Ohio
Fruit ICM News

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In This Issue

Calendar

July 14: Penn State Grower Field Day, Penn State University, Fruit Research and Extension Center. See following article.

July 14: Piketon Berry/Horticulture Field Night, 1864 Shyville Poad, Piketon, OH 44661. Contact Shawn Wright at 740-289-2071 for details.

September 20-22: Farm Science Review, Molly Caren Agricultural Center, London, OH. Details at: <http://fsr.osu.edu>

November 15: Ohio Ag and Hort Human Resource Managers' Forum, Hilliard, OH, 10:00 AM-2:30 PM. Registration and fee requested by November 8. Contact Mid American Ag and Hort Services at 614-246-8286, maahs@ofbf.org or visit <www.midamservices.org> and click on 'Events' for registration form and details.

Deadline Fast Approaching for Penn State Grower Field Day

Source: Karen Weaver, Penn State University Fruit Research and Extension Center

You are invited to attend the Penn State University Fruit Research and Extension Center 2005 Grower Field Day on July 14, 2005. The Field Day registration will be held between 12:00 noon and 1:00 p.m., and the Grower Day Program will begin at 1:00 p.m.

Concurrent research and educational sessions will be held throughout the day. Participants will choose between Tour A and Tour B for both Sessions I and II. Each tour includes all of the topics listed under the tour title. Dinner will be served at 5:45 p.m. The cost to attend the Grower Field Day is $10.00 and includes educational handouts, drinks at breaks, and dinner.

Please join us for an afternoon of seeing and hearing the latest research information for tree fruit and grape growers, followed by a delicious chicken barbeque dinner. Also, please show your support for the Center to the administration within the College of Agriculture Sciences by attending.

The details of the day's activities and the registration form can be found later in this newsletter. The deadline for registration is fast approaching, and has been extended to July 5. There will be time throughout the day for you to ask questions of the scientists regarding their research.

Ag Publications Help Truckers Hit the Road, Legally

Source: Steve Leer, Ag Answers editor/writer, Department of Agricultural Communication, Purdue University

Federal and state transportation laws can be confusing to farmers and others who haul and deliver agricultural products over-the-road. Vehicle operators need to understand the regulations so they can keep on truckin' legally, said a Purdue University Extension specialist. Regulations are far more stringent for those who haul heavier loads over greater distances for hire, said Fred Whitford, coordinator of Purdue Pesticide Programs. "There's a tremendous difference between farmers who transport their own goods and commercial drivers who haul supplies and materials for co-ops and independent ag retailers," Whitford said. "Farmers are given many exemptions to federal Department of Transportation and state regulations, as compared to the commercial operators."

Those regulations, and which ones apply to whom, are contained in two new Purdue Extension publications. *Carrying Farm Products and Supplies on Public Roads*, Extension publication PPP-68, is geared for exempted farmers. *DOT Rules of the Road*, Extension publication PPP-65, is aimed at businesses and farmers who operate commercially. The publications cost $1 each and are available through Purdue's Media Distribution Center.

Both publications also can be downloaded online at **no charge** by logging onto: <http://www.btny.purdue.edu/PPP/PPP_pubs.html>

For a farmer to be exempt from commercial operator's rules they must meet specific criteria, said Whitford, lead author of the two Purdue publications. "Farmers have to stay within 150 miles of their farm when transporting goods, must be hauling their own products -- with some exceptions, and must use their own vehicles," he explained.

The law also defines DOT regulations and what inspectors can check along highways. "In the state of Indiana, any vehicle or combination of vehicles over 10,000 gross vehicle weight is subject to DOT and state regulations," Whitford said. "The regulations cover transportation rules that deal with commercial drivers licenses (CDLs), medical cards, annual vehicle inspections, placards for hazardous materials, training, log books, and the list goes on."

In addition to those topics, *DOT Rules of the Road* covers such topics as the regulatory structure of transportation, roadside inspections, compliance audits, vehicle safety, and hauling hazardous chemicals. The 86-page publication also contains a list of the nine classes of hazards in the DOT classification system.

Indiana law allows farmers not driving for hire to enjoy a plethora of exemptions, which are covered in *Carrying Farm Products and Supplies on Public Roads*, Whitford said. **(Editor's note: Readers in other states are advised to check applicable laws within their own state.)** "They're given such exemptions as purchasing farmer plates, driving a combination semi-truck needing nothing more than a regular license and a medical evaluation, using off-road fuel that's not taxed, given a 10 percent allowance over their weights when they're hauling to their first destination, and hauling two anhydrous tanks without needing a hazardous endorsement or CDL," he said. "Farmers are given the exemptions in good faith that they are not going to be hauling, for money, other people's products, and that they are going to be staying local."

Other issues addressed in the 38-page exempt farmer publication include seat belt usage, surge brakes, slow-moving-vehicle signs, legal lengths and widths of farm vehicles, hazardous materials transportation security plans, weigh stations, and regulatory reciprocity between Indiana and bordering states. Because many transportation laws are similar among states, farmers in all parts of the United States should benefit from information in the two publications, Whitford said. He added that he knows of no other Extension publications as thorough on ag-related transportation regulations.

To order the publications from the Media Distribution Center, call Purdue's toll-free Extension hotline at 1-888-398-4636 (EXT-INFO). Other contributors to the publications were Steve Salomon, Excel Co-op; Michael Templeton and Delinda Davis, Indiana State Police; Gerry Blase, Asplundh Railroad; Brian Miller, Agrium Retail; and John Massey, Western Farm Service.

To What Family *Does* That Miticide Belong?

Source: Hannah Fraser, Entomologist, Hort Crops/OMAF; Neil Carter, Tender Fruit and Grape IPM Specialist/OMAF Hort Matters Newsletter, June 27, 2005

Here's a quick reference chart listing some of the miticides we have registered in Ontario (incomplete listing), along with their chemical families. Groups with different numbers mean that they have different sites of action and are likely not cross-resistant. Remember to check labels for information on what species of mite they are effective against, rates, and registration status on various crops.

Brand or Trade Name(s)	Common Name Active Ingredient	Chemical Family or Activity Group	Target Life Stage +	Mode of Action (MOA)
Agri-Mek or Avid	abamectin	avermectin (6)	motiles	paralysis; chloride channel agonist
Apollo	clofentezine	tetrazine (10)	primarily eggs	mite growth inhibitor; ovicide
Acramite or Floramite	bifenazate	carbazate (aka carboxylic acid ester) (25)	motiles	GABA antagonist in the peripheral nervous system
Carzol	Formetanate hydrochloride	carbamate (1A)	motiles	Acetylcholinesterase inhibitor
Endosulfan or Thiodan	endosulfan	Organochlorine/ Chlorinated cyclodiene (2A)	motiles	GABA-gated chloride antagonist
Envidor	spirodiclofen	tetronic acid derivative (23)	eggs, nymphs, and adult females	Interference with lipid biosynthesis, novel MOA
Insecticidal Soap (various)	potassium salts of fatty acids	Soap	motiles	physical poison
Kelthane	dicofol	Organochlorine/ diphenylethane (3)	motiles	Disrupts the sodium / potassium pump; nerve poison
Malathion	malathion	organophosphate (1B)	motiles	Acetylcholinesterase inhibitor
Pyramite or Sanmite or Dyno-mite	pyridaben	pyridazinone (21)	motiles (red mites); nymphs (spider mites)	Site 1 electron transport inhibitor
Superior Oil	mineral oil	oil	primarily ovicidal, some nymphs	Physical poison
Vendex	fenbutatin oxide	organotin miticides (12)	motiles	Disrupts ATP formulation

***** Developed in consultation with Mitch Pogoda, Biologist, Pesticide Minor Use Program, AAFC Vineland
+ "Mobiles" are active stages: nymphs and adults

Fresh Apple Holdings Up 59 Percent

Source: <http://www.fruitgrowersnews.com>

June 20, 2005 - Total U.S. holdings of fresh and processing apples on June 1 were 34.3 million bushels, 56 percent more than holdings on June 1, 2004, and 24 percent more than the five-year average of 27.7 million bushels. Holdings of fresh-market and processing apples in CA storage on June 1 were 32.3 million compared to June 1, 2004, and 20 percent more than the five-year average for that date. Total processing apple holdings as of June 1 were 11.4 million bushels, a 51 percent increase from June 1, 2004, and 28 percent more than the five-year average for processing holdings for that date. **Fresh Apple Holdings**

Total fresh-market apple holdings of 22.8 million bushels on June 1 were 59 percent more than at the same time last year and 22 percent more than the five-year average. On a regional basis, fresh holdings in the Northeast were 22 percent lower than holdings on June 1, 2004, but 11 percent higher than the five-year average for that date. Southeast June 1 fresh holdings were 80 percent less than on June 1, 2004, and 82 percent less than the five-year average for that date. In the Midwest, June 1fresh holdings were down 2 percent as compared to holdings on June 1, 2004, and 31 percent less than the five-year average. Fresh-market apple supplies were sold out in the Southwest on June 1 and also on June 1 last year.

These holding are below the five-year average of 11,000 bushels. Northwest June 1 fresh holdings were 72 percent more than on June 1, 2004, and 25 percent more than the five-year average for that date. Fresh CA holdings as of June 1were up 52 percent compared to June 1, 2004, and 17 percent more than the five-year average for holdings on that date. **Varietal Holdings**

On a varietal basis, June 1 fresh Red Delicious holdings were 11.7 million bushels, a 66 percent increase from 2004 and 3 percent more than the five-year average. Fresh Golden Delicious holdings of 4.1 million bushels were 106 percent over last year's holdings and up 37 percent as compared to the five-year average.

June 1 fresh Granny Smith holdings of 2.4 million bushels increased 10 percent from holdings on June 1, 2004, and were 43 percent more than the five-year average. McIntosh holdings on June 1 were 285,000 bushels, down 12 percent from holdings on June 1, 2004, but up 59 percent from the five-year average.

Fresh Fuji holdings of 2.5 million bushels on June 1 were up 153 percent compared to last year's holdings on that date and were up 141 percent compared to the five-year average. Fresh Gala holdings on June 1 were 142,000 bushels, 58 percent less than June 1, 2004, levels, but 38 percent more than the five-year average. Fresh Empire holdings were 252,000 bushels, 54 percent lower than 2004 and 31 percent less than the five-year average.

May Movement

May 2005 fresh apple movement of 10.8 million bushels was 44 percent higher than May 2004 and 28 percent more than the five-year average.

Movement of fresh-market apples from controlled atmosphere (CA) storage was 39 percent higher than in May 2004 and 24 percent more than the five-year average. Total movement of 15.9 million bushels in May 2005 was 29 percent more than in May 2004 and 21 percent more than the five-year average of 13.1 million bushels, according to the U.S. Apple Association's (USApple) June 1 survey of apple storage facilities. Regionally, movement of fresh-market apples in the Northeast was 9 percent more than May 2004 and 9 percent higher than the five-year average.

May 2005 movement in the Southeast was 34 percent less than May 2004 and 51 percent lower than the five-year average. May 2005 movement of fresh-market apples in the Midwest was 8 percent lower than May 2004 but 9 percent higher than the five-year average for the month.

In the Southwest, movement was 27,000 bushels compared to no movement in May 2004 but 38 percent below the five-year average. Movement of fresh-market apples from the Northwest was up 55 percent from May 2004 and 33 percent more than the five-year average for the month.

Are Fungicides Needed for Fruit Disease Management in Dry Weather?

Source: John Hartman, U.K. Extension Plant Pathologist

For the past five weeks, Kentucky fruit growers have faced less disease pressure than has been experienced in recent years. Aside from two moisture-driven infection periods May 13 to 15 and 19 to 21, there have been few or no other disease-favorable weather events. Many Kentucky locations have received less than two inches of rain since the first of May. During this same period in 2004, many locations received ten or eleven inches of rain, and in 2003, seven or eight inches. Fruit crop disease management was difficult in 2003 and 2004.

Growers might be wondering whether or not there is a need to continue spraying their fruit trees or grapes if the fungicide residue is still visible on the leaves. The lack of rain for several weeks has limited the washing-off of fungicide residues. Since fruits are still enlarging and new foliage is still emerging, unexpected rains could still provide foliage and fruit rot infection opportunities. Thus, one should probably continue spraying.

However, it depends. . . it depends on the type of fungicides used, and it depends on what kinds of diseases are likely to cause problems in the orchard or vineyard. It depends on whether diseases are currently under control. With scattered pop-up showers in the forecast, it depends on how much rain falls and how long leaves would remain wet.

Diseases & Disease Pressure

- **Apple scab:** If, because of diligent early-season management, apple scab is absent from the orchard, secondary infections from prior scab lesions are not likely. In addition, primary inoculum from last year's infections is likely all gone. Scattered showers often don't provide prolonged leaf wetness to cause infection problems in any case. Should the weather change, the scab fungus, if it is present in the orchard (disease pressure), will resume activity. Growers can use a fungicide such as Nova, Rubigan, or Procure to eradicate resulting infections even after the wetting event.
- **Grape black rot:** Grape vines are still elongating, and large amounts of unprotected plant tissue are vulnerable to attack. The fruits, at or just past bloom, are also vulnerable. Continued fungicide applications are advised, but if diseases are absent from the vineyard, application intervals can be stretched during dry weather.
- **Peach scab:** The critical shuck-split spray period is past, but fungicide use needs to continue, especially for brown rot management as fruit begins to ripen.
- **Apple and grape powdery mildew:** For infection to occur, this fungus does not need leaf wetness, just high humidity, and we have plenty of that. If there is a history of powdery mildew in the orchard or vineyard, growers should reapply their mildew fungicides because the captan or mancozeb residues don't control powdery mildew anyway.
- **Apple fruit rot diseases:** Enlarging fruits are not well protected, because new surfaces appear each day. Relatively short periods of wet weather are needed for infection, and "pop-up" thunder- showers could provide that opportunity. This might be the most compelling reason to continue with fungicide sprays.
- **Apple Sooty blotch and flyspeck:** These diseases are not likely to become active until much later in the season if dry weather persists. Fungicides used: Locally systemic fungicides such as Nova, Procure, and Rubigan, which move inside the leaf, lose their effectiveness after about a week or ten days in any case, even when they are protected from rain. The same should be true of Topsin-M which is systemic, and strobilurin fungicides such as Abound, Flint, or Sovran, which are mesosystemic. If these fungicides are called for, they might need to be reapplied. Protectant fungicides such as captan or mancozeb are likely still present on the leaves if they are visible. They might not need to be reapplied.

There is little information available on how sensitive these protectants are to degradation by sunlight, but most of the concern about loss of effectiveness is related to fungicide removal by rain.

How much rain? It is said that anywhere from one-half to one inch of rain is needed to deplete half the fungicide residue on the fruit or foliage. It is important for growers to monitor the rainfall in the orchard and the vineyard to at least have an estimate of how much weathering has occurred. If more than half of the fungicide has been lost, it may be time to reapply.

Japanese Beetle

Source: Richard A. Weinzierl, Professor and Extension Entomologist, Department of Crop Sciences, University of Illinois

Japanese beetles have started to emerge at least as far north as Champaign, and numbers have been very high in some southern counties, so it must be time again for my annual piece on this creature's life history and pest status, as well as updates and reminders on its control.

The Japanese beetle is an "introduced" pest in North America. It was brought to the United States accidentally in the early 1900's with plant materials from Japan. It has since spread across much of the eastern United States to the Mississippi River, and local populations are established in Texas, Oklahoma, Missouri, and Minnesota. The spread of the Japanese beetle in North America is detailed at this site: <http://www.oardc.ohio-state.edu/biocontrol/images/jb_map.jpg>

Japanese beetle larvae (grubs) feed on the roots of a wide range of grasses and can be serious pests of turf. In most of Illinois, the common grub that has damaged lawns and golf courses has been the annual white grub or masked chafer, *Cyclocephala* spp. It remains unclear whether or not larvae of the Japanese beetle will become as damaging to turf here as populations build.

Adult Japanese beetles feed on the fruits and foliage of over 275 different plant species. Among the host plants that they prefer the most are roses, grapes, American linden, cherry, plum, peach, apple, flowering crab apples, Norway maple, and Japanese maple. In small fruit production in Illinois, adult Japanese beetles feed on the foliage of grapes and the foliage and fruits of blueberries and brambles. They also aggregate in mass to feed on fruits of peaches.

Adult Japanese beetles are about 3/8-inch long, with metallic green bodies and coppery-brown front wings (wing covers). Five tufts of white hairs (white spots) are visible along each side of the abdomen, and a sixth pair of white tufts are visible at the tip of the abdomen. Larvae are typical C-shaped grubs, with three pairs of legs on the thorax and no legs or prolegs on the abdomen. Newly hatched larvae are about 1/16 inch long; mature larvae are about 1 1/4 inch long. Larvae of the Japanese beetle can be distinguished from larvae of other grub species by the V-shaped pattern of spines (the raster) at the tip of the abdomen.

Mature larvae of the Japanese beetle pupate in the soil in late spring, and adults emerge from June through August; adult emergence begins earlier in the southern portion of the region. Ron Hines at the University of Illinois Dixon Springs Agricultural Center in the far southern portion of the state has been catching them in traps for 2 to 3 weeks now.

Females emit a sex pheromone to attract males, and mating occurs in the turf or other grasses where the female emerges; additional matings occur later, on the plants on which adults feed. Adults find a suitable host plant, begin feeding, and both sexes emit an aggregation pheromone to attract other beetles to the same plant. Females feed, lay eggs in grassy areas, and return to host plants to mate and feed again, completing several cycles of this behavior. Each female lays 40 to 60 eggs.

Because adult beetles can live for several weeks and emergence from pupae spans a period of several weeks as well, Japanese beetle adults may be present from June through October in at least some areas. Larvae hatch from eggs in July, August, and September, and they feed on the roots of grasses until cold temperatures trigger their movement downward in the soil to depths of 4 to 8 inches; they survive prolonged exposure to temperatures of 25°F at that depth with little or no mortality. In the spring, partially grown larvae move upwards in the soil and resume feeding on roots. They pupate in May and June.

The Japanese beetle life cycle is available at this Ohio State University Ohioline site: <http://ohioline.osu.edu/hyg-fact/2000/2504.html>

Japanese Beetle Management

Biological control agents are available for reducing numbers of Japanese beetle larvae in soil. They include the "milky disease" bacteria *Bacillus lentimorbis* and *Bacillus popilliae* and the insect-parasitic nematodes *Steinernema carpocapsae* and *Heterorhabditis* spp. However, if the goal is to reduce adult damage to fruit or vegetable crops or ornamental plants, the great mobility of adult beetles limits or negates the value of larval control unless it is practiced on an area-wide basis. Most fruit and vegetable growers must focus on adult control to limit crop losses. Although traps that attract and kill great numbers of Japanese beetles are marketed widely, studies have shown repeatedly that these traps do not reduce beetle populations enough to protect nearby plants, and in some instances damage is greater on plants near traps than on those in areas where traps are not used at all.

Exclusion (by use of plant covers) and the use of insecticides are the only effective options for protecting small fruit crops from Japanese beetle adults. Plant covers (with textures similar to floating row covers) can be practical for protecting small numbers of blueberry plants or a very few small peach or apple trees when fruit is ripening, but covers rarely are feasible for protecting grapes (because sprays for fungal diseases are needed at the same time as protection from Japanese beetles) or brambles (bees are still visiting and pollinating some flowers while ripening fruit is vulnerable to Japanese beetles).

Insecticides labeled for use on blueberries, grapes, and brambles for Japanese beetle control are listed in the *2005 Midwest Small Fruit and Grape Spray Guide*. Danitol and Sevin are effective choices for use on grapes until harvest approaches; preharvest intervals are 21 days and 7 days for Danitol and Sevin, respectively. Closer to harvest, malathion is moderately effective and has a 3-day preharvest interval (PHI). Pyrethrins or pyrethrins plus rotenone provide moderately effective control and can be used in organic production. In blueberries, if control is needed it is usually during harvest or very shortly before harvest. Although Asana is effective and labeled for application to blueberries, its 14-day preharvest interval prevents its use when infestations usually occur.

Sevin (7-day PHI), malathion (1-day PHI), and pyrethrins or pyrethrins plus rotenone (0- or 1-day PHI) are moderately effective.

In brambles, Capture (3-day PHI), malathion (1-day PHI), and pyrethrins or pyrethrins plus rotenone (0- or 1-day PHI) provide adequate control. Several insecticides are labeled for application to apples and peaches for Japanese beetle control. In general, the organophosphates (Imidan and Guthion), carbamates (primarily Sevin), and pyrethroids (several) used in cover sprays aimed at codling moth and other fruit-damaging pests are effective against Japanese beetles as well.

See the *2005 Midwest Commercial Tree Fruit Spray Guide* at <http://www.extension.iastate.edu/pubs/PM1282/CTFSPBODY.pdf> and specific insecticide labels for rates and restrictions.

In peaches, pre-harvest intervals for effective insecticides are: Asana - 14 days, Imidan - 14 days, Guthion - 21 days, malathion - 7 days, Neemix - 0 days, Pounce - 14 days, Sevin - 3 days, and Warrior - 14 days. Sevin is often the best alternative for peach growers as the crop nears harvest.

For all these insecticides, the key to adequate control is to scout regularly (once or twice weekly) and treat when damaging numbers of beetles occur on foliage or fruit. Just as important is to scout again beginning a couple of days after treatment to detect reinfestation - something that usually happens with Japanese beetles - and treat again if necessary.

Dogwood Borer

Source: Common Tree Fruit Pests by Angus H. Howitt

The adult dogwood borer is a typical black and yellow sesiid moth, similar to adult peachtree and lesser peachtree borers (and often found in pheromone traps for those two pests), but its wingspan of 1.4 to 2 cm makes the dogwood adult much smaller than the average-sized adults of either of the other two borers.

The female has a wide, yellow band on the fourth abdominal segment; the male has a much narrower band on the same segment.

The dogwood borer is a native clearwing moth found in all parts of the United States east of the Rocky Mountains. It occurs throughout the apple-growing areas of the eastern United States and Canada on a wide range of host plants, including oak and their galls, dogwood, black cherry, apple, mountain ash, hickory, willow, birch, American chestnut, beech, elm, pine, elm, and myrtle.

On apple, the borer was not an economic problem until the introduction of clonal rootstock, which are much more prone to produce burr knots than conventional rootstocks. Dogwood borer larvae feed inside burr knots, which can develop on the aboveground portion of clonal rootstocks.

All commercial dwarfing and semi-dwarfing rootstocks tend to develop burr knots. This tendency can be enhanced by low light conditions around the trunk due to shading by weeds, low limbs, suckers, opaque mouse guards, and shallow planting. Burr knots are aggregations of partially developed root initials that usually occur in clusters at or below the graft union. Reddish frass on the surface of the burr knot indicates an active infestation. The tunnels in newly infested burr knots are irregular, not well defined, and usually quite shallow.

Feeding is initially confined to the burr knot but sometimes spreads to healthy bark outside it. Feeding in the burr knot does little or no damage to the tree, but feeding below the bark is much more destructive and eventually girdles the tree.

Tree kills attributable to dogwood borer usually take several consecutive years of infestation, even though several dozen larvae may be found on a single tree at one time. Persistent infestations over several years can contribute to a slow decline of the trees and reduce yields. Infestations probably also increase the chances of disease introduction.

According to the *2005 Commercial Tree Fruit Spray Guide*, Lorsban 50W at a rate of 3lb per 100 gallons of spray is applied no later than 28 days before harvest. The best insecticide timing is at peak egg hatch, which is in late June in the central Midwest. DO NOT apply Lorsban to the fruit or foliage.

Pest Phenology

Coming Events	**Degree Day Accum.** Base 50°F
Oriental fruit moth 2nd flight begins	784 - 1022
Codling moth 1st flight subsides	808 - 1252
Spotted tentiform leafminer 2nd flight peak	854 - 1218
Lesser appleworm 2nd flight begins	866 - 1298
Spotted tentiform leafminer 2nd generation tissue feeders present	913 - 1182
Oriental fruit moth 2nd flight peak	972 - 1368
Redbanded leafroller 2nd flight peak	972 - 1368
San Jose scale 2nd flight begins	1000 - 1294
Dogwood borer flight peak	1001 - 1327
Codling moth 2nd flight begons	1018 - 1540

Revised thanks to *Scaffolds Fruit Journal* (Art Agnello)

Degree Day Accumulations for Ohio Sites

June 29, 2005

Ohio Location	Degree Day Accumulations Base 50°	
	Actual	Normal
Akron-Canton	939	952
Cincinnati	1306	1348
Cleveland	969	917
Columbus	1184	1114
Dayton	1100	1156
Kingsville	842	829
Mansfield	920	936
Norwalk	1012	922
Piketon	1202	1324
Toledo	1027	915
Wooster	984	877
Youngstown	838	848

Fruit Observations and Trap Reports

Site: Waterman Lab, Columbus
Dr. Celeste Welty, OSU Extension Entomologist and Gretchen Sutton

Apple: 6/23 to 6/29/05	
Redbanded leafroller	48 up from 38
Spotted tentiform leafminer	112 down from 203
San José scale	0 same as last wk.
Codling moth (3 trap mean)	6.0 up from 5.3
Lesser appleworm	12 up from 7
Tufted apple budmoth	0 down from 2
Variegated leafroller	1 down from 5
Obliquebanded leafroller	16 up from 7
Apple maggot (sum of 3 traps)	0 same as last week

Site: East District; Erie and Lorain Counties
Jim Mutchler, IPM Scout/Technician

Apple: 6/21 to 6/28/05	
Codling moth (3 trap mean)	1.5 up from 1.4
Oriental fruit moth	2.8 up from 1.3
Redbanded leafroller	20.5 up from 1.8
San Jose scale	0.0 same as last wk.
Spotted tentiform leafminer	83 up from 62.5
Lesser appleworm	3.5 up from 1.0

Beneficials found: lacewings, native lady beetles, orange maggots, brown lacewings

Peach: 6/21 to 6/28/05	
Redbanded leafroller	21.0 up from 1.7
Oriental fruit moth	0.0 down from 0.1
Lesser peachtree borer	11.7 down from 14.3
Peachtree borer	1.7 up from 0.4

Beneficials found: lacewings, native lady beetles

Site: West District: Huron, Ottawa, Richland, and Sandusky Counties
Lowell Kreager, IPM Scout/Technician

Apple: 6/20 to 6/27/05	
Codling moth	1.4 up from 0.9
Oriental fruit moth	4.5 down from 13.8
Redbanded leafroller	51.9 up from 4.9
San Jose scale	0.0 same as last week
Spotted tentiform leafminer	495 up from 471
Lesser appleworm	5.7 down from 7.2

Beneficials found: lacewings

Peach: 6/20 to 6/27/05	
Redbanded leafroller	34.3 up from 12.0
Oriental fruit moth	0.8 up from 0.1
Lesser peachtree borer	3.7 down from 11.4
Peachtree borer	0.0 down from 0.1

Beneficials found: brown lacewings, lacewings

Penn State University Fruit Research and Extension Center
2005 Grower Field Day

Agenda:Noon - 1:00 **Parking and Registration**

1:00 - 1:15 **Welcome and Announcements**
Dr. Larry Hull, Center Director

1:15 - 3:15 **Tour Session I**

Tour A. Innovations in Fruit Crop Management I
- Compost: Effects on Tree and Vine Growth
- High Density Apple Plantings and Rootstocks
- Orchard Mapping with GPS
- Comparison of Apple Replant Site Recommendations

Tour B. Codling Moth/Oriental Fruit Moth Program
- Overview of the Entomology Research Program
- Insecticide Resistance in CM/OFM Populations
- New Options/Ideas for CM/OFM Management
- Dispersal of OFM in Orchards - Techniques & Results
- Peach Blossom Thinning

3:15 - 3:30 **Break**

3:30 - 5:30 **Tour Session II**

Tour A: Organic Apple Production
- The PROFIT (Organic) Initiative
- Organic Alternatives for Fruit Insect Pest Mgmt.
- Organic Alternatives for Apple Disease Mgmt.
- Organic Alternatives for Apple Thinning

Tour B: Innovations in Fruit Crop Management II
- Effects of Ozone on Grape Leaves / Juice Quality
- Foam Mulch for Weed Management
- IPM with Reduced Risk Pesticides in Apple and Peach
- Mite IPM with the New Predatory Mite, T. pyri
- The Ag Innovation Initiative

5:45 - 7:00 **Dinner and Invited Speaker**
Dr. Daney Jackson
Director of Cooperative Extension
Vice President for Public Outreach
College of Agricultural Sciences

7:00 Adjourn

Registration FormFruit Research and Extension Center 2005 Grower Field Day, July 14, 2005 Registration fee of $10 includes educational handouts, drinks, and dinner.
Registrations must be postmarked no later than July 5, 2005.

Name _____

Address _____

Phone _____ E-mail_____

Make checks payable to "Penn State University"

Mail registration form with payment to:
Penn State Fruit Research and Extension Center2005 Grower Field DayP. O. Box 330, 290 University Dr.Biglerville, PA 17307-0330

For additional information, call 717-677-6116, Ext. 0**Please pre-register for the tours you plan to attend:**

Session I Tour A _____ or Tour B _____
Session II Tour A _____ or Tour B _____

The Center is located on University Drive, 1/2 mile west of Biglerville (off Route 234), Adams County, Pennsylvania