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THE OHIO STATE UNIVERSITY Newsletter Extension

Fruit ICM News

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Calendar

June 20 & 21: Direct Marketing Summer Tour in NE Ohio and NW Pennsylvania, sponsored by Ohio Direct Ag. Marketing Association (DAMA), evening of June 20 and all day on June 21. **Tuesday, June 20**: 6:30 p.m. - Picnic dinner at Whitehouse Fruit Farm, 9249 State Route 62, 4 miles southwest of Canfield, phone (330) 533-4161; 7:30 p.m.- Tour of Whitehouse Fruit Farm. **Wednesday, June 21:** 6:00-7:00 a.m.- Continental breakfast at Whitehouse Fruit Farm; 7:00 a.m.- Bus leaves from Whitehouse Fruit Farm; 7:10 a.m.- Tour Haus Red Apple Orchard, Canfield; 8:45 a.m.- Tour Apple Castle Farm Market, New Wilmington, PA; 10:40 a.m.- Tour Soergel's Farm Market, Wexford, PA; 11:40 a.m.- Lunch at Soergel's; 1:30 p.m.- Tour Trax Farms, Finleyville, PA; 3:30 p.m.- Tour Janoski's Market and Greenhouse, Clinton, PA; 5:30 p.m.- Return to Whitehouse Fruit Farm. Cost is $50.00 per person, which includes bus travel, Tuesday evening picnic, Wednesday breakfast and Wednesday lunch. To register, contact Rob Leeds, OSU Extension, Delaware County at (740) 368-1925 or leeds.2@osu.edu.

June 28: Ohio Fruit Growers Society Summer Tour, Vogley Enterprises, East Sparta, Ohio, Stark County. Wagon tours start at 8:00 a.m. Dr. Dave Ferree will talk about Apogee, for fire blight and growth regulation. Diane Miller will discuss peach varieties and the Vogley's trickle irrigation system. A walking tour of the processing facilities follows, with Winston Bash (Director of Food Industry Center at OSU) reviewing sanitation and food safety. Exhibitors will sponsor lunch, and Ohio Fruit Growers business meeting starts at 1:00 p.m. Cost is $6 per person or $12 for the family. For registration, contact OFGS at (614) 249-2424 or growohio@ofbflorgso they can prepare the proper number of lunches.

July 27-28: Ohio Berry Tour, Central Ohio. Tour stops include Rhoads Farm Market (Circleville), Circle S Farms (Grove City), Schacht Farm Market (Canal Winchester), Jacquemine Farms (Plain City), and Doran's Farm Market (New Albany). We will keep you posted as definite times are set and

registration information becomes available. Contact Berry Coordinator Sandy Kuhn at (800) 297-2027 or kuhn.37@osu.edu for information needed before then.

August 3: OVPGA & Ohio Fruit Growers Society Young Grower Tour, in northeast Ohio, 8:30 a.m. to 7:30 p.m.. This bus tour provides a broad variety of fruit and vegetable operations that use different marketing strategies. Stops include: Farmers Produce Auction (Mt. Hope), Graf Growers (Akron), Hilgert's Berry Farm & Market (Mogadore), K.W. Zellers & Son (Hartville), and Hartville Kitchen (for dinner). Tour is designed for growers 40 years of age and younger, and others are welcome if interested. Contact John Wargowsky at (614) 249-2424 or jwargows@ofbf.org for more information.

June 24-27: International Dwarf Fruit Tree Assoc. (IDFTA) Annual Summer Tour: Scheduled for the Lake Champlain Valley of New York, Vermont, and Quebec. Various registration options are available for the days you would like to attend. Each year IDFTA holds a summer tour in a prominent fruit production region throughout North America. In the past few years, IDFTA has been to Colorado, Virginia, and Massachusetts. The Champlain Valley is a striking fruit production area, with Lake Champlain surrounded by the Adirondack and Green Mountains of New York and Vermont, respectively. Cool summers and crisp September weather make it the premier climate for growing the world's best McIntosh apples. Cortland, Empire, and Honeycrisp are also popular varieties. Day 1 (Saturday) of the tour will travel to Quebec with a couple orchard stops, including one that features the Solaxe' pruning and training system. A maple syrup operation, an African violet and orchid greenhouse, and a vegetable production and distribution operation will also be on the agenda. On Monday, IDFTA will travel to the New York side of the Lake, visiting the world's largest McIntosh orchard in Chazy, as well as other orchards in the Peru area. Cornell Cooperative Extension fruit specialists will be on hand to discuss recent research and establishment of dwarf tree demonstration plantings in these commercial orchards. A barbecue dinner at Shelburne Farms (the world famous restored mansion and farm of William and Lila Vanderbilt Webb) will follow Monday's full day of orchard tours. On Tuesday, IDFTA will visit two orchards in the Shoreham, Vermont area, and will also tour a Cornell rootstock research planting in Crown Point, NY. A stop is also planned at Ben & Jerry's premium ice cream plant in Waterbury, Vermont, home also to Cold Hollow Cider Mill, New England's largest fresh apple cider operation. IDFTA Tour headquarters will be at the Sheraton Hotel in S. Burlington, VT. Pre-registration deadline is June 9. This will be an excellent opportunity to visit the Champlain Valley, learn about the local fruit industry, and pick up a few growing tips from fellow fruit growers from throughout North America. For more information, visit the IDFTA WWW site http://www.idfta.org/ or contact IDFTA business manager Charles Ax at (570) 837-1551, attorney@ptdprolog.net.

Summer Oil for European Red Mite

Source: Art Agnello, Cornell University, Scaffolds Fruit Journal, May 30, 2000

In situations where European red mite pressure or the crop's sensitivity to them haven't necessarily justified an early season treatment with Agri-Mek, Apollo or Savey, this is the time of year when a summer oil program might be considered as an alternative preventive approach. Field research trials conducted in commercial and experimental apple orchards in western N.Y. have shown the effectiveness of using a highly refined oil in a seasonal program to control mites throughout the summer. Some examples of these products are Sunspray Ultra Fine Spray Oil (Sun Refining & Marketing, Philadelphia), Stylet-Oil (JMS Flower Farms, Vero Beach, FL), and Omni Supreme (an ExxonMobil product formulated using Orchex 796 and distributed in our area by Helena); others are labeled and may be available, although we haven't tested all brands.

Our approach is to make three applications, on a preventive schedule, immediately after the bloom period, before mite populations have a chance to build. The first application can be any time from petal fall to 1-2 weeks later, followed by two additional sprays at 10-14-day intervals. The oil is not concentrated in the tank, but rather mixed on the basis of a rate per 100 gallons of finish spray solution; for instance, at the 1-gal. rate, a spray tank holding 500 gallons receives 5 gallons of oil. The sprays are applied at a volume sufficient to obtain adequate coverage of the canopies; in most cases, we recommend 100 gal. per acre. Dosages that we have tested are 6.5 oz., 1 qt., and 1, 2, and 3 gal./100 gal. of finish spray solution. Results of our tests can be summarized as follows: the 2 and 3 gal. rates effectively controlled mite populations for the entire season in all but the most extreme cases; the 1 gal. rate maintained control of moderate populations but was not effective against severe mite pressure (a fourth spray was necessary later in the summer); and the lower rates provided only minimal control (light population pressure), permitting unacceptable mite numbers by mid-July in orchards with moderate or severe populations.

Overall, the results of this work demonstrated that summer oil applications can be used to effectively control European red mite populations in many orchard situations. So far, mites have not demonstrated an ability to develop a resistance to oil, and oil is less toxic to at least some beneficial species than are traditional toxicants. Although it is possible to kill some predator mites by directly spraying them, overall mortality is not very high. Some potential drawbacks to keep in mind if using this management strategy:

- potential compatibility problems with some fungicides needed to control summer diseases, particularly captan.
- small necrotic leaf lesions in some situations such as drought stress or on certain varieties, especially when high-rate (2% or more) applications take place under poor drying conditions.
- a tendency for increased "scarf skin" in some varieties such as Red Rome and Jonathan.

Leafroller Activities

Source: Common Tree Fruit Pests by Angus H. Howitt

Redbanded Leafroller

The redbanded leafroller (RBLR) is a native insect that has become injurious in an area north of the Ohio River and east of the Mississippi. RBLR feeds on a variety of plants, including tree fruits, small fruits, vegetables, weeds and flowers, and forest or ornamental trees and shrubs. On tree fruits, it is a pest of peach, apple, cherry, and plum.

The adult RBLR is reddish-brown with lighter markings of silver, gray, and orange. The name refers to the distinct reddish-brown band extending across the wings, and its habit of rolling, folding, or attaching leaves together. The moths have a wingspread of ½ inch. The first adults emerge sometime in April from overwintered pupae in the ground cover, with the female depositing egg masses on the underside of larger limbs. Larvae emerge in May and skeletonize leaves from the underside, folding and webbing them together. They feed on the fruit, especially where leaves touch it, making shallow, irregular channels.

Natural enemies of the RBLR include the egg parasite, *Trichogramma minutum* (Riley), and 22 species of hymenopterous parasites (predatory wasps) of the larva and pupa. The egg parasites, however, are

apparently eliminated by commercial orchard sprays.

Control: When infestations are severe, sprays applied at the delayed dormant stage will control the adults before the female lays eggs, thus greatly reducing the amount of egg laying. Normally, these eggs begin to hatch at petal fall, so broad spectrum sprays applied at petal fall will control this pest. Because the redbanded leafroller has so many host plants, pheromone traps may be useful in determining the occurrence of generations, but they have limited value in determining economic thresholds. If the redbanded leafroller is a problem, it is essential to control the first generation. Large numbers of surviving first generation redbanded leafrollers can create problem populations in the second and third generations.

Obliquebanded Leafroller

Injury or Damage: During the prebloom period, overwintering larvae feed inside bud clusters and on various floral parts. Larvae continue to feed on the flowers during bloom and on developing fruit after petal fall. At that time, they begin to feed on both the fruit and the rapidly expanding leaves. They gouge deeply into young fruit. Numbers of overwintering larvae decrease after petal fall, but fruit damage increases as the remaining large larvae feed more on fruit as the season progresses.

Though most damaged fruits drop before harvest, some remain on the tree. Most of the severe damage to fruit caused by overwintering larvae occurs after petal fall. The larger the fruit becomes before it is damaged, the more likely it is to develop and remain on the tree until harvest. In late July, larvae of the summer generation can be found on actively growing terminals inside the canopy and on terminals and older leaves near fruit clusters.

Cornell entomologists have developed a sampling form for obliquebanded leafroller. The form and sampling instructions can be downloaded @
http://www.nysaes.cornell.edu/ipmnet/ny/fruits/tree_fruit/apple.man/OBLR_3.GIF

Fruit Observations

Insect Key

AM: Apple maggot
CM: Codling moth
DWB: Dogwood borer
LPTB: Lesser peachtree borer
OBLR: Oblique banded leafroller
OFM: Oriental fruit moth
PC: Plum curculio
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 (5/25-5/31)

Source: Dr. Celeste Welty, OSU Extension Entomologist
Traps used: STLM=wing traps, SJS=Pherocom-V, Others=Multipher-1® traps

Apple	**Peach**
RBLR: 0 (unchanged)	OFM: 18 (up from 8)
STLM: 439 (up from 59)	LPTB: 2.0 (down from 4.0)
DWB: 1.0 (down from 1.5)	PTB: 0 (unchanged)
SJS: 0 (unchanged)	
CM: 11.7 (down from 22.0)	
OBLR: 0 (unchanged)	
TABM: 1 (up from 0)	
VLR: 0 (unchanged)	

Site: East District; Erie & Lorain Counties (5/25-5/31)
Source: Jim Mutchler, IPM Scout
Traps Used: STLM=wing traps, Others=Multipher® traps

Apple	**Peach**
RBLR: 0.0 (down from 0.1)	OFM: 7.33 (up from 3.3)
CM: 3.7 (up from 2.3)	RBLR: 0 (down from 0.3)
SJS: 0 (unchanged)	LPTB: 10.0 (down from 11.0)
	PTB: 2.7 (down from 12.7)

Other pests: plum curculio strikes, green apple aphid, rosy apple aphid, white apple leafhopper, fire blight

Beneficials at work: lacewing eggs & adults, *Stethorus* punctum, other lady beetles

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Site: West District; Huron, Ottawa, & Sandusky (5/24-5/30)
Source: Gene Horner, IPM Scout
Traps Used: STLM=wing traps, Others=Multipher® traps

Apple	**Peach**
RBLR: 0.0 (unchanged)	OFM: 11.3 (up from 3.5)
SJS: 0.0 (down from 2.4)	RBLR: 0 (unchanged)
CM: 2.7 (up from 0.9)	LPTB: 4.5 (down from 14.8)
	PTB: 2.0 (up from 0.5)

Other pests: green apple aphid, green peach aphid, lilac borer

Beneficials at work: Banded thrips, predatory mites

Site: Wayne County (5/26-6/1)
Source: Ron Becker, Extension Program Assistant
Traps used: STLM=Wing traps, PC=Circle trunk trap, Others=Multipher® traps

	Apple			
	North	South	East	West
RBLR:	0	0	9	0
STLM:	4.0	7.5	0	29.3
CM:	2.2	1.0	3.0	21
PC:	0			0

	Peach		
	North	South	West
OFM:	24	19	19
LPTB:	0	3	0
LPTB:	0		0

Orchard observations: *North:* red mites found throughout one orchard at less than 1 mite per leaf. *South:* light aphid infestation in apples and stone fruit. Stink bugs were found feeding on several cherries. *West:* red mites washed off leaves by heavy rains, but many eggs remain. Heavy aphid infestations in several blocks. Also leaf miner damage at less than one mine per leaf. White apple leafhopper also being found. Heavy trap catch for oriental fruit moth.

Northern Ohio Apple Scab Activity - SkyBit Product

SkyBit based on observations:	May 1, 2, 5, 7, 8, 10, 13, 17-24, 27-30; possible infection & damage
Based on Forecasts:	**June 2, 3; possible infection & damage**

North Central Ohio Spectrum Technologies Orchard Monitors for Apple Scab
Spectrum Technologies Monitors and Software* Observations: May 1, 2; Light Infections May 5,19, 27; Moderate Infections (Software* based on Modified Mills Chart)

Northern Ohio Fire Blight Activity - SkyBit Product

SkyBit based observations:	May 1, 4, 5, 7-10, 13, 18,19, 22-24; possible infection & damage
Based on Forecasts:	**June 1-3; possible infection & damage**

Degree Day Accumulations for Selected Ohio Sites January 1,

2000 to date indicated

	Actual DD Accumulations May 31, 2000		Forecasted Degree Day Accumulations June 1, 2000			
Location	**Base 43° F**	**Base 50° F**	**Base 43° F**	**Normal**	**Base 50° F**	**Normal**
Akron - Canton	946	486	1080	960	582	534
Cincinnati	1254	710	1413	1378	831	823
Cleveland	935	490	1067	916	585	507
Columbus	1210	680	1355	1127	787	649
Dayton	1181	655	1331	1149	767	671
Mansfield	940	490	1073	941	586	522
Norwalk	967	512	1101	901	609	503
Toledo	966	494	1100	890	591	496
Wooster	1018	539	1146	895	630	484
Youngstown	910	454	1035	865	541	469

Phenology

	Range of Degree Day Accumulations	
Coming Events	**Base 43° F**	**Base 50° F**
Spotted tentiform leafminer 2nd flight begins	795-1379	449-880
Dogwood borer 1st catch	798-1182	456-718
Peachtree borer flight peaks	864-2241	506-1494
Oriental fruit moth 2nd flight peak	1000-2908	577-2066
Apple maggot 1st catch	1045-1671	629-1078
Redbanded leafroller 2nd flight begins	1096-2029	656-1381

Thanks to Scaffolds Fruit Journal (Art Agnello)

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