



Newsletter

Extension

Fruit ICM News

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Calendar

June 20: International Dwarf Fruit Tree Association Summer Tour. The International Dwarf Fruit Tree Association announces its summer tour for 2004 will be headquartered in La Crosse, Wisconsin. The annual summer tour will be held June 21-22, with a preparatory discussion on Sunday evening, June 20. The emphasis for the 2004 tour is 'Honeycrisp', an explosively crisp apple that has attracted a huge customer following in an extremely short period of time. Details on the IDFTA 'Honeycrisp' tour in Wisconsin and Minnesota are available at: <http://www.idfta.org>.

June 30: Ohio Fruit Growers Society Summer Tour, OARDC Horticulture Unit 2, Wooster. Registration begins at 7:00 a.m.; program runs 8 a.m. to 3 p.m. Registration fee.

Two orchard tours, one focusing on horticultural aspects of fruit production and the second on diseases and insects, will be offered concurrently beginning at 8 a.m. "Both tours will showcase current research projects underway in support of the Ohio fruit industry," said Diane Miller, a researcher with OARDC's Department of Horticulture and Crop Science. "Each tour will run approximately one hour, and registrants are encouraged to attend both." Ohio Department of Agriculture Pesticide Applicator Recertification Credit will be available for the disease and insect tour.

The horticulture tour will consist of six informational stops:

- NC-140 cooperative fruit rootstock evaluations in Ohio by Dr. Stephen Myers, chairman of the Department of Horticulture and Crop Science
- NE-183 apple variety evaluations in Ohio by Dr. Diane Miller
- Weed control in young fruit plantings by Dr. Doug Doohan, OARDC weed specialist.
- Use of windbreaks for orchard screening and reducing spray drift by Steve Davis, Ohio Department of Natural Resources
- Grape research at OARDC by viticulturist Dr. Imed Dami

- Primocane-fruiting blackberries by Dr. Joe Scheerens, OARDC small-fruit specialist

The disease and insect tour will feature six informational stops:

- New developments in fungicides for fruit disease control by OARDC plant pathologist Dr. Mike Ellis
- Organic strawberry production involving composts, pest density, consumer taste panels, and economics by Dr. Joe Kovach, OARDC integrated pest management specialist
- Impact of Asian lady beetle on grape and wine production in Ohio by Roger Williams, OARDC entomologist
- Reducing spray drift and improving pest management by Richard C. Derksen, U.S. Department of Agriculture expert based on the Wooster campus
- Insecticide and pheromone options for managing oriental fruit moth in peaches and codling moth in apples by OARDC entomologist Dr. Celeste Welty
- Encouraging honey bee populations impacted by diseases, nest site destruction, and pesticides by Dr. Jim Tew, OARDC beekeeping specialist.
- Pesticide applicator recertification credit is one hour in commercial category 2B or one hour in private category 3A (vegetables) or 4 (fruit).

The orchard tours will be followed by lunch, which participants can purchase at the site between 11 a.m. and 1 p.m. The OFGS business meeting begins at 1 p.m. under the tent. Other specialists will be available in the tent area to assist you on a one-on-one basis, providing:

- A plant pest diagnostic clinic, where you can bring samples and have Nancy Taylor, OSU Extension plant pathologist, diagnose your plant problems
- Fruit on the Web, a demonstration on how to access fruit informational web sites by Ted Gastier, OSU Extension
- An orchard weather monitoring equipment demonstration by Ron Becker, OSU Extension.
- A cider regulation update providing the latest information for the 2004 autumn cider season by Chuck Kirchner, Ohio Department of Agriculture.

The summer tour also will present more than 30 exhibitors who support the fruit industry. Interaction with these exhibitors will allow participants to discuss products and learn about technologies available to grow and market better fruit. Ohio State's Fruit Team members will be available to answer questions and will have a variety of extension publications on fruit-crop production and management available for purchase.

Following the tour, attendees are invited for a wagon tour of Secrest Arboretum on the OARDC campus. The arboretum tour will be from 2-3:30 p.m., and wagons will load at the Fisher Auditorium parking lot. Secrest has beautiful collections of crabapples, arborvitae, azaleas, and rhododendrons, along with the Garden of Roses of Legend and Romance. To learn more, visit web address <http://www.secrest.osu.edu>.

Registration opens at 7 a.m. and the registration fee is \$15 individual/\$20 family for OFGS members. Individual and family fees increase by \$5 for non-OFGS members. The OARDC Unit 2 Research Farm is located on Oil City Road (T-92), southeast of Wooster off U.S. Route 250.

For those interested in arriving the night before, a block of rooms has been set aside at the Best Western Wooster Plaza, 243 East Liberty, Wooster. The OFGS overnight room rate is \$59.50 plus 12.75 percent tax, and the reservation deadline for this rate is June 10. The Best Western toll free phone number is 866-264-2057, local phone number is 330-264-7750, and their fax is 330-262-5840.

For more information about the OFGS tour, contact Tom Sachs at 614-246-8292, tsachs@ofbf.org, or Diane Miller at 330-263-3824, miller.87@osu.edu.

Trauma Blight

Source: MARYBLYT 4.3, Paul W. Steiner & Gary W. Lightner, University of Maryland

We have entered the period of possible storm damage and trauma fire blight. The following discussion is from the *MARYBLYT 4.3* handbook.

The 6 to 8 week period after petal fall is a very important time for fire blight management decisions. During this time:

- Blossom blight symptoms appear if infections occurred during bloom.
- Canker blight symptoms appear within the first 3 weeks after bloom in orchards with a history of fire blight.
- The risk for shoot blight increases and continues until shoot growth ceases.
- Severe storms (wind, hail) are more likely to contribute to trauma blight.

Control measures taken here will do much to limit the amount of disease in the current year and the amount of inoculum available for the next season. As bacterial populations in the orchard increase, the potential for shoot blight increases with the activity of sucking insects. This is also true for trauma blight incidents should severe weather occur. With the exception of late secondary flowering, *the focus of the control effort must now shift from preventing blossom blight to limiting the damage caused by canker blight and to reducing the potential for serious damage with shoot and trauma blight events.*

Antibiotic sprays after primary petal fall are specifically not recommended except where a significant amount of secondary flowering extends the period of risk for blossom infections. In any case, the number of antibiotic applications per season should not exceed four to reduce the potential for selecting resistant populations of the pathogen. This presents a problem where secondary flowering prolongs the period of susceptibility to blossom blight. Streptomycin is ineffective as a protectant for shoot blight. In addition, because of the high potential for selecting resistant strains of the pathogen, streptomycin should *never* be used after symptoms of fire blight appear in the orchard.

Whether streptomycin should be used *after* severe weather damage (hail, high wind, late frost) is still a matter for debate. There is no data on its effectiveness or economic value under these conditions. Nevertheless, if this approach is taken, consider the following factors in making a treatment decision:

- Susceptible cultivars are damaged
- The orchard has a history of fire blight
- The application can be made within the allowed pre-harvest interval for the crop
- The application can be made within 24 hours
- The value of the planting justifies the cost of the application

Preventing Problems with Heat Stress

Source: 1999 Michigan State Fruit CAT, submitted by Gary Thornton, MSU, and written by Sheldon R. Braun, M.D., Wayland N McKenzie, Ph.D., and Mary Andersen; University of Missouri

Farm workers have been reported to have more heat-related illnesses than any other occupation. Many health problems can be caused by too much heat. Among them are heat rash, heat cramps, fainting brought on by heat, heat exhaustion, and most deadly, heatstroke (also called sunstroke). The factors that contribute to these health problems are many, and people differ in how prone they may be.

Heat Rash

Heat rash occurs when the sweat glands of the skin become clogged due to extreme sweating. Usually this looks like red "pimples" on skin that is kept sweaty. White "goosebumps" occur if the sweat glands below the skin are affected. The skin feels prickly. Heat rash disappears when the person is returned to cooler temperatures. Infection can occur if the problem is not corrected.

Heat Cramps

Heat cramps are caused by loss of salt and electrolytes (magnesium, potassium, calcium) during strenuous exercise in the heat. This is helped by replacing the lost salt and electrolytes, usually taken together with lots of water as well.

Fainting

Fainting due to heat is caused by the same factors that cause other fainting. People most likely to faint in the heat are those unused to working in it.

Heat Exhaustion

Heat exhaustion is caused by excessive sweating. Nausea, giddiness, thirst, and headache are common symptoms of this problem. Body temperature may or may not be higher than normal. People vary widely in how much tolerance they have for heat, making it sometimes difficult to foresee this problem. Treatment includes cooling the victim and giving liquids. Take the victim to a cool place, resting in a head-low position. Keep the victim warm enough to avoid shock. Keep at rest. The victim should be watched for further problems.

Heatstroke

Heatstroke is a life-threatening situation. Body temperature above 105F, irritability, staggering, unconsciousness or convulsions, and lack of sweating are the common symptoms. Immediate efforts must be made to cool the victim to 103F and move to a hospital immediately. Keep the head elevated. Heatstroke occurs when the body's central control mechanisms fail. Because of this general failure, the entire body can be damaged. The damage to blood-clotting, liver, and kidney functions can be especially severe. A survivor may have permanent damage to these organs, and may also be unable to bear heat as well as in the past.

Adapting to working in heat

Healthy people get used to working in a hot environment within two to three days. The complete change takes place within seven to ten days. *Similarly, after two to three days working at a moderate temperature, the adjustment is lost.* Adapting to heat is harder for those who are malnourished, elderly, children, overweight, diabetic, or have heart or circulatory problems. There is no difference between women and men in heat tolerance, when differences in body size are taken into account.

Because it is so hard to predict how a particular person may tolerate heat, the U.S. Department of Health and Human Services has made several recommendations, based on experience and known facts about heat stress. When working in a hot environment, thirst is not a strong enough urge to make a worker to drink enough water to replace up to one quart that may be lost per hour. Therefore, workers in hot environments must be encouraged to drink cool water or non-carbonated, low-sodium beverages about a cupful at a time every 15 to 20 minutes. Separate drinking containers help workers keep track of the amount they drink. Still, workers may be a little dehydrated after a work shift. They usually recover overnight.

The salt lost from sweat can be replaced by slightly increasing the use of table salt. Those not used to working in hot environments may need to increase their salt intake a little more than others, but this need lasts only two to three days. Salt tablets *are not recommended*.

Potassium is unlikely to be depleted by anyone eating a healthy diet, due to the abundance of it in meat and fruits. A person taking diuretics, however, may have problems and may need medical supervision. Depletion of potassium can lead to heatstroke. A normal diet should satisfy the needs of workers in hot environments.

Alcohol reduces heat tolerance, and is a common factor in heatstroke. It should not be consumed just before or while working in heat. Many prescription drugs interfere with the body's ability to endure heat. Diuretics and antihistamines are common examples. Ask your doctor's advice if you are taking prescription drugs and working in a hot environment.

Generally, the body must work harder to maintain itself in hot weather. As a result, it is unreasonable to expect to accomplish as much on a very hot day as on a mild weather day. If you have predisposing factors for heat illnesses, be aware of them and take it easier. Be sure to keep an eye on others working with you, and be alert for headaches, nausea, staggering, dizziness, or other unusual behavior that may mean a heat illness.

If you have an infant to care for, remember that they become dehydrated easily. Likewise, children have more difficulty controlling their body temperature than mature adults, and should be encouraged to drink more in hot weather. Children should also be supervised more closely during hot weather, and watched for signs of heat illnesses.

Degree Day Accumulations for Ohio Sites June 9, 2004

Ohio Location	Degree Day Accumulations Base	
	50	
Akron-Canton	707	599
Cincinnati	977	887
Cleveland	705	578
Columbus	937	744
Dayton	898	845
Kingsville	645	479
Mansfield	712	589
Norwalk	751	557

Piketon	986	777
Toledo	714	578
Wooster	775	559
Youngstown	669	541

Pest Phenology

Source: Art Agnello, Scaffolds Fruit Journal, Volume 13, No. 12, June 7, 2004

In the past, we have reported a range for the "Coming Events" that covers the earliest noted occurrence to the latest incidence noted, according to our records. However, because some of these numbers (dates) come from records that are quite old, and we are unable to vouch for the accuracy of all of them, this sometimes produces a potential DD range that is unrealistically wide. To address this incongruency somewhat, we have decided to switch to a range that encompasses one standard deviation on either side of the mean DD occurrence, which gives a more realistic expectation of when any of these events might actually occur. Statistically, events should generally take place within the stated range approximately 7 years out of 10.

Coming Events	Degree Day Accum. Base 50F
San Jose scale 1 st generation crawlers present	619 - 757
Apple maggot 1 st catch	629 - 1287
Redbanded leafroller 2 nd flight begins	656 - 1381
Codling moth 1 st flight subsides	673 - 1412
Spotted tentiform leafminer 2 nd flight begins	701 - 1355
Oriental fruit moth 2 nd flight begins	772 - 1215
Lesser appleworm 2 nd flight begins	778 * 1531
Codling moth 2 nd flight begins	864 - 1549
San Jose scale 2 nd flight begins	893 - 1407
Obliquebanded leafroller 1 st flight subsides	899 - 1790

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: 6/2 to 6/9/04	
Redbanded leafroller	19 up from 13
Spotted tentiform leafminer	349 down from 743
San Jose scale	0 same as last wk
Codling moth	17.3 up from 16.3
Lesser appleworm	10 down from 17
Tufted apple budmoth	3 up from 1
Variegated leafroller	3 down from 10
Obliquebanded leafroller	0 down from 4

Site: Medina, Wayne, and Holmes Counties

Ron Becker, IPM Program Assistant

Apple: 5/26 to 6/3/04	
Redbanded leafroller	Holmes: 0 down from 2.5
	Wayne: 0.7 up from 0
	Medina: 0 down from 2.5
Spotted tentiform leafminer	Holmes: 300 up from 50
	Wayne: 3.3 up from 1
	Medina: 60 up from 0
Oriental fruit moth	Holmes: 0 same as last wk.

	Wayne: 2 up from 0
	Medina: 3.5 up from 0
Codling Moth	Holmes: 5.0 up from 4.3
	Wayne: 6.5 down from 23.6
	Medina: 3.0 down from 4.9
Lesser appleworm	Wayne: 34 down from 60

Apple: 6/3 to 6/9/04	
Redbanded leafroller	Holmes: 0 same as last week
	Wayne: 1 up from 0.7
	Medina: 0 same as last week
Spotted tentiform leafminer	Holmes: 420 up from 300
	Wayne: 316 up from 3.3
	Medina: 162.5 up from 60
Oriental ruit moth	Holmes: 0 same as last wk.
	Wayne: 0 down from 2
	Medina: 0 down from 3.5
Codling Moth	Holmes: 3 down from 5
	Wayne: 9 up from 6.5
	Medina: 0.8 down from 3.0
Lesser appleworm	Wayne: 7 down from 34

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

Apple 6/1 to 6/8/04	
Codling moth	2.4 up from 1.8
Lesser appleworm	6.5 down from 7.3
Oriental fruit moth	0.3 down from 0.8
Redbanded leafroller	0.4 up from 0.1
San Jose scale	0.0 down from 0.3
Spotted tentiform leafminer	449 up from 160
Peach 6/1 to 6/8/04	
Lesser peachtree borer	1.3 up from 0.7
Oriental fruit moth	0.7 same as last week
Peachtree borer	0.2 down from 0.3
Redbanded leafroller	0.0 down from 0.2

Site: East District; Erie and Lorain Counties

Jim Mutchler, IPM Scout/Technician

Apple 6/1 to 6/8/04	
Codling moth	3.1 down from 3.3
Lesser appleworm	18.3 first report
Oriental fruit moth	0.4 down from 2.9
Redbanded leafroller	0.0 same as last week
San Jose scale	0.0 same as last week
Spotted tentiform leafminer	201 up from 135
Peach 6/1 to 6/8/04	
Lesser peachtree borer	8.0 up from 1.6
Oriental fruit moth	0.0 down from 1.1
Peachtree borer	0.0 down from 0.2
Redbanded leafroller	0.0 same as last week

Beneficials include native lady beetles & lacewings. Other observations include apple scab, fire blight, plum curculio strikes, codling moth damage, and white apple leafhopper.

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Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

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