

Kentucky Fruit Facts

March/April 2009 (3-4/2009)

Fruit Facts can be found on the web at: <http://www.ca.uky.edu/fruitfacts/>

John Strang, Extension Fruit Specialist, Editor
Karen Shahan, Administrative Assistant

Fruit Crop News

Talk about a fast spring. By my calculations we are about 10-14 days ahead of normal. Most growers have recently made good progress in pruning due to the mild weather. As apples and pears move into bloom, fire blight transfer on pruning tools will become a concern.

It looks like we dodged a bullet this morning (April 7), but tonight may be a little colder. Keep your fingers crossed.



Eastern Tent Caterpillar

Tom Priddy in the U.K. Ag Weather Center indicates that our soil moisture reserves for the coming season are at full capacity. La Nina system conditions are expected to end sometime in the May-July time period and we will enter a normal Kentucky weather pattern. This should mean a little more



rain during the summer months than we have experienced the last several years.

Several early season fruit insects should be scouted for now or shortly and may require control. Watch apples for European red mites, rosy apple aphid and San Jose scale. Eastern tent caterpillars are in the process of hatching. Evaluate strawberries for eastern flower thrips as the blossoms begin to open. Pay attention to grapevines as the buds begin to develop and control cutworms and flea beetles if noted.

We have begun sending out timely disease and insect control information on our apple and grape list serves. If you are not currently on these list serves and would like to be placed on either list, send your name and email address and identify the list serve that you would like to be on to me at: jstrang@uky.edu

The KSHS now has a web site located at <http://www.kyhort.org> Growers are encouraged to look it over and provide suggestions for postings. We are working on a section that locates KSHS member fruit operations on a map of the state and will provide their websites. If you are a KSHS member and would like your website listed please send your website url to John Strang at jstrang@uky.edu.

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Upcoming Meetings

Apr. 15 Orchard Meeting and Tour, Haney's Appledale Orchard, Nancy, KY. Contact Beth Wilson 606-679-6361 or John Strang 859-257-5685.

Apr. 18 Kentucky Nut Growers Association Spring Meeting, Hardin County Extension Office, Elizabethtown, KY. Contact Carl Ray 270-281-4800.

Apr. 21 Gardeners Toolbox on Raspberries, Morgan County Extension Office, West Liberty. 12:00 p.m. Contact Sarah Fannin (606) 743-3292.

May 19 Mid Mississippi Valley Orchard and KSHS Orchard Tour, Reid's Orchard, Owensboro, KY Contact Annette Heisdorffer 270-685-8480 or John Strang 859-257-5685.

Jun 6 Summer KY State Beekeepers Assoc. Field Day, Walter T. Kelley Company, Letchfield. The Kentucky State Beekeepers Association, in cooperation with the Walter T. Kelley Company, will hold a beekeeper field day at its summer meeting. The Walter T. Kelley Company will host the event on their factory grounds and will provide lunch. Hands on – in the apiary – classes will be held in the Kelley Company's apiary. Tentative topics (subject to change) include: hive inspections, making splits and divides, how to mark queens and re-queen hives, grafting queen cells, varroa mite treatments and mite monitoring, small hive beetle trapping, pollen trapping, Ross Rounds and comb honey production, pulling honey techniques, honey extraction and more. And like all beekeeping field days, lots of fellowship between beekeepers and "talking bees" will be part of the day. The fun will start at 8 a.m. Central time and will last until about 3 p.m. The only cost is your current KSBA membership dues (\$10) if they are not current, free if your 2009 dues have been paid. If weather should not permit opening hives, an alternative indoor program will be presented. KSBA would like to get an approximate head count for this event to help them prepare for lunch. So if you are planning on attending, please contact Joe Taylor, KSBA at (270) 879-8654, shopteacher@gmail.com or shop_teacher@yahoo.com, and say "count me in for June 6"! You can also contact Joe if you have any questions regarding the event.

July 23 University of Kentucky Research and Education Center All-Commodity Field Day, UKREC, Princeton, KY. Contact: Win Dunwell, P.O. Box 469, Princeton, KY 42445; 270.365.7541 x 209, Fax 270.365.2667; e-mail, wdunwell@uky.edu

Aug. 1 U.K. & KVS Grape Field Day, Lover's Leap Vineyards and Winery, Lawrenceburg. Contact Chris Smigell 859-257-3598 or John Strang 859-257-5685.

Jan. 4-5, 2010 Kentucky Fruit and Vegetable Conference and Trade Show. Embassy Suites Hotel, Lexington, KY. Contact John Strang 859-257-5685.

Fruit Grower Orchard Meeting - Wednesday, April 15

Appledale Orchard
8350 W. Hwy 80, Nancy, KY 42544
Don and Mark Haney, owners
606-636-6148

Directions: **From the west** – Take the Louie B. Nunn Parkway (Cumberland Parkway) to exit 78 and proceed south on old 80. Appledale Orchard will be on the left on the far side of Nancy, KY.

From the east – Take the Louie B. Nunn parkway going west from Somerset. Turn left at the second intersection after US 27. Take the first right onto old 80 towards Nancy, KY. Appledale Orchard will be on the right on the edge of Nancy.

Program:

All times EDT

- 10:00 a.m Registration
- 10:15 Tour of Appledale Orchard & Farm Market – Don & Mark Haney
- 11:00 Early Season Fruit Diseases
- John Hartman
- 11:30 Fruit Canning and Freezing Update for Direct Marketers – Edith Lovett
- 12:00 **Lunch will be available at cost for those that preregister.**

→ *Preregister for lunch by calling Mary Ann Kelley at 270/365-7541 Ext. 216 (leave a phone message) between 8:00 a.m. and 4:30 p.m. CDT weekdays by Monday April 13 and give her a count for the Fruit Grower Meeting at Appledale Orchard.*

- 1:00 p.m. Stone Fruit and Small Fruit Varieties
– John Strang
- 1:30 Early Season Insect Control – Ric Bessin
- 2:00 Apple Grower Round Table Discussion (Thinning, Hort. Department and Hort. Council Update)
- Larry Ayres, moderator

Patsy Wilson - Extension Viticulturist

By John Strang, U.K. Extension Horticulturist

I am pleased to report that Patsy Wilson has accepted our Extension Viticulture position as of March 1, 2009. Patsy is a Kentucky native and has received two B.S. degrees from the University of Kentucky in Biology (2004) and Agricultural Biotechnology (2005). She did an internship at N.C. State University at the Center for Environmental Farming Systems in 2005. Patsy has been working in the Horticulture Department as our Research Analyst in the Enology/Viticulture program and working on her MS degree since 2005. From 2001 to 2004 she held a Laboratory Technician position at the Morris K. Udall Parkinson's Disease Research Center of Excellence, U.K. Medical Center.



The U.K. Extension Viticulture position requires a Ph.D., so Patsy will bypass completing her M.S. degree and apply her completed research toward a Ph.D. Dean Scott Smith has given her two years to complete her Ph.D. Thus, Patsy will participate in field days, short courses and major viticulture events, but the day to day horticultural extension activities will be handled by Chris Smigell, Terry Jones and me. We are currently actively working to fill the Research Analyst position formally held by Patsy to handle the needs of the coming season.

Those of us in the horticulture department appreciate the input supplied by many Kentucky grape growers and wineries during the interview process. Please help us welcome Patsy to her new position.

New NC-140 Peach Rootstock Trial

By Dwight Wolfe, Horticulture Research Specialist

A new NC-140 Peach rootstock trial was planted March 5, 2009, at the UKREC orchard in Princeton, KY. The trial consists of 14 different rootstocks with Redhaven as the scion cultivar. Rootstocks included are Lovell; Guardian; two redleaf peach x Bailey

crosses (KV010123 and KV010127) from Ralph Scorza's program; two Russian rootstocks (Krymsk1 and Krymsk 86); a peach x Almond cross (Bright's Hybrid #5) from Bill Bright's program; a *Prunus salicina* x *Prunus persica* cross (Controller 5) from the USDA-UC Davis program; two stocks with Harrow Blood and Siberian C in parentage (HBOK 10 and HBOK 32) from the UC Davis program; a plum-almond rootstock (Microbac); two interspecific hybrids from Zaiger Genetics (Atlas and Viking); and a seedling selection from Bailey's Nursery (*Prunus americana*). Growers can see and learn more about these trees and much more at the University of Kentucky College of Agriculture's 2009 All Commodity Field Day on July 23, at the Research and Education Center in Princeton, Kentucky.

Early Spring Apple Disease Management

By John Hartman, U.K. Extension Plant Pathologist

Many apple growers in Kentucky are now engaged in orchard pruning and other late winter and early spring activities. Each season, apple diseases are a threat to orchard productivity and fruit quality. Now is an important time for fruit growers to manage some of these destructive diseases. Cultural practices applied these last days of winter and early spring will help to reduce disease in the crop next summer.

There are many cultural practices that can be implemented now and in the coming weeks to reduce the threat of diseases such as apple scab, fruit rots, powdery mildew, collar rot, fire blight, and cedar-apple rust. The following are cultural practices beneficial for reducing apple diseases:

Sanitation - prune out last year's infections, cankers, and any dead wood while the trees are dormant. Dead and diseased wood provide a reservoir for spread of fungi and bacteria to nearby healthy trees or parts of trees. Figure 1 illustrates an apple fire blight canker which should be pruned out of the tree.



Figure 1.

Remove nearby landscape or forest trees or overhanging tree branches that might shade the fruit trees. Shade on apple trees means that susceptible leaves will remain wet longer following rain or dew, thus increasing the chances of infection by disease-causing fungi.

For apple and pear disease management, especially fire blight, remove and destroy any abandoned and unsprayed apple or pear trees near the orchard.

Fire blight, a bacterial disease, was severe locally last year in many Kentucky orchards and backyard apple and pear trees. If the disease was serious last year, extra measures may be needed. Very early season (dormant to silver tip) applications of fixed copper sprays are helpful in fire blight management. These sprays serve to reduce epiphytic (tree surface) populations of pathogenic bacteria in the orchard. Apply copper sprays to the entire orchard block, including cultivars not considered susceptible to the disease. The reason for treating non-susceptible cultivars is that even cultivars that normally are not very susceptible to fire blight, such as Red Delicious, can be colonized by fire blight bacteria and serve as a source of infection to other, more susceptible trees during bloom.

Remove and destroy nearby susceptible cedars and junipers if possible, or at least remove and destroy galls on cedars and junipers too valuable to cut down. Cedar-apple rust galls are visible on cedar twigs and branches now, appearing as brown, somewhat-spherical galls an inch or two in diameter. They will be even more visible during moist periods next month when the orange, gelatinous telial “horns” appear. If cedars or junipers are not present within 200 yards of the orchard, cedar rust diseases are not likely to be a serious problem for the orchard.

Thin apple tree branches during the dormant pruning operation to open up the trees to better sunlight penetration. Again, speeding up leaf surface drying reduces chances for foliar diseases.

Remove prunings from the orchard and destroy them. The pathogens in those dead and dying branches can be moved by insects, wind, and rain back into the orchard, if left nearby.



Figure 2.

Figure 2 shows an apple black rot fruit mummy.

Rake up and destroy all fallen leaves from the previous season or chop fallen leaves into tiny pieces with a power mower before spring. The

fungus that causes apple scab overwinters on fallen leaves and develops spore-producing capability in the spring. Removing the previous season’s diseased leaves or chopping them up finely is an important step in apple scab management. A mulch or flail mower, used in the orchard before April, can reduce the risk of scab considerably (perhaps 80 to 90%) if all of the leaf litter is shredded. Some growers apply 5% urea (42 lb/A of urea dissolved in 100 gal of water) to the ground in early spring up to the time of silver tip development. This treatment may reduce spore production (perhaps 60 to 90%). If urea is used to aid in scab management, nitrogen fertilization must be adjusted accordingly.

Incorporate apple disease resistance into the orchard disease management program by selecting scab-resistant apple trees, fire blight-tolerant apple varieties and rootstocks, and collar rot-tolerant rootstocks. Use only disease-free nursery stock when planting a new block of trees.

Provide good soil drainage. Underground tiling will help improve internal drainage of heavy soils. Soil contaminated with the collar rot fungus should not be moved about.

Remove and destroy weeds, undergrowth and brush from near the orchard; these plants may harbor pathogenic microbes.

Be prepared to monitor for disease-favorable weather conditions. Springtime is the most important time to prevent diseases because by preventing early-season primary infections, secondary infections are also avoided.

Read and understand the 2009 Commercial Tree Fruit Spray Guide and develop ways to integrate fungicide applications into the total apple disease management program.

Purchase necessary fungicides so that they are available when they are needed during the growing season. Calibrate sprayers so that correct amounts of fungicide are applied.

For more specific information concerning tree fruit diseases and control recommendations, please consult the current U.K. College of Agriculture Commercial Tree Fruit Spray Guide 2009 (ID-92) or the Midwest Tree Fruit Handbook (ID-93). These publications are available at County Extension Offices statewide. More detailed information about symptoms, causal organisms, disease cycles, epidemiology, and control of apple diseases can be found in the *Compendium of Apple and Pear Diseases* available from The American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121.

Periodical Cicada Brood XIV + 1 Year = Woolly Apple Aphids

By Ric Bessin, U. K. Extension Entomologist

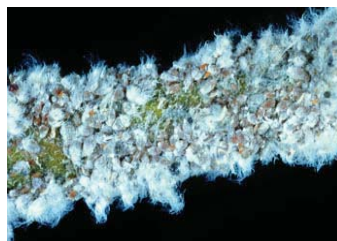
The periodical cicada brood XIV is gone but not forgotten. I have already received some reports this spring of woolly apple aphids infesting the cicada egg-laying wounds on apple trees. This is a common occurrence in apple trees the year after a periodical cicada emergence. Woolly apple aphid is not controlled with many commonly used orchard insecticides as growers often need to include materials specifically in their sprays to control this pest. Woolly apple aphid is a serious pest of apples, particularly young trees. Colonies form at wound sites on trunks, limbs, and twigs, where they feed on tender bark. Besides cicada egg-laying wounds, pruning and hail damage can create the wound sites for attack by this pest. As populations grow, aphids are commonly found on water sprouts in the center of the tree. The tree will begin to swell and form galls at the feeding sites. The woolly apple aphid differs from other apple aphids in appearance, life cycle, and the type of damage inflicted. A colony appears as a cottony mass generally clustered in wounds and pruning scars on the trunk and branches of the tree. The aphids themselves are purplish in color surrounded by white, cottony secretions. Woolly apple aphid is a sucking insect pest that weakens the tree by feeding on limbs and roots. Long strands of white wax are produced that help to protect the colony of purple aphids from predators and pesticide sprays.



Woolly apple aphid colony on a branch

As the number of aphids on the above ground portion of the tree increase, many work their way down to the roots and trunk below ground surface. It is the feeding on the roots that produces the greatest damage. Mature trees usually suffer little damage from the root infestations, but the root infestations are very damaging to young trees. Control of these aphids is very difficult when they attack the roots. Yellowish foliage is a sign that woolly apple aphid may be infesting roots. The root systems of nursery stock can be damaged, and severe root infestations can stunt or kill young trees. Infest-

ed trees often have short fibrous roots, which predisposes them to being easily uprooted. Swollen galls also form on roots; galls increase in size from year to year and are sites where fungi can attack. Aphid feeding on the root systems also disrupts the nutrient balance of root tissue, which can affect growth of other parts of the tree. Trees can have above-ground infestations of woolly apple aphid but no root infestations. Rootstocks vary in susceptibility to woolly apple aphid and susceptible rootstocks will form galls around the infestation sites. Use MM.111 or MM.106 if woolly apple aphid is a serious problem. Rootstocks appearing more susceptible to woolly apple aphid infestation include B.9, M.9, and M.26. During the summer, repeated woolly apple aphids generations of wingless individuals are produced. In the fall, winged individuals are produced which fly to search for elms on which to lay overwintering eggs, while some wingless forms may remain on both above and below ground parts of the apple tree throughout the winter. Woolly apple aphid colonies produce honeydew, which results in development of black sooty mold. The wax and the honeydew are bothersome to pickers when it brushes off the tree and onto clothing.



A colony with the wax removed showing live aphids

It is relatively easy to find where the colonies have formed. When monitoring for woolly apple aphid, examine four pruning scars on each of 5 scaffold limbs per tree. Carefully examine woolly apple aphid colonies to determine if live aphids are present. Predators, such as lady beetles, Syrphid fly larvae, and lacewing larvae can completely destroy the colony, but the waxy residue will remain. When examining colonies, blow hard on the branch to remove the waxy filaments to reveal live aphids. Treatments for woolly apple aphid are recommended when 10% of the pruning/egg laying scars are infested with live colonies. There are few insecticides specifically labeled for control of woolly apple aphid. Diazinon (commercial use only), endosulfan, Admire and Movento are recommended for control of above-ground infestations. There is some information indicating that Movento applied to the foliage will move systemically to other portions of the tree.

Movento on Grapes

By Dr. Rick Weinzierl, *Extension Tree Fruit Entomologist, University of Illinois, Urbana, IL*

There are several new insecticides labeled for use in grapes, but one of the most noteworthy may be Movento. Movento 2EC is labeled for use post-bloom in grapes at 6-8 oz per acre against the foliar phase of grape phylloxera. It moves systemically in plants -- up and down — and limited information from the western US suggests that it may move to roots and give some control of the root phase of phylloxera when used at the 8-oz rate. Movento must be tank mixed with a spray adjuvant to increase leaf penetration and maximize systemic effectiveness; note label precautions regarding the potential phytotoxicity of various adjuvants and their interactions with other pesticides such as Captan.

Managing Ice Damage on Woodland Trees

By Dr. Jeffry Stringer, *Extension Hardwood Silviculturist and Forest Operations Specialist*

Many growers have sustained ice damage to their woodland areas. Forestry extension personnel have developed three extension fact sheets on ice damage to trees and woodlands that are available through County Extension Offices and at the url's listed below.



'Greenriver' pecan tree damage by ice at the UKREC, Princeton, KY— picture by Dwight Wolfe)

1. FORFS 09-01 Ice Damage – Safety in the Woods <http://www.ca.uky.edu/forestryextension/PDF/Ice%20damage/FORFS09-01.pdf>

2. FORFS 09-02 Ice Damage – Timber Salvage Decisions <http://www.ca.uky.edu/forestryextension/PDF/Ice%20damage/FORFS09-02.pdf>

3. FORFS 09-03 Ice Damage – Managing Woodland Damage and Health <http://www.ca.uky.edu/forestryextension/PDF/Ice%20damage/FORFS09-03.pdf>

Also at the web site containing these publications <http://www.ca.uky.edu/forestryextension/kyicepublications.html> is a Kentucky Department of Forestry publication *Managing Ice Damage for Forest Stands* http://www.ca.uky.edu/forestryextension/PDF/Ice%20damage/managingicedamagedforeststands_KDF.pdf

All this information can be found at <http://www.kyicedamage.net> or <http://www.ukforestry.org>

Kentucky Horticultural Grant and Funding Opportunities

Kentucky Department of Agriculture grant and funding opportunities involving horticultural crops may be found at: <http://www.kyagr.com/marketing/farmmarket/grants.htm>

These include the Horticultural Advertising Cost-Share, Horticulture Market Development Cost-Share Program, Kentucky Proud Point of Purchase Grants, Restaurant Rewards Program, Winery Cost-Share Program and the Wholesaler Reimbursement Program. If you would like to call the State Department of Agriculture about these programs the phone number is 502-564-4983.

Grapevine Primary Bud Survival

By Brandon O'Daniel, U.K. Graduate Student and Patsy Wilson, U.K. Graduate Student and Viticulturist

It appears that most grapevines survived the winter well with minimal damage if the vines hardened off properly last fall. The following are the results of Brandon O'Daniel's evaluations of 25 buds from each cultivar collected from February 25-28, 2009. The first 5 count buds closest to the cordon were cut and evaluated for primary bud survival on 5 canes from each cultivar.

French hybrid cultivars	Survival (%)	French hybrid seedless table grapes & American cultivars	Survival (%)	Vinifera cultivars/ rootstocks	Survival (%)
Villard	100	Norton	100	Riesling clone 17	100
Frontenac	100	Neptune	100	Riesling clone 09	100
NY70	100	Jupiter	100	Pinot Gris clone 4	100
NY73	100	Reliance	100	Limberger	100
Vidal/5C	100	Einset	100	Chardonnay clone 76	96
NY76	100	Marquis	100	Riesling clone 12	96
NY62	100			Chardonnay clone 43	96
Traminette/5C	96			Cabernet Sauvignon clone 337	96
Cayuga	96			Shiraz clone 5	96
Seyval	96			Shiraz clone 470	92
Vidal	96			Sangiovese	92
Vignoles	92			Cabernet Sauvignon clone 8	92
St. Vincent	92			Cabernet Franc clone 4	92
Chardonnel	88			Pinot Gris clone 152	92
Chardonnel/3309	88			Cabernet Franc clone 5	92
Chambourcin	72			Chardonnay clone 15	88
				Viognier	80
				Chardonnay	80
				Cabernet Franc clone 312	72
				Cabernet Franc clone 1	72
				Cabernet Franc clone 214	72
				Chardonnay clone 4	72
				Pinot Gris clone 4	48

Receiving Fruit Facts Electronically on the Internet

Fruit Facts is available on the web in the pdf format. To get notification of the monthly Fruit Facts posting automatically and approximately two weeks earlier than it would normally be received via mail, you can subscribe to the UK College of Agriculture's Fruit Facts listserv.

New subscription requests and requests to unsubscribe should be addressed as follows.

To subscribe type "ListServer,l-s-v" in the To: line of your e-mail message.

Please enter a subject in the Subject: line -- the system needs for the Subject line not to be empty (blank).

In the message body, enter the following two lines (nothing more!):

subscribe KY-FRUITFACTS

Or, to unsubscribe, the lines:

unsubscribe KY-FRUITFACTS

You should receive confirmation by return e-mail. If you have a problem, or if you wish to communicate with a person about "fruitfacts", the owner's address (the To: line of the message) is: owner-ky-fruitfacts@lsv.uky.edu

Kentucky Ag Fund Regional Workshops

The Governor's Office of Agricultural Policy (GOAP) will hold eleven Kentucky Agricultural Development Fund (KADF) Regional Workshops in April and May across the Commonwealth.

The GOAP staff will discuss, in detail, new policy changes as well as changes concerning KADF programs and how they apply to the administrators, extension agents, and county council members. This workshop is for anyone interested in learning more about the county programs, though the focus will be on administration. The Regional Workshops are also designed to be an interactive learning session that will help KADF administrators with reporting requirements.

KADF Regional Workshops will take place from 9:00 am to Noon (local times) on the following dates:

Wednesday, April 22

Shelby County Extension Office

Thursday, April 23

Hopkins County Extension Office

Friday, April 24

Logan County Extension Office

Monday, April 27

Harrison County Extension Office

Thursday, April 30

Casey County Extension Office

Friday, May 1

Laurel County Extension Office

Monday, May 18

Meade County Extension Office

Wednesday, May 20

Fleming County Extension Office

Thursday, May 21

Morgan County Extension Office

Wednesday, May 27

Gallatin County Extension Office

Thursday, May 28

Hart County Extension Office

If planning on attending a session please RSVP by contacting Kylee Smith or Jennifer Daniels at (502) 564-4627 or via e-mail at govkyagpolicy@ky.gov.

For additional information visit the KADF Regional Workshop webpage at http://agpolicy.ky.gov/funds/administrator_workshops.shtml.



John G. Strang,
Extension Fruit & Vegetable Specialist