AGRICULTURE  
Rutgers - The State University of New Jersey  
Plant & Pest Advisory  
18 College Farm Road  
Cook College  
New Brunswick, N.J. 08901-8551

## **PLANT & PEST ADVISORY**

### **FRUIT EDITION - CONTRIBUTORS**

#### Rutgers Cooperative Extension Specialists

Robert Belding, Ph.D., Pomology  
Joseph A. Fiola, Ph.D., Small Fruit & Viticulture  
George Hamilton, Ph.D., Pest Management  
Norman Lalancette, Ph.D., Plant Pathology  
Bradley A. Majek, Ph.D., Weed Science  
Peter Oudemans, Ph.D., Plant Pathology  
Sridhar Polavarapu, Ph.D., Entomology  
Peter W. Shearer, Ph.D., Entomology  
Nicholi Vorsa, Ph.D., Breeding, Genetics and Culture

#### NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding

#### Rutgers Cooperative Extension Agricultural Agents and Program Associates

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)  
Gloucester County, Jerome L. Frecon (609-863-0110)  
Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)  
Morris County, Peter J. Nitzsche (973-285-8300)  
Warren County, William H. Tietjen (908-475-6505)  
Fruit IPM, Dean Polk (609-758-7311)  
Meredith Peters, Program Associate (908-788-1338)  
Gene Rizio, Program Associate (609-566-2900)  
David Schmitt, Program Associate (609-863-0110)

#### Newsletter Production

Jack Rabin, Assistant Director, NJAES  
Cindy Rovins, Editor and Designer  
Mary Ann Hughes, Assitant Editor

The Plant & Pest Advisory invites reproduction use of individual articles, only in their entirety, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

Rutgers Cooperative Extension provides information and educational services to all people without regard to sex, race, color, national origin, disability or handicap or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.

**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.

**Use of Trade Names:** Trade names are used in this publication with the understanding that no discrimination is intended and no endorsement is implied. In some instances the compound may be sold under different trade names, which may vary as to label clearances.