



Ohio Fruit ICM News

North Central Ohio Tree Fruit IPM Program Report Prepared by Cindy Crawford (Erie County Adm. Assoc.)

Inside This Issue

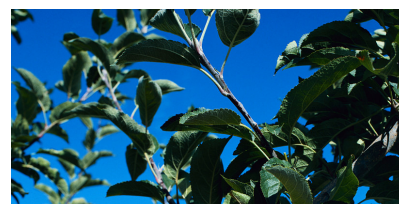
Tree Fruit IPM Report.....	1
Growers Learn Pruning Techniques for Small Fruit Crops.....	2
OPGMA Summer Tour & Field Day..	2
USAID's Farmer to Farmer Program Looking for Strawberry Expertise.....	3
Apple Costs of Production.....	3
2010 Upcoming Events.....	3
Clarification to Midwest Tree Fruit Spray Guide 2010.....	4
Movento® Insecticide.....	4
Eastern Flower Thrips.....	4
Using Pheromone Traps to Monitor Moth Activity in Orchards.....	5

Mike Abfall – East District IPM Scout (Erie and Lorain Counties)

Date – 5/3/10

Apples

Spotted Tentiform Leafminer – 379 (First Report)
Codling Moth - 0.3 (First Report)
Redbanded Leafroller – 0 (First Report)
San Jose Scale – 0 (First Report)
Oriental Fruit Moth – 5.06 (First Report)



Peaches

Redbanded leafroller - 5.7 (first report)
Oriental Fruit Moth – 0 (first report)

Ted Gastier – West District IPM Scout (Sandusky, Ottawa, Huron and Richland Counties)

Date – 5/3/10

Apples

Spotted Tentiform Leafminer – 23 (First report)
Codling Moth – 0.4 (First Report)
Redbanded Leafroller – 0 (First Report)
San Jose Scale – 0 (First Report)
Oriental Fruit Moth – 27.28 (First Report)
Lesser Appleworm – 0 (First Report)

Peaches

Redbanded leafroller- 0 (First Report)
Oriental Fruit Moth – 7 (First Report)



If you have articles for the newsletter that you would like to have considered to be included in upcoming issues, please submit to either Howard Siegrist at siegrist.1@cfaes.osu.edu or Melissa Swearingen at swearingen.34@cfaes.osu.edu



EMPOWERMENT THROUGH EDUCATION

Growers Learn Pruning Techniques for Small Fruit Crops

Maurus Brown, Associate Professor and Extension Specialist
Ohio State University Extension

OSU South Centers hosted a two hour hands-on workshop to teach pruning techniques for blueberries, grapes, and brambles. Perennial woody fruit plantings should be pruned each year to help promote new growth and good plant structure, enhance air circulation, increase sunlight penetration into the canopy, and increase fruit yield, size and quality. This workshop provided a training opportunity for 50 growers, including commercial and home gardeners. Some growers are reluctant to prune perennial woody fruit crops as closely as needed, because of concern that they may damage their plants. We discussed how to select what portion of the plant should be removed to help direct new growth. Information learned in this workshop will help growers to better make decisions about pruning their own fruit plantings. Additional information on pruning of woody small fruit crops can be found on Ohioline (<http://ohioline.osu.edu/>).



OPGMA Summer Tour & Field Day Set for June 30, 2010

Ohio Produce Growers & Marketers Association

It's never too soon to start thinking about how you'll spend your summer ... and the OPGMA Summer Tour & Field Day should certainly be part of that schedule.

Join your peers for this educational and networking activity where you can learn about two growing operations as well as some of the newest equipment, packaging, chemicals, seeds, and services from allied vendors.

Tours Highlight Apple Training, High Tunnel Tomatoes, Media Socks, and Apple Cider Plant

Tours at Grobe Fruit Farm Ltd. will be from 8:30 a.m.-12 p.m. Speakers along the farm tour will discuss different apple training methods including tall spindle and super spindle, North America Seedway pepper and tomato variety trials, and high tunnel tomatoes growing in media socks rather than the soil. An additional highlight will be a media sock filler demonstration.

At 12 p.m. OPGMA will host a brief session during lunch. Attendees can then drive five miles to tour Rex Gees Orchard. Maps will be available onsite.

Grobe Fruit Farm, Elyria, Ohio - Allen Grobe is the fifth generation to farm at this location over the past 100 years. The family owns and farms 650 acres, 130 acres of apples, and a smaller acreage of cherries, peaches, pears, plums, and brambles. They have another 120 acres in vegetable production; the remainder is grain farmed. Grobe Fruit Farm offers a seasonal farm market from July through March, a commercial packing line for apples, and a commercial cider mill and bottling plant.

Rex Gees Orchard, Amherst, Ohio - Apples, cherries, peaches, plums, pears, and brambles are grown on this 40-acre farm, which was purchased by the Grobe family in 2007. The farm has grown since taking ownership, and includes a blackberry and red raspberry planting which are V-style trellised.

Registration Details

Discounted, pre-registration prices are available through June 23 [online](#) or by [faxing the registration form](#) to 614-487-1216.

And after you purchase the first registration for \$25, each additional attendee you register is just \$10.

Lunch will be available for sale during the tour for no more than \$9 per person (cash only).

More information about programs and events at the 2010 OPGMA Summer Tour & Field Day is available at www.opgma.org/events .

See Registration Flyer included at the end of this newsletter.



www.opgma.org

USAID's Farmer to Farmer Program Looking for Strawberry Expertise

Article from: CAT Alert Fruit Newsletter

Michigan State University



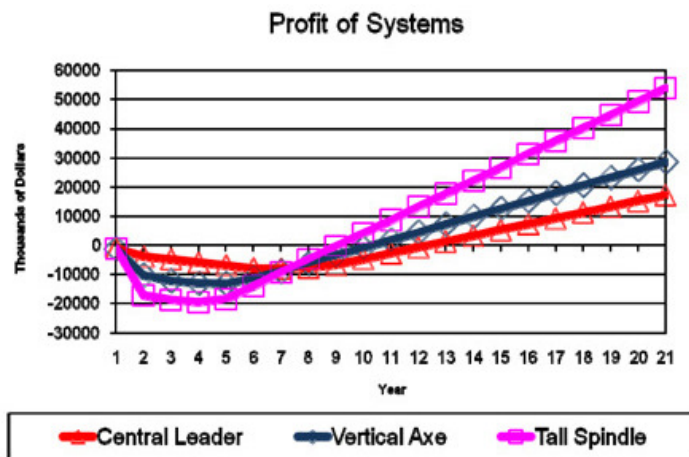
USAID's Farmer to Farmer program sends American agricultural experts on short term assignments overseas to developing nations, in order to increase rural livelihoods. They report they have worked with many consultants, growers, and professors in Michigan in the past with assignments ranging from potato and apple production to marketing development. Their current need is for expertise in strawberry production. The assignment would be based in the Republic of Moldova, and they would ideally like to send someone out in the next two months on a 2-3 week project. The host organization is trying to switch over to plasticulture / drip irrigation, so specific experience in that form of strawberry production is preferred. Contact Andrew Wheadon at (202) 296-3920 or awheadon@cnfa.org for more information. Learn more about the Farmer to Farmer program as a whole can be found at www.cnfa.org/farmertofarmer.

Apple Costs of Production

Philip Schwallier and Amy Irish-Brown, Extension Educators

Michigan State University Extension

The Apple Costs of Production is now available for download at www.apples.msu.edu website. This 2008 study is an update of the last study done in 1998. It was completed with support from the Michigan Apple Committee and MACMA. The study includes a comparison of three systems (tree densities), Central Leader, Vertical Axe and Tall Spindle. It is in a excel spreadsheet file and is downloadable as .xls file. This study was completed with a survey of a study group of west Michigan growers at a review meeting. Practices and material costs were reviewed with the growers and an average of these practices and materials were placed in the costs study. There are a few costs listed on the first page that are not included. The accompanying table is the Profit of Systems chart of the 20-year running income for the various systems. It basically indicates higher densities are more profitable but also more expensive to establish. Also, the breakeven years occur from nine to 12 years after planting.



2010 Upcoming Events:

May 20 – Strawberry Production Techniques Workshop

6:00 p.m. to 8:00 p.m. Ohio State University South Centers at Piketon, Ohio

Cost: \$5.00 per person. The workshop is part of OSU South Center's Horticulture Business Training Series. For more information on the workshop or to RSVP, contact Julie Strawser-Moose at (740) 289-2071, ext. 223, or e-mail strawser.35@cfaes.osu.edu. Walk-ins are welcome.

May 27 - Sustainable and Organic Viticulture Management Workshop

9:00 a.m. to 4:00 p.m. Farm and Home Center in Lancaster, PA

Cost: \$70 Registration deadline is May 25th. Make checks payable to "PSCE Program Fund" and mail to Penn State Cooperative Extension, 1383 Arcadia Rd, Room 140, Lancaster, PA 17601. Payment by credit card is available by calling the extension office at 717.394.6851. Questions??? Call Mark Chien at 717-394-6851

June 30 - OPGMA Summer Tour & Field Day – See attached registration flyer

Clarification to Midwest Tree Fruit Spray Guide 2010

Peter Hirst, Associate Professor, Horticulture
Purdue University Extension



On page 10, the Midwest Tree Fruit Spray Guide incorrectly lists the labeled rate of Apogee as 36-48 oz per 100 gallons. The correct rate is 12-16 oz per hundred gallons dilute spray. The amount that you should apply at any one time per acre will depend upon tree vigor, tree size, growth potential the tree, AND tree row volume (TRV). For example, if you decide to apply 6 ounces per 100 gallons of spray on a block of trees with a TRV requiring 200 gallons per acre in a dilute spray, you would apply 12 ounces of Apogee per acre. It may be applied as a single spray, or more frequently as multiple sprays. For more information on Apogee, see: <http://www.umass.edu/fruitadvisor/factsheets/Apogee.pdf> (Beckerman).

NOW is the time to start applying Apogee if you are going to use it this year. Applications are most effective when applied when growth of new shoots is 1-3".

Movento® Insecticide

Ricky E Foster, Professor / Pest Mgmt. Vegetable and Fruit Crops, Coordinator of Extension
Purdue University Extension

Many of you are aware of Movento, a new insecticide from Bayer. Movento is a very effective against sucking insects such as aphids, scales and whiteflies on pome and stone fruits. One unique feature of Movento is that it moves systemically from the foliage to the roots, making it very attractive for use against woolly apple aphid. Recently, an environmental group challenged the registration of Movento in court because EPA had not held the required comment period prior to registration. As a result, EPA has put a stop sale on this insecticide. However, growers who have previously purchased Movento may use stocks in their possession according to label directions.

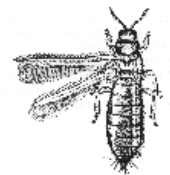


Eastern Flower Thrips on Strawberries

Ricky E Foster, Professor, Pest Mgmt. Vegetable and Fruit Crops,
Coordinator of Extension
Bruce Bordelon, Department of Horticulture
Purdue University Extension



One of the factors we believe may be associated with problems with eastern flower thrips on strawberries is having sustained, strong southerly winds early in the growing season. Such winds may blow eastern flower thrips to Indiana from southern areas. We recommend looking at the early flowers, especially on early varieties. Although an exact threshold has not been established for Midwest conditions, data from elsewhere suggest that control is warranted if counts exceed 2 to 10 thrips per blossom. Radiant and SpinTor are labeled specifically for thrips. Endosulfan, Lorsban, Brigade and Danitol are not labeled specifically for thrips, but have been effective in field trials at rates listed for clipper, tarnished plant bug, and spittlebug. Growers may also want to consider using an insecticide containing neem extracts (Aza- Direct or Neemix) that is less toxic to bees.



Eastern flower thrips.
Actual length = 1/16
inch (1.5 mm).

Using Pheromone Traps to Monitor Moth Activity in Orchards

Larry Gut and Peter McGhee, Entomology; and David Epstein, IPM Program

Editor's note: This article was originally published in the Fruit CAT Alert on May 19, 2009

Michigan State University Extension

The use of moth catches in pheromone traps for timing insecticide applications and assessing pest pressure is fundamental to orchard scouting and integrated pest management. Many factors affect the performance of trapping systems, and the usefulness of the information gathered. These factors are trap selection, trap placement and seasonal maintenance. Ignoring any one of these fundamentals will reduce the reliability of the whole trapping system.

Selecting a trap and lure: Every trap is composed of three essential components. The design of the trap, the pheromone baited lure and the sticky surface needed to retain the moths. The three most commonly used traps are the wing, large delta and diamond traps. Each can be an effective tool for monitoring fruit pests; however, the delta trap is probably the overall best option. Since the trap is made of a durable plastic it can be used for several seasons, if used to monitor the same pest species. The trapping area is a sticky insert that can be removed to count moths and is easily replaced if needed. Trap comparisons have consistently revealed that the delta trap catches at least 30 percent more moths than other traps, primarily because it has a larger trapping surface than other traps. The ability to trap as many moths as possible is especially important in situations where catches are typically low, such as when monitoring mating disrupted orchards.

There are also many lures to choose from. The most commonly used lure is the red septum. A septum loaded with 0.1 mg of a 3-component pheromone blend is a very effective lure for monitoring Oriental fruit moth in both disrupted and non-disrupted orchards. A red septum loaded with 1 mg of codlemone has been the fruit industry standard for monitoring codling moth in insecticide-treated orchards. However, recent studies have demonstrated that the performance of this lure declines after about three weeks in the spring and two weeks in the summer. Changing lures this often is difficult and expensive, thus some longer-lasting lures have been developed. These include the L2 (Trécé Inc) and Biolure CM1x (Suterra) lures that may last six or more weeks.

Lures releasing a high rate of pheromone are often used to monitor codling moth in mating disrupted orchards. A red septum loaded with 10 mg of pheromone has been the industry standard. As with the 1x red septum, the performance of the 10x version declines over a period of two to three weeks. High load lures that last at least six weeks have been developed and include the superlure or 'bubble lure' (PheroTech Inc.), the megalure (Trécé Inc) and the Biolure CM1ox (Suterra, LLC). For all high-load lures, however, moth captures are not a reliable indicator of population densities in orchards. Trapping should be used in conjunction with visual inspection for signs of codling moth infestation. Concentrate your search for fruit injury in the upper canopy, along orchard borders, near bin or prop piles and in the most susceptible varieties, such as golden delicious.

Monitoring with other attractants – The DA and CM/DA Lures: In 1998, Dr. Doug Light, USDA-ARS scientist in Albany California, discovered a compound that is attractive to both male and female codling moths. The attractive chemical is an ester that is present in the odor of ripe Bartlett pears. This pear ester is a stable compound that can be readily synthesized and loaded into a rubber septum to make a lure for monitoring codling moth. Trécé Incorporated produces a lure based on this chemistry that is commonly referred to as the DA lure. They also produce a combination lure that contains both codling moth pheromone and the pear ester that is referred to as the CM/DA lure.

The possible advantages of the DA-based lures over the sex pheromone lure are 1) they attract females and thus moth catch is more directly linked to egg laying and the potential for worms in the fruit, and 2) attraction does not appear to be impeded or suppressed by pheromone-based mating disruption. Scientists, including our MSU group, have been evaluating the performance of the DA and CM/DA lures for the past few years, and, in general, the results have been promising, but variable. We have had the best results using the CM/DA lure. This "combo" lure has proved quite useful as a monitoring device in orchards that are treated with a codling moth mating disruption product. In particular, it provides a means of monitoring codling moth flight in orchards treated with pheromone, and thus to best time the application of any supplemental insecticides that are needed.

Trap maintenance: Making management decisions using information obtained from poorly maintained traps can be a recipe for disaster. The effectiveness of the trap depends on maintaining the trap shape, the quality of the adhesive over the season, and good accessibility to attracted moths. Two common problems with trap shape are failure to return side flaps to the upright position of the large delta trap, and not maintaining the proper entrance space in the wing trap after the traps are checked. Leaves, twigs, and moth scales can foul the adhesive bottom of traps over time. Each time traps are checked; debris, moths, and other insects should be removed. The adhesive should be redistributed. A general guideline for replacing trap bottoms is at least once per generation or when the surface has been fouled sufficiently to prevent routine capture. And finally, after hanging the trap **be sure that leaves and branches are cleared from around the trap entrances**. Any interference with the moth's ability to enter the trap will greatly reduce captures. Lures should not be handled with bare hands. Gloves, sticks, or an instrument (with acetone dip) can be used, but whatever tool is chosen, pheromone cross-contamination when working with lures for different moth species must be avoided. Replacement of lures for most species is

Continued from page 5: Using Pheromone Traps to Monitor Moth Activity in Orchards

between generations, except for codling moth, which may require more frequent changes. Check with the manufacturer for lure specific recommendations. Spent lures as well as new lure packaging must be removed from the orchard. **A trap should never have more than one lure at a time.**

Trap placement : Trap placement is a critical factor for optimizing trap performance. The key decisions are 1) how many traps to deploy, 2) where to place them in the orchard, and 3) location of the trap within the tree. There is no way to avoid the fact that deploying more traps will increase the reliability of the information gathered. The trapping range of an individual trap varies depending on the species being monitored and whether the block is treated with mating disruption. Moth species vary in their response to pheromone lures; therefore the number of traps needed ranges from 1 to 4 per ten-acre block. The extremes can be represented by Oriental fruit moth at 1 trap per ten acres and codling moth in a pheromone treated block at 4 traps per ten acres. These numbers are actually a compromise between accurate monitoring and what is practical. For example, each trap in a codling moth disrupted orchard assesses activity in less than 0.5 acre, probably closer to 0.1 acre. Thus, a trapping density of 1 per 2.5 acres is already stretching things. The key considerations for effective trap placement within a block given these considerations are 1) historical “hot spots,” and 2) location relative to block perimeter. An area where moth catches from previous seasons were high, or a “hot spot,” is a good place to locate a trap. A “hot spot” does not represent pest pressure in the whole orchard; thus traps should also be placed elsewhere. Avoid placing traps on the perimeter row. Instead place traps at least 3 to 4 rows in. Placing traps well within the orchard will increase the likelihood of capturing local moths, rather than your neighbors’.

The location of the trap within the tree is the third critical factor. A trap needs to be located where moth activity is greatest and placed in a way that allows moths easy access to the trap. For most insects, the trap can be placed in the middle third of the canopy. Truck window height is not acceptable. The height that a trap is placed is especially important for codling moth. Riedl et al. (1979) demonstrated that catches of male codling moth varied substantially depending on trap location in the tree canopy (Figure 1). Higher catches were recorded in the upper compared to lower canopy positions. Very few moths were captured above or below the canopy. **For monitoring codling moth in a pheromone-disrupted orchard, the trap needs to be placed in the upper third of the canopy.** This increases the likelihood of capturing moths in an environment in which male orientation to pheromone sources is severely impeded.

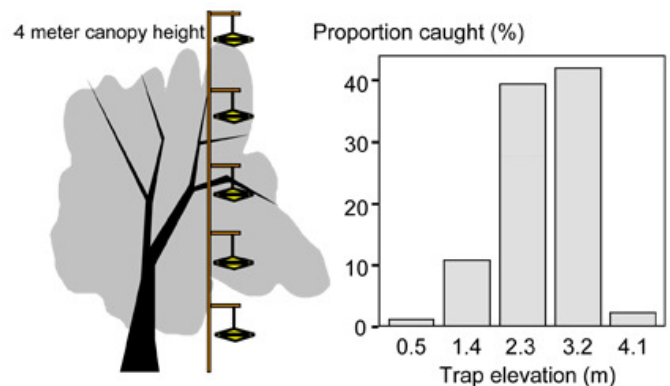
A bamboo or PVC pole can be used to position the trap high in the canopy. For small to medium-sized trees a 5-6 foot pole will suffice, but 8-foot poles are required for trees with canopy heights of 14 feet or greater. The trap is fastened to the end of the pole by slipping the trap’s wire hanger through a hole drilled near the end of the pole, and then wrapping the wire back around itself to prevent it from being dislodged in strong winds. The trap and wire hanger can then be easily slipped over a branch high in the canopy. The trap entrances should be cleared of foliage so that moths can readily access the trap. This can be accomplished using a pole pruner when the traps are first placed in the trees, with periodic maintenance through the season as the foliage grows.

References

Knight, A., Hilton, R. VanBuskirk, P. and Light, D. (2006) Using pear ester to monitor codling moth in sex pheromone treated orchards. Oregon State University Extension Service EM 890, 8 pp.

Riedl, H., Hoying, S.A., Barnett, W.W. and Detar, J.E. (1979) Relationship of within-tree placement of the pheromone trap to codling moth catches. *Environmental Entomology* 8:765-769.

Riedl, H., Howell, J.F., McNally, P.S. and Westgard, P.H. (1986) Codling Moth Management, Use and Standardization of Pheromone Trapping Systems. University of California Bulletin 1918, 23 pp.



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We gratefully acknowledge the continued help and financial support of our local county commissioners. We appreciate their input and participation in our programming efforts.

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Keith L. Smith, Ph.D., Associate Vice President for Agricultural Administration and Director, Ohio State University Extension
TDD No. 800-589-8292 (Ohio only) or 614-292-1868



**Central Ohio Poison
Control Number**

(800) 222-1222

TTY # is (614) 228-2272



2010 Summer Tour & Field Day

Wednesday, June 30
8 a.m. - 3 p.m.

Tour Locations

Grobe Fruit Farm Ltd
43875 Telegraph Road (St Rt 113)
Elyria, OH 44035

Rex Gees Orchard
50586 St Rt 113
Amherst, OH 44001

Registration Information

\$25 for 1st company attendee
\$10 for each additional attendee

Pre-registration deadline is June 23.
After June 23 all fees increase \$5.
No refunds after June 23.

Lunch

Lunch will be available for sale on-site.
The average cost is \$6-\$9 per person.
CASH ONLY.

OPGMA
614-487-1117
Fax: 614-487-1216
opgma@ofa.org
www.opgma.org

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Grobe Fruit Farm, Elyria, Ohio

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Rex Gees Orchard, Amherst, Ohio

Apples, cherries, peaches, plums, pears, and brambles are grown on this 40-acre farm, which was purchased by the Grobe family in 2007. The farm has grown since taking ownership, and includes a blackberry and red raspberry planting which are V-style trellised.

More Information & Hotel Suggestions

For additional information on attending or exhibiting at the OPGMA Summer Tour, visit www.opgma.org/events, e-mail opgma@ofa.org, or call 614-487-1117.

COMPANY INFORMATION (Please print)

Company Name _____

Address _____

City/State/ZIP _____

Phone _____

Fax _____

E-mail _____

Fruits and vegetables you grow and/or retail: _____

ATTENDEE INFORMATION Please print each attendee's name.

	Reg Fee
1 _____	\$25
2 _____	\$10
3 _____	\$10
4 _____	\$10
5 _____	\$10

Register Online!

www.opgma.org

Total _____

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