



Ohio Fruit ICM News



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Calendar

August 10: Grape-Wine Workshop, Firelands Winery, Sandusky. See issues 26 or 27 for details.

August 19: Ohio Grape and Wine Day, Kingsville Grape Branch.

August 24: Grape-Wine Workshop, Raven's Glenn Winery, West Lafayette. See issues 26 or 27 for details.

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

October 14-15, 2005: Highbush Blueberry Council (USHBC) Fall Meeting, Amway Grand Plaza Hotel, 187 Monroe NW, Grand Rapids, Michigan. Contact: 616-885-2000 for information.

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.

December 6-8, 2005: Great Lakes Fruit,

Vegetable, and Farm Market EXPO, DeVos Place Convention Center, Grand Rapids, Michigan. For additional information, visit www.glexpo.com.

Dock Sawfly

Source: Art Agnelo, Cornell Entomologist, Scaffolds Fruit Journal, Volume 14, No. 20, August 1, 2005. Also thanks to Dano Simmons for the reminder to include this information. Image is available at http://www.nysaes.cornell.edu/ent/scaffolds/2005/images/050801fig_1.jpg

This one always sneaks in during the waning days of summer. Following is a repeat of our annual write-up on this pest:

Before and during apple harvest in recent years, a number of growers and fieldmen have been unpleasantly surprised by the appearance of neat little (2 mm) holes bored into the side of their fruit, similar in appearance to those caused by a stem puncture.

Although graders sometimes attribute this damage to apple maggot or European corn borer, cutting open these apples reveals a bright green worm with a light brown head, not feeding but lying inactive, in the burrow extending in from each hole.

These are larvae of the dock sawfly, *Ametastegia glabrata*, a highly sporadic but nonetheless well-documented apple pest that has been known to show up in our area since 1908.

Dock sawfly probably confines its feeding almost entirely to plants belonging to the buckwheat family (Polygonaceae), including numerous docks and sorrels, the knotweeds and bindweeds, or else wild buckwheat or alfalfa. In feeding on any of these plants, the larvae devour the leaf tissue and the smaller veins, eating out irregular holes in the leaves. Ordinarily, the midribs and the larger veins are untouched.

This insect should not be confused with the related European apple sawfly, *Hoplocampa testudinea*, which has a whitish larva that lives and feeds in young apples, particularly prevalent in the eastern apple regions of N.Y.

Injury to apples by the dock sawfly is known to occur generally in the late summer and early fall, when the fruit is approaching maturity and the sawfly is searching for an overwintering site.

The greater hardness of immature apples probably deters the larvae from burrowing into these, so although 4 generations per year have been identified, only the last one or two are of concern to apple growers.

The injury to apples consists externally of the small round holes bored by the larvae, which after a few days show a slightly sunken, brownish ring around them and occasionally may be surrounded by a larger discolored halo. These holes may occur anywhere on the surface, but are most numerous around the calyx and stem ends, or at a point where the apple touches a leaf or another apple, since it is easier for the larva to obtain a foothold here.

Inside, the injury is usually more serious, since the larva often burrows to the core and usually hollows out a pupal cell somewhat larger than itself.

Apples may have three or four, or sometimes even eight, holes in them of varying depths, but contain only one or two worms.

Since the dock sawfly does not feed upon any part of the apple tree, but must live on the above-mentioned succulent weeds, it becomes an apple pest only where these plants are growing in or around the orchard. There is little danger from this insect in orchards where the food plants don't exist.

Likewise, the possibility of the larvae coming into the orchard from neighboring meadows, ditch banks, or roadsides is slight, for the larvae are incapable of finding their way over any extent of bare soil. The adults, though active, are not strong fliers, and it is not possible for the insect to travel far in this stage.

Now would be a good time to assess the weed situation in your orchard and make plans for such selective herbicide applications as may be appropriate regarding this insect. Even though

common wisdom says this sawfly is a pest only every 10-12 years, this is only an average estimation, and it's not a bad idea to anticipate the unexpected when hardly any season is considered to be "average."

(Information adapted from Newcomer, E. J. 1916. The dock false-worm: An apple pest. USDA Bull. 265, 40 pp.)

Control Of Preharvest Drop with NAA

Source: Peter Hirst, *Purdue Horticulturalist*, *Facts for Fancy Fruit*, 05-06

The traditional material used for stop drop control on apples is NAA (Fruitone N), a synthetic auxin. Other synthetic auxins you may have heard of include 2,4-D and 2,4,5-T. Of course you also know Fruitone N as a chemical thinner. Early in the season NAA knocks them off and later towards harvest it sticks them on. This highlights the importance of timing when using plant growth regulators.

Another newer stop drop material is ReTain (see article by Dr Jim Schupp on ReTain immediately below). Although both NAA and ReTain can reduce preharvest drop, they do this in different ways. ReTain delays apple maturity, whereas NAA does not delay maturity (and may even hasten it) but just reduces the fruit dropping.

As Dr Schupp highlights in his article, ReTain must be applied well ahead of the anticipated harvest date so a considerable amount of planning is required. NAA, on the other hand, needs to be applied just before apples start dropping, so in this regard can be viewed as a rescue treatment.

Once NAA is applied it takes about 3 days for the activity to kick in. After that you can expect about 7 days of drop control. Rates of 10-20 ppm are usually effective, but knowing exactly when to apply it can be tricky. If the application is made too soon, the effect may wear off before harvest is complete. If the NAA is applied too late, then too many apples will have dropped on the ground before the NAA starts having an effect. Wait until you start to see a few apples drop, and perhaps assist this by bumping a few branches to see if any apples drop. Then it's time to apply the NAA.

Longer stop drop control can be obtained with a split application, 10 ppm applied 7-14 days apart. NAA works best when the temperature is over 70°F, but the way the weather has been lately, this won't be much of a constraint. Be aware that high rates of NAA (20 ppm) can advance fruit maturity.

NAA can be tank mixed and is compatible with a wide range of products. Always conduct a small test before mixing NAA with materials you haven't tried previously. Apply in enough water to ensure good coverage.

Timing ReTain Sprays

Source: Dr. Jim Schupp, The Fruit Times, Penn State University

ReTain (AVG) is a plant growth regulator that blocks the production of ethylene. When ReTain is applied to apples, several ripening processes are slowed, including preharvest drop, fruit flesh softening, starch disappearance, and red color formation.

In order for ReTain to be effective, it must be applied well in advance of the climacteric rise in ethylene production that signals the onset of fruit maturity. If applied too early the effects may wear off prematurely. If applied too late, a significant portion of the crop may not be responsive to AVG, having already begun to produce autocatalytic ethylene. A second reason for avoiding late applications of ReTain is the 21 day preharvest interval (PHI) which, combined with a late spray date, could result in an undesirable delay in harvest.

The label recommends applying ReTain four weeks before anticipated harvest (WBH). This has sometimes caused confusion, as the grower is timing the spray relative to some future, unknown date. A more scientific basis for timing would be to state that ReTain should be applied four weeks before the natural climacteric rise in fruit ethylene, but this is still a future event with an element of uncertainty. The good news is that there is a fairly wide window when ReTain can be applied with optimal results, and a fairly easy way to determine when to apply it.

The best application window for ReTain is about 10 days wide and centered on the 4 WBH date. For early season varieties, such as Gala and McIntosh, start by estimating when you would normally expect to begin harvesting the variety if no ReTain or ethephon (Ethrel, Ethephon II) were used.

Now take into consideration the season. For example, the 2004 bloom date, the ripening pattern of cherries, peaches, and summer apple varieties all suggest that this season is about 10 days earlier than normal in PA. Adjust the anticipated harvest date according to how early or late you estimate the season is, and then count back four weeks on the calendar. Now mark the calendar from that date through the next seven days. This is your application window for that early season variety.

Watch for good spray conditions with at least six hours drying time within that week and apply the material at the first opportunity. Congratulations! Your ReTain is on at the right time. Now mark your calendar for 21 days after the spray was applied. This is the PHI, as required by the label. You can't legally harvest before this date.

Repeat the same thought process for later varieties, but keep in mind that later varieties are usually less affected by seasonal variation in maturity than stone fruits or early apple varieties. It is usually unnecessary to account for seasonal variation in fruit maturity for Empire and later varieties.

North American Farmers' Direct Marketing Association Survey

Source: Charlie Touchette, Executive Director, North American Farmers' Direct Marketing Association, via John Wargowsky, Executive Director, MAAHS, Inc.

The North American Farmers' Direct Marketing Association is engaged in an extensive survey of farm direct marketers and agritourism operators. We are partnered with Ed Mahoney and his survey team at Michigan State University to accomplish this. We invite you and the entire North American farm direct marketing community to help make this the most comprehensive survey our industry has ever seen.

It's important that we include your region in the makeup of the farm direct marketing and agritourism analysis of North America. We are asking our friends who have association, Extension, state or provincial department of agriculture, and similar lists to blast out e-mails or send notices to their members and invite them to participate in this survey. Any farmer or rancher on this continent who sells at farmers' markets, operates an agritourism destination, does PYO, has a farm stand, or engages in any related activity on their farm or ranch should be counted!!!

Please be sure your region is represented. Forward this e-mail to your direct market association decision maker, send it to farmers and ranchers directly, or do whatever else it takes to ultimately get this internet survey link into the hands of farm direct marketers everywhere.

This is a serious effort, and confidentiality is protected under all appropriate laws as indicated in the web site. The survey is specifically applicable to farm and ranch operators. You, as a service provider, certainly can view the entire survey by clicking on the link provided and by clicking on the "print survey" button.

The survey is data base driven. So if we get enough responses from any given region to provide critical mass, we can sort statistics by your state or region and do some comparative analysis with the results of the entire continent. The power of this tool to help us all is nearly endless.

Please take action now. Please contact Charlie Touchette by e-mail at <nafdma@map.com> if you have any questions.

Study Particulars

The North American Farmers' Direct Marketing Association (NAFDMA) is helping sponsor and strongly endorses the most comprehensive survey that has ever been commissioned relating to the continental farm direct marketing and agritourism industry. Please take the time to participate. The survey is designed to help the operators who are currently engaged in farm direct marketing and agritourism enterprises. If you have any questions about this study, please contact Dr. Ed Mahoney by e-mail at rirc@msu.edu,

The results of this survey will:

- help revolutionize our industry
- provide a realistic look at current impact of this industry
- make available broad-based benchmarks that have never been captured before
- help you and other farm direct marketers in the areas of zoning and insurance
- document accurate facts that help represent your interests and resolve issues in our industry
- give agricultural communities and urban centers alike a realistic analysis of the importance of farm direct marketing and agritourism

This can't be accomplished successfully without your participation! We're so serious about this we are providing an incentive. ***The first 777 COMPLETED surveys will be entered into a drawing to win*** your choice either of a \$1900+ USD value to attend the NAFDMA Convention in San Antonio and Austin, Texas, or \$1000 CASH. Feel free to contact me if you have questions about your eligibility for the drawing. This email is being sent to over 2000 farm direct marketing and agritourism operations that have had some connection to NAFDMA or their local associations in the past five years.

To complete the survey, go to <<http://www.farmmarketresearch.com>>. You will need to register first by providing your e-mail, zip/postal code, and name of the ranch/farm.

Your privacy will be protected to the maximum extent allowable by law. We hope that you will complete all the questions, but you are under no obligation to do so. As soon as we receive your information, your name as well as the name of your farm and ranch will be automatically separated from the answers that you provide.

phone 517-432-0285 or regular mail 131 Natural Resources Bldg, East Lansing, MI 48824.

If you have any questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone 517-355-2180, fax 517-432-4503, e-mail ucrihs@msu.edu, or regular mail 202 Olds Hall, East Lansing, MI 48824.

Please, click the link provided below to complete the Farm Market Annual Survey.

<http://www.farmmarketresearch.com/>

Pest Phenology

Coming Events	Degree Day Accum. Base 50°F
Lesser appleworm 2 nd flight peak	1554-2292
Oriental fruit moth 3 rd flight begins	1613-1901
Peachtree borer flight subsides	1708-2232
Spotted tentiform leafminer 3 rd flight peak	1776-2134
Oriental fruit moth 3 rd flight peak	1821-2257
Redbanded leafroller 3 rd flight peak	1876-2342
Apple maggot flight subsides	1908-2368
Codling moth 2 nd flight subsides	1944-2536

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

Degree Day Accumulations for Ohio Sites August 3, 2005

Ohio Location	Degree Day Accumulations Base 50°	
	Actual	Normal
Akron-Canton	1808	1729
Cincinnati	2282	2286
Cleveland	1861	1690
Columbus	2141	1956
Dayton	1993	2025
Kingsville	1651	1540
Mansfield	1747	1687
Norwalk	1861	1669
Piketon	2158	2194
Toledo	1907	1669
Wooster	1857	1584
Youngstown	1640	1521

Fruit Observations and Trap Reports

Site: Waterman Lab, Columbus

Dr. Celeste Welty, OSU Extension Entomologist,
and Gretchen Sutton, Graduate Assistant

Apple: 7/28 to 8/3/05	
Redbanded leafroller	36 up from 12
Spotted tentiform leafminer	77 down from 398
San José scale	15 up from 10
Codling moth (3 trap mean)	7.3 up from 4.3
Lesser appleworm	13 down from 14
Tufted apple budmoth	14 up from 6
Variegated leafroller	7 down from 21
Obliquebanded leafroller	7 down from 14
Apple maggot (sum of 3 traps)	1 same as last week

Site: East District; Erie and Lorain Counties

Jim Mutchler, IPM Scout/Technician

Apple: 7/26 to 8/2/05	
Codling moth (3 trap mean)	0.5 down from 2.7
Oriental fruit moth	3.1 up from 1.9
Redbanded leafroller	1.2 down from 2.9
San Jose scale	61.7 down from 139
Lesser appleworm	5.5 up from 4.0
Apple maggot (sum of 3 traps)	2.8 up from 0.8

Beneficials found: lacewings, native lady beetles, brown lacewings, *Stethorus pinctum*

Peach: 7/26 to 8/2/05	
Redbanded leafroller	1.3 down from 2.3
Oriental fruit moth	1.3 up from 0.8
Lesser peachtree borer	3.7 up from 2.5
Peachtree borer	5.7 up from 2.1

Beneficials found: lacewing eggs and adults, native ladybeetles

Site: West District: Huron, Ottawa, Richland,

and Sandusky Counties

Lowell Kreager, IPM Scout/Technician

Apple: 7/25 to 8/1/05	
Codling moth	1.0 up from 0.4
Oriental fruit moth	4.0 up from 2.0
Redbanded leafroller	2.6 up from 1.4
San Jose scale	0.0 same as last week
Spotted tentiform leafminer	1204 up from 454
Lesser appleworm	6.7 up from 4.5
Apple maggot (sum of 3 traps)	0.1 up from 0.0

Beneficials found: lacewings, banded thrips

Peach: 7/25 to 8/1/05	
Redbanded leafroller	13.0 down from 3.0
Oriental fruit moth	1.9 up from 0.7
Lesser peachtree borer	1.7 down from 4.5
Peachtree borer	0.5 same as last week

Lacewing adults, brown lacewing adults

**Preliminary Monthly Climatological Data for Selected Ohio Locations
July 2005**

Weather Station Location	Monthly Precipitation	Normal Monthly Precipitation	Year-to-date Precipitation	Normal Year-to-date Precipitation	Average High Temp.	Normal High Temp.	Average Low Temp.	Normal Low Temp.	Mean Temp.	Normal Mean Temp.
Akron-Canton	6.09	4.02	23.49	22.84	84.6	82.3	64.4	61.3	74.5	71.8
Cincinnati	1.76	3.75	22.97	26.29	86.5	86.4	68.3	66.1	77.4	76.3
Cleveland	3.24	3.52	21.50	21.99	84.5	81.4	65.8	62.3	75.2	71.9
Columbus	1.79	4.61	25.95	23.45	86.3	85.3	67.7	64.9	77.0	75.1
Dayton	1.95	3.75	24.88	24.34	84.6	84.2	65.8	64.4	75.2	74.3
Fremont	6.72	3.76	21.54	20.45	86.2	83.9	60.0	61.6	73.1	72.8
Kingsville	3.84	2.90	19.35	19.80	82.9	80.7	62.6	61.2	72.8	71.0
Mansfield	3.05	4.22	23.93	25.49	83.3	81.8	63.3	60.3	73.3	71.1
Norwalk	5.68	4.16	25.13	21.13	86.9	82.2	61.8	61.5	73.8	70.8
Piketon	2.58	4.40	15.71	26.70	87.2	84.6	66.8	62.3	77.0	73.5
Toledo	5.03	2.80	19.56	19.41	85.3	83.4	64.3	62.5	74.8	73.0
Wooster	4.03	4.05	20.60	21.43	86.1	83.6	63.2	59.7	74.7	71.6
Youngstown	3.19	4.10	24.80	22.21	84.0	81.0	61.3	58.7	72.6	69.9

Temperatures in degrees F, Precipitation in inches **Record set: High - July 26th Mansfield 92° F**