http://ipm.osu.edu/fruit/index.html

THE OHIO STATE UNIVERSITY Newsletter Extension

Fruit ICM News

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In This Issue:

Calendar

June 25: Ohio Fruit Growers Society Summer Tour, Glen Hill Orchards, 17156 Glen Road, Mt. Vernon, OH. Registration begins at 8:00 a.m. Member registration fees are $15 per family and $10 per individual. (Non-member fees are $20 and $15.) You may contact the Ohio Fruit Growers Society at 614-246-8292. See article for additional information.

July 6-8: International Dwarf Fruit Tree Association Summer Tour, Kelowna, BC, Canada; Charles Ax, International Dwarf Fruit Tree Association; 570-837-1551; Web site: http://www.idfta.org.

August 4-5: HACCP Workshop, Leesport, PA. A Hazard Analysis Critical Control Point (HACCP) workshop will take place at the Berks County Ag Center in Leesport, PA. For more information please contact Dr. Luke LaBorde, Penn State University, at 814-863-2298 or e-mail at lfl5@psu.edu.

Ohio Fruit Growers Society Summer Tour

Maureen and Jim Buchwald of Glen Hill Orchards, Mount Vernon, Ohio will host the annual Ohio Fruit Growers Society (OFGS) Summer Tour on Wednesday, June 25, 2003. The Summer Tour will be of interest to Midwest fruit growers that enjoy touring a modern, progressive orchard and interacting with exhibitors, educators, and other industry participants.

The original orchard was started in 1912. Maureen and partner Rich Ridenbaugh began updating the orchard in 1976 and currently market 23 apple varieties, such as Jonathon, McIntosh, Red Delicious, Empire, Law Rome, Ginger Gold, and specializing in Golden Delicious. There are 106 production acres of mainly apples with ten acres of peaches and some pick your own Montmorency tart cherries. Annual

apple production is estimated at 60,000 to 65,000 bushels and peach production at 2,800 bushels. The apples are primarily marketed through Fruit Growers Marketing Association (FGMA) and an on-farm retail market. Glen Hill also packs and sells gift boxes through the winter holidays.

In addition to touring the orchard and farm market, participants will observe modern migrant labor housing facilities; 20,000 bushel refrigerated storage; and 21,000 bushel controlled atmosphere apple storage. The orchard wagon tour will feature Maureen and Rich discussing farm operations, cultural practices, variety selection, labor management, packing line operations, marketing, and more. A major management focus utilizes computerized records to track labor productivity and production results to assist in future management decisions. They will also discuss their commitment to providing a safe and healthy worker environment.

The Ohio State University's Celeste Welty will also showcase a codling moth control demonstration project and Dave Gress, General Manager of FGMA, will discuss the wholesale apple market.

The final tour stop will address "Good Agricultural Practices and Good Handling Practices" in the packinghouse. Shari Plimpton, food safety educator with the Ohio Specialty Crop Food Safety Initiative, will address issues such as worker hygiene and health, wash water quality, sanitation, refrigeration, and transportation. Apple industry exhibitors will also be present to help serve the needs of growers and marketers. Past exhibitors have included equipment dealers, nursery and farm market suppliers, chemical companies, service agencies, etc. The OSU Fruit team will also participate as an exhibitor to provide research and education resources.

Registration for the Summer Tour begins at 8:00 a.m. Member registration fees are $15 per family and $10 per individual. Nonmember fees are $20 per family and $15 per individual. Orchard tours will begin as soon as the first tour wagon is full. Registrants will be able to purchase morning refreshments and a noontime meal. There will be a short Ohio Fruit Growers Society meeting after lunch.

The Ohio Fruit Growers Society and Glen Hill Orchards look forward to your participation on June 25. More information about Mount Vernon and Knox County may be found at web address: http://www.knoxchamber.com. Driving directions and maps may be found at the OFGS web site: http://www.ohiofruit.org or contact the OFGS office at 614-246-8292 or e-mail at growohio@ofbf.org.

A National Road Map for Pest Management 2001 - 2010

Source: http://www.nepmc.org/insider/extras/roadmap.html

Vision: Wide scale adoption of integrated pest management (IPM) will result in more economically viable, environmentally compatible, socially responsible, and sustainable crop production systems for the United States by 2010.

Mission: The pest management mission of USDA and its partners is to improve farm profitability and safeguard human health and the environment through discovery, development, extension, and verification of safer, more effective, and more economical pest management systems.

Goal 1: By 2006, reduce the average cost of pest management in major cropping systems compared to 2000 baseline, while maintaining efficacy and sustainability. (*NASS survey*)

Objective: *Develop and promote pest management approaches designed to improve farm profitability and agricultural sustainability.*

Strategies:

- Define and publish the elements (tactics) of IPM for crops in major cropping systems of the United States.
- Develop and implement rapid, accurate monitoring and prediction systems for pest infestations and their resulting damage.
- Refine, verify, and implement action thresholds for key pests and pest complexes of major cropping systems.
- Improve the efficiency of suppression tactics and demonstrate least cost options and pest management alternatives.

Goal 2: Reduce by half the levels of hazardous pesticides detected in surface drinking water supplies by 2008. (*USGS drinking water surveys*)

Objective: *Promote the adoption of pest management systems for agricultural and non-agricultural environments that minimize non-target impacts*.

Strategies:

- Design and promote effective pesticide application technologies that permit precise targeting of pesticides, particularly in high-risk situations and during adverse treatment conditions.
- Develop and demonstrate crop production practices that reduce surface water and sediment movement off fields and non-agricultural sites.
- Develop and promote practices to replace pesticides that pose high risk to surface drinking water supplies.
- Demonstrate appropriate buffer zones or other practices to protect non-target areas from pesticide drift and other encroachments.

Goal 3: Reduce pesticide residue levels in the major foods consumed by infants and children by the year 2006. (*AMS market basket survey*)

Objective: *Implement pest management approaches designed to eliminate unacceptable pesticide residues in crop commodities used for food, especially those consumed by infants and children.*

Strategies:

- Develop alternatives to pesticides that have resulted in unacceptable residue levels in food crop commodities.
- Determine pesticide application methods, timing, and placement that result in improved efficacy with reduced pesticide residues in raw agricultural commodities.
- Develop methods that will minimize pesticide residues that are found in processed foods.

Goal 4: Evaluate and promote national protocols for pest management in recreational, roadside, right-of-way, and native habitat areas by 2007. *(Are protocols developed?)*

Objective: *Develop and implement pest management programs that maintain safe, functional recreational, roadside, right-of-way and native habitat environments.*

Strategies:

- Develop pest management approaches for turf grass, other landscape plantings, and aquatic sites

that require less intensive pesticide use while maintaining functional and aesthetic standards.
- Document the most effective ways to manage the encroachment of invasive species and facilitate the return of endemic species to native habitats.

Goal 5: Have pilot community-run pest management programs in place and operating by 2010. (*Are community programs in place*?)

Objective: *Design and implement community-based pest management programs for residential, school, and public area environments that emphasize prevention programs and low-risk suppression technologies.*

Strategies:

- Expand and publicize the "IPM in Schools" program now in existence so it can be implemented nationwide.
- Develop and disseminate a Residential Pest Management program to encourage adoption of IPM by homeowners.
- Organize and publicize community stakeholder groups to administer the local community pest management efforts.

Protecting Fruit from Apple Scab in Orchards with Visible Scab Lesions

Source: Dave Rosenberger, Plant Pathology, Highland, Scaffolds Fruit Journal, Vol. 12, No. 14, June 16, 2003

Keeping apple scab under control is proving very difficult this year in orchards where primary scab was not completely controlled during April and early May. Over the last 30 days at the Hudson Valley Lab, we have recorded 17 separate wetting events for a total of 228 hours of wetting and 5.8 inches of rain. Unfortunately, this period of extended wetting started shortly after petal fall, just when fruit and leaves are at peak susceptibility for apple scab infection.

What is the best approach for keeping apple scab off of fruit in orchards with a moderate level of scab on terminal leaves? Unfortunately, there is no simple answer to this question. Below are four options to consider.

Option 1: Make at least two applications of captan alone at the maximum label rate per acre. Applications at this time of year can be 10-14 days apart, unless rainfall (> 1.5 inches) removes captan residues before 10 days have elapsed. Captan is very effective for protecting fruit, especially when combined with high temperatures of 80-85F. However, if cool, wet weather persists into July, then continued applications (more than two sprays) using high rates of captan may be essential. If weather becomes more normal (hotter and drier), the risk of fruit infection will subside until September, when scab might become active again.

Option 2: Apply captan at maximum label rates as noted above, but tank-mix the high rate of captan with an SI fungicide (Nova, Rubigan, or Procure). The full rate of captan is needed because the SI's will shut down scab on leaves but will do little to protect the fruit. This option is considerably more expensive than Option 1, but will prove more effective **IF** orchards do not contain SI-resistant populations of scab and **IF** weather stays cool and wet for another month. Option 2 also provides extended control of mildew. However, if weather becomes hotter (days > 80-85F) and drier, then Option 1 will probably work just as

well as the more expensive Option 2 for controlling scab.

Option 3: Apply captan at 50% of maximum label rates in a tank-mix with Flint or Sovran. Flint and Sovran will provide better protection of fruit than the SI fungicides, so a half-rate of captan should be adequate. The fact that Sovran and Flint bind to cuticular waxes should make them more resistant to wash-off than is captan. However, Sovran and Flint will be less effective than the SI fungicides (in the absence of resistance) for arresting incubating but still invisible infections in leaves. Thus, the trade-off here is potentially better control of fruit scab with Sovran or Flint, compared with greater reduction of total inoculum when SI's are applied to leaves with incubating lesions. It is very difficult to predict which option (2 or 3) will result in the least fruit scab. In two years of trials where I tested these products on trees with visible scab, I got better control with the SI's in one year and with the strobilurins (Sovran, Flint) in the other. The variation is largely due to the details of exactly when the products are applied within the scab incubation period. Be aware, however, that where Sovran and Flint have been used alone (without any contact fungicide) to stop previous scab epidemics in Michigan and Western NY, the results have generally been less than satisfactory. Thus, I personally would gamble on options 1 or 2 rather than option 3.

Option 4: Apply captan at 50% of maximum label rate in combination with a full rate of dodine (Syllit). This is an extremely risky approach because we cannot accurately predict which orchards have dodine resistance. However, if you have not used ANY dodine, not even in the first spray of the season, for at least 10 years, then this approach might be very effective. Only one spray of dodine should be applied and the follow-up spray should be the full rate of captan because a single spray of dodine may be enough to re-select for dodine-resistant strains that survive at low levels in most orchards.

The specifics of the orchards involved should be considered when choosing among the options noted above. There is significantly more risk of getting scab on fruit of susceptible cultivars such as McIntosh and Ginger Gold and than on more scab-resistant cultivars such as Empire and Delicious. Therefore, captan alone might suffice for the more resistant cultivars, whereas an SI-plus-captan might be warranted for McIntosh blocks. Similarly, vigorous young trees that are still actively growing have the potential for several more cycles of leaf scab, whereas older orchards with a heavy crop will soon set terminal buds. The SI-captan combination is more likely to pay for itself in orchards with vigorous terminal growth because the SI's can quickly reduce the amount of inoculum available for infecting new leaves (unless, of course, the scab is SI-resistant).

Unfortunately, some orchards may already have so much scab that spending more money for fungicides will only increase costs for a crop that is already lost. In cases where a significant number of fruit already have visible scab, one must assume that additional fruit may soon develop symptoms from infections that occurred last week unless heroic measures have already been employed to save the crop. There is no point in spending big dollars for SI or strobilurin fungicides for a crop that will not pay for itself.

The Maggot: Reloaded

Source: Harvey Reissig, Dave Combs & Art Agnello, Entomology, Geneva, Scaffolds Fruit Journal, Vol. 12, No. 14, June 16, 2003

Monitoring: Once again, it is nearly time to expect the first appearance of apple maggot (AM) flies in volunteer apple stands and abandoned orchards, particularly in eastern N.Y. Western N.Y. could be about a week later if this were a normal season, and the less said about that the better. Crop scouts and consultants have been using traps to monitor AM populations for a long time, but this tactic, useful as it is, nevertheless is not recommended in all cases. Some orchards have such high or such low AM

populations that monitoring for them is a waste of time; that is, sprays are needed predictably every season in some blocks, and on a calendar basis; conversely, they are rarely needed at all in other blocks. However, most commercial N.Y. orchards have moderate or variable pressure from this pest, and monitoring to determine when damaging numbers of them are present can reduce the number of sprays used in the summer with no decrease in fruit quality.

Sticky yellow panels have been in use for over 30 years, and can be very helpful in determining when AM flies are present. These insects emerge from their hibernation sites in the soil from mid-June to early July in New York, and spend the first 7-10 days of their adult life feeding on substances such as aphid honeydew until they are sexually mature. Because honeydew is most likely to be found on foliage, and because the flies see the yellow panel as a "super leaf", they are naturally attracted to it during this early adult stage. A few of these panels hung in an orchard can serve as an early warning device for growers if there is a likely AM emergence site nearby.

Many flies pass this period outside of the orchard, however, and then begin searching for fruit only when they are ready to mate and lay eggs. That means that this advance warning doesn't always have a chance to take place -- the catch of a single (sexually mature) fly then indicates a spray is necessary immediately to adequately protect the fruit. This can translate into an undesirable risk if the traps are not being checked daily, something that is not always possible during a busy summer.

To regain this time advantage, researchers developed newer traps that have the form of a "super apple" -- large, round, deep red, and sometimes with the smell of a ripe apple -- in an attempt to catch that first AM fly in the orchard. Because this kind of trap is so much more efficient at detecting AM flies when they are still at relatively low levels in the orchard, the traps can usually be checked twice a week to allow a one- or two-day response period (before spraying) after a catch is recorded, without incurring any risk to the fruit.

In fact, research done in Geneva over a number of years indicates that some of these traps work so well, it is possible to use a higher threshold than the old "one fly and spray" guidelines recommended for the panel traps. Specifically, it has been found that sphere-type traps baited with a lure that emits apple volatiles attract AM flies so efficiently that an insecticide cover spray is not required until a threshold of 5 flies per trap is reached.

The recommended practice is to hang three volatile-baited sphere traps in a 10- to 15-acre orchard, on the outside row facing the most probable direction of AM migration (south, or else towards woods or abandoned apple trees). Then periodically check the traps to get a total number of flies caught; divide this by 3 to get the average catch per trap, and spray when the result is 5 or more. Be sure you know how to distinguish AM flies from others that will be collected by the inviting-looking sphere. There are good photos for identifying the adults at the following web site:

http://www.nysipm.cornell.edu/factsheets/treefruit/pests/am/am.pdf.

In home apple plantings, these traps can be used to "trap out" local populations of AM flies by attracting any adult female in the tree's vicinity to the sticky surface of the red sphere before it can lay eggs in the fruit. Research done in Massachusetts suggests that this strategy will protect the fruit if one trap is used for every 100-150 apples normally produced by the tree (i.e., a maximum of three to four traps per tree in most cases), a density that makes this strategy fairly impractical on the commercial level.

A variety of traps and lures are currently available from commercial suppliers; among them: permanent sphere traps made of wood or stiff plastic, disposable sphere traps made of flexible plastic, and sphere-plus-panel "Ladd" traps. The disposable traps are cheaper than the others, of course, but only last one

season. Ladd traps are very effective at catching flies, but are harder to keep clean, and performed no better than any other sphere trap in our field tests.

Brush-on stickum is available to facilitate trap setup in the orchard. Apple volatile lures are available for use in combination with any of these traps. These tools are available from a number of orchard pest monitoring suppliers, among them:

- Gempler's Inc., 100 Countryside Dr., PO Box 328, Belleville, WI 53508; 608-424-1544, Fax, 608-424-1555
- Great Lakes IPM, 10220 Church Rd. NE, Vestaburg, MI 48891; 800-235-0285, Fax 989-268-5311
- Harmony Farm Supply, 3244 Gravenstein Hwy, No. B, Sebastopol, CA 95472; 707-823-9125, Fax 707-823-1734
- Ladd Research Industries Inc., 83 Holly Court, Williston, VT 05495; 800-451-3406, Fax 802-660-8859
- Olson Products Inc., P.O. Box 1043, Medina, OH 44258; 330-723-3210, Fax 330-723-9977
- Scenturion Inc., P.O. Box 585, Clinton, WA 98236; 360-341-3989, Fax 360-341-3242

By preparing now for the apple maggot season, you can simplify the decisions required to get your apples through the summer in good shape for harvest.

Comparison of Application Technology for AM Control - 2002

Source: Harvey Reissig, Dave Combs & Art Agnello, Entomology, Geneva, Scaffolds Fruit Journal, Vol. 12, No. 14, June 16, 2003

A western NY apple orchard that has been in organic production for several years was selected for use in this trial because high levels of AM damage had been observed in fruit the previous season. Using an airblast sprayer delivering 200 gpa, two treatments were applied using Surround (kaolin clay) on a weekly basis; the two treatments varied in the nozzles used for each application. Tee Jet hollow cone nozzles (Model D4 disc with DC45 whirl plate) as well as Tee Jet air induction nozzles (Model AIll004VS, Spraying Systems Co., Wheaton, IL) were tested to determine the effectiveness of droplet size with this product. A volatile bait containing spinosad was applied with a Meterjet spray gun (Model 2362, Spraying Systems Co.) connected to a CO_2 backpack sprayer at 40 psi, also on a weekly basis, at the rate of 1 gpa.

A new antagonistic method using chemical repellency was also incorporated into this trial by hanging 12 dispensers in the center of a 3 x 3 tree plot. This proprietary technology, developed by W. Roelofs (NYSAES, Geneva), is still in the preliminary testing phase, and this was its first assessment under field conditions.

Treatments, including an untreated check, were replicated four times and arranged in a RCB design. All applications were started on July 25 and continued on August 2, 8, 14, and 21. The dispenser vials for the repellent were hung on July 20. Red volatile-baited sphere traps were hung in four trees surrounding the center tree in both the repellent trial and in the untreated check. Weekly counts were taken from these traps to determine whether the treated tree had any repellent activity. Fruit was harvested on September 9 by randomly selecting 200 fruits from the center tree in each replicate. A subsample was taken from the harvest sample from the check plot and the repellent block, and examined in the lab to determine numbers of AM punctures.

AM pressure in the test orchard was moderate to high, as indicated by the damage levels found in the

untreated check plots, and by high trap catches of flies throughout the season. The weekly applications of Surround provided good control of AM damage, regardless of the nozzle used (hollow cone, 2.4%; air induction, 3.3%).

The spinosad bait also reduced damage found at harvest (12.8%); however, it was not significantly different from the check (24.6%). The repellent plots (20.3%) also did not separate from the untreated check plot. The pressure found in this orchard is many times greater than that found in the average commercial block. For this reason, the constant presence of flies in the orchard probably represented too high a pressure for the weaker programs to control.

The subsamples examined for oviposition punctures provided little insight into the efficacy of the repellent treatment. The untreated check yielded a mean of 1.30 punctures per apple, and the repellent treatment resulted in 1.04 punctures per apple, which was not statistically different.

Trap catches taken over the duration of the trial seemed to indicate some repellency to the dispensers. A mean of 7.6 flies per trap were caught in the untreated check plot, while a mean of 12.3 flies per trap were caught in traps surrounding the repellent dispensers; however, these numbers also were not statistically different.

New Options for Control of Fruit Rots in Blueberries

Source: Annemiek Schilder, Plant Pathology, MSUE Fruit CAT 06-17-03

Fungal fruit rots, especially anthracnose caused by *Colletotrichum acutatum*, continue to be of economic concern in blueberries. Losses can occur before, as well as after, harvest. The cultivars Jersey, Bluecrop, Rubel, and Blueray are very susceptible to anthracnose fruit rot, whereas Elliott is resistant. Alternaria fruit rot is commonly found on Bluecrop fruit before harvest and affects most varieties after harvest. Botrytis fruit rot is not as common in Michigan, but may be a problem in years when cool wet weather prevails during the flowering and fruit development period.

These fruit rots can be distinguished to some extent with the naked eye: anthracnose is characterized by wet, pink to orange spore masses; Alternaria fruit rot by dark olive-green mold growth, and Botrytis by fluffy, tan to gray mold growth on the berry surface. A fact sheet for identification of blueberry fruit-rotting fungi will be published soon by MSU Extension.

The anthracnose fungus overwinters in dead fruiting twigs, but has also recently been found to overwinter in live, dormant buds. The infected buds typically die in the spring and support sporulation of the fungus. A twig blight, which is difficult to distinguish from Phomopsis twig blight, can also result from bud infection. With anthracnose there are two important periods when the infection risk is high because of peak spore release: 1) from pre-bloom to about pea-size berry (due to overwintering inoculum), and 2) from first blue fruit until the end of harvest (due to sporulating berries that infect surrounding berries). Fungicide spray programs should focus on these periods.

There are several new fungicide options for control of blueberry fruit rots. The strobilurin fungicides Abound (azoxystrobin) and Cabrio (pyraclostrobin) are excellent at controlling anthracnose fruit rot. They are both surface-systemic, meaning that they redistribute locally in the wax layer, and are considered "reduced risk". They may be applied around bloom and early fruit development (to prevent the primary infections) and at first blue fruit or pre-harvest (to prevent secondary infections). Switch (cyprodinil and fludioxonil) is a systemic fungicide with a unique mode of action. Switch has activity against anthracnose, Alternaria fruit rot, and Botrytis fruit rot, and would be the better option if Alternaria

fruit rot is a major objective of control efforts. Elevate (fenhexamid) is primarily a Botryticide with suppressive activity against mummy berry.

Another exciting option for control of anthracnose is choosing a new variety from the MSU Blueberry Breeding Program. Several of the new late varieties, e.g., Draper, are resistant to fruit rots and also have excellent shelf life. AND they taste better than Elliott. So look ahead when planning new plantings.

Degree Day Accumulations for Ohio Sites June 18, 2003

Ohio Location	Degree Day Accumulations			
	Base 45° F		Base 50° F	
	Actual	Normal	Actual	Normal
Akron/Canton	1049	1091	660	747
Cincinnati	1388	1524	960	1091
Cleveland	1029	1046	661	716
Columbus	1319	1265	900	887
Dayton	1247	1299	838	919
Kingsville	828	941	495	639
Mansfield	984	1072	602	733
Norwalk	991	1041	624	717
Piketon	1469	1521	1008	1082
Toledo	964	1030	598	710
Wooster	1149	1016	748	685
Youngstown	928	985	558	663

Fruit Observations & Trap Reports

Insect Key

AM: apple maggot
CM: codling moth
ESBM: eye-spotted budmoth
LAW: lesser apple worm
LPTB: lesser peachtree borer
OBLR: obliquebanded leafroller
OFM: oriental fruit moth
PTB: peachtree borer
RBLR: redbanded leafroller
SJS: San Jose scale
STLM: spotted tentiform leafminer
TABM: tufted apple budmoth
VLR: variegated leafroller

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

Apple: 6/11 to 6/18/03

CM: 19.7 (down from 22.7)
ESBM: 0 (same as last week)
LAW: 29 (up from 22)
OBLR: 1 (down from 8)
RBLR: 18 (up from 0)
SJS: 0 (same as last week)
STLM: 173 (up from 78)
TABM: 6 (up from 0)
VLR: 2 (same as last week)

Peach: 6/11 to 6/18/03

OFM: 0 (same as last week)
LPTB: 3 (up from 1)
PTB: 1 (up from 0)

Site: Medina, Wayne, & Holmes Counties
Ron Becker, IPM Program Assistant

Apple: 6/11 to 6/18/03

STLM: Holmes: 2147 (up from 593)
Medina: 1105 (up from 13.8)
Wayne: 424 (up from 0)

RBLR: Holmes: 0 (same as last week)
Medina: 0 (same as last week)
Wayne: 0 (same as last week)

CM: Holmes: 4.1 (up from 2.0)
Medina: 1.7 (same as last week)
Wayne: 41.9 (up from 21.8)

Peach: 6/11 to 6/18/03

LPTB: Holmes: 10 (down from 11)
Medina: 3 (up from 0)
Wayne: 5 (up from 1)

OFM: Holmes: 3 (same as last week)
Medina: 0 (same as last week)
Wayne: 0 (same as last week)

PTB: Holmes: 0 (same as last week)
Medina: 0 (same as last week)
Wayne: 0 (same as last week)

Apples: scab, plum curculio, white apple leafhopper, rosy & green peach aphids, European red mite, STLM, potato leafhopper.
Peaches: OFM, powdery mildew.
Strawberries: two-spotted spider mite (TSSM), sap beetles, gray mold.
Brambles: TSSM.
Beneficials: fellacis mites, lacewing, lady beetle

Site: East District: Erie & Lorain Counties
Jim Mutchler, IPM Scout

Apple: 6/10 to 6/17/03
CM: 10.1 (up from 5.1)
LAW: 47.8 (up from 30.6)
OFM: 4.3 (up from 3.5)
RBLR: 0.0 (same as last week)
STLM: 10.7 (down from 26.3)

Peach: 6/10 to 6/17/03
LPTB: 21.7 (up from 3.9)
OFM: 2.7 (up from 1.3)
PTB: 1.0 (up from 0.3)
RBLR: 0.0 (same as last week)

Other pests: green apple aphid, rosy apple aphid, wooly apple aphid. Beneficials: green lacewing and ladybeetle

Site: West District: Huron, Ottawa, Richland, & Sandusky Counties - Gene Horner, IPM Scout

Apple: 6/10 to 6/17/03
CM: 4.9 (down from 5.8)
LAW: 2.0 (up from 0.7)
OFM: 0.3 (down from 0.9)
RBLR: 0.0 (same as last week)
STLM: 0.6 (down from 8.9)

Peach: 6/10 to 6/17/03

LPTB: 5.6 (up from 1.2)
OFM: 0.9 (up from 0.7)
PTB: 0.4 (up from 0.2)
RBLR: 0.0 (same as last week)

Other pests: TSSM, green peach aphid.

Beneficials: banded thrips

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| Back |