

# Kentucky Fruit Facts

October 2005 (10/05)

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

## Upcoming Meetings

**Oct. 17 Tasting the Fruits of Your Labor**  
(taste about 20 different apple varieties). Bullett  
County Extension Office, Shepherdsville, KY. 7:00 p.m.  
Contact Darold Ackridge 502-543-2257.

**Oct. 21-23 Appalachian Heirloom Seed  
Conservancy Second Annual Fall Conference,**  
Sustainable Mountain Agriculture Center, Pilot Knob  
Cemetery Road, Berea, KY. See the Aug.-Sept issue of  
Fruit Facts for the program. Contact Brook Elliot phone:  
859-623-2765, email: [KentuckySeeds@hotmail.com](mailto:KentuckySeeds@hotmail.com) or  
Roger Postly phone: 859-278-4846, email:  
[Rpostley@aol.com](mailto:Rpostley@aol.com)

**Oct. 22 Kentucky Vineyard Society Fall  
Meeting,** Acres of Land Winery, Richmond, KY 9:30  
a.m. Contact Jim Wight 502-543-8681 home, 502-807-  
8681 cell

**Oct. 22 Kentucky Nut Growers  
Association Fall Meeting,** "Ed Yates" pecan grove,  
Chrisney, IN. 10:30 EDT (Kentucky time) See program  
and directions below.

**Nov. 16 Kentucky Farm Bureau Fall Farm  
Marketing Tour,** This one-day bus tour is for all  
Kentucky direct farm market operators and features

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market operators with exceptional marketing practices.  
\$15 registration fee which includes lunch. See program  
below.

**Dec. 11-13 Tennessee Fruit and Vegetable  
Convention,** Nashville Marriott Hotel, Nashville, TN.  
This years meeting will feature numerous out of state  
speakers. Contact Dave Lockwood Phone: 865-974-  
7208, E-mail: [dlockwood@utk.edu](mailto:dlockwood@utk.edu)

**Jan. 4-6, 2006 The 2006 North American  
Berry Conference,** International Trade and  
Convention Center, Savannah, GA. Special discount for  
those that resister before November 30. See web site  
for program, hotel and registration information:  
[www.nasga.org](http://www.nasga.org)

**Jan. 10-11, 2006 Kentucky Fruit and  
Vegetable Grower Conference and Trade Show,**  
Holiday Inn North, Lexington, KY. Contact: John Strang  
859-257-5685, e-mail: [jstrang@uky.edu](mailto:jstrang@uky.edu)

**Jan. 11-14 2006 American Beekeeping  
Federation Convention,** Hyatt Regency Louisville  
hotel. See the ABF web site for more information: [http://  
www.afbnet.org/](http://www.afbnet.org/)

**Jan. 17-19 2006 Illinois Specialty Crops  
Conference,** Crown Plaza hotel & Convention Center,  
Springfield, IL. Contact Illinois Specialty Growers  
Association Phone: 309-557-2107, E-mail:  
[handley@ilfb.org](mailto:handley@ilfb.org). The program may be found on the  
Web site: [http://www.specialtygrowers.org/  
confagenda.htm](http://www.specialtygrowers.org/confagenda.htm)

## Correction

In our last issue of Fruit Facts the first letter of Dr. Tom Cottrell's e-mail address was left off. Dr. Cottrell's correct e-mail address is [tom.cottrell@uky.edu](mailto:tom.cottrell@uky.edu)

## Kentucky Vineyard Society Fall Meeting - October 22

**Location:** Acres of Land Winery, 2285 Barnes Mill Road, Richmond, KY 40475  
Owners, Lowell and Katherine Land  
Phone: 859-328-3000  
Web site: [www.acresoflandwinery.com](http://www.acresoflandwinery.com)

### Directions:

Take I-75 to Richmond and exit at Barnes Mill Road, exit 87. Follow Barnes Mill Road west for 6 miles to Acres of Land Winery.

### Program:

ALL TIMES ARE EDT

- 9:00-9:45 a.m. Registration, coffee and pastries  
9:45-10:00 Welcome  
- Jim Wight, Lowell and Katherine Land  
10:00-10:30. Pros and cons of hilling grapevines and grape production budgets  
- Kaan Kurtural  
10:30-11:00 2005 Vineyard problems  
- John Strang  
11:00-11:30 Post-harvest wine making decisions  
- Tom Cottrell  
11:30-12:00 Downy and powdery mildew  
- John Hartman  
12:00 p.m. Lunch catered by Chef Joe of Acres of Land Restaurant  
\*\* Lunch is \$10.00 for non-members & free for KVS members.  
1:00- 1:30 p.m. Business meeting with a question and answers session  
1:30- 2:00 Nomination and election of KVS officers and directors  
2:00-2:15 Brief board meeting  
2:15-3:30 p.m. Social hour and wine tasting featuring the gold medal wines from the Kentucky State Fair and the winemakers.

**Please RSVP Jim Wight, e-mail:**  
[jawight@alltel.net](mailto:jawight@alltel.net) or cell: 502-807-8681.  
**Last day for registration: October 20, 2005**

## Kentucky Nut Growers Association Fall Meeting - October 22

Ed Yates' pecan grove, Chrisney, IN.

### Directions:

From the Western Kentucky Parkway take William Natcher Parkway to Owensboro, connect with US 231 and cross the Ohio River to Rockport, IN (on US 321). Follow US 231 North about 20 miles to Chrisney, IN. On the north edge of Chrisney, turn left onto County Road 950 (gravel road) and proceed about a half mile. The meeting site (pecan orchard) is on your left. It is possible to reach Owensboro and US 231 by traveling north or south on US 60 (depending on your location).

### Program:

The program is a joint effort between the Kentucky Nut Growers Assoc. and the Indiana Nut Growers Association. This orchard is now owned by Joe Ballard of Owensboro, KY.

The board of directors meeting will begin at 10:30 a.m. EDT. The meeting will include a chance to see 180 very old pecan trees of which 18 are identified varieties, demonstration of a pecan harvester, a display of nuts grown by members and the chance to taste different nut varieties, door prizes, an auction, and a potluck luncheon.

A tent has been rented for the meeting, however since this is late October, please dress accordingly.

## Kentucky Farm Bureau Fall Farm marketing Tour November 16

*Eastern Standard Time*

7:30-8:00 a.m. Begin loading bus at KFB office in Louisville

8:00 Leave KFB

*Central Standard Time*

9:00 a.m. Arrive in Glasgow to pick up additional people at Wal-Mart

9:30 Leave for Kenny's Farmhouse Cheese

10:00 Arrive at Kenny's, Glasgow

11:00 Leave Kenny's

12:00 p.m. Arrive at Chaney's Dairy Barn, (tour and lunch) Bowling Green

2:00 Leave Chaney's

2:30 Arrive at Jackson's Orchard and Nursery, Bowling Green

4:00 p.m. Leave Jackson's

*Eastern Standard Time*

7:00 p.m. Arrive at KFB State Office, Louisville

For more information contact J. K. Henshaw, Kentucky Farm Bureau, P.O. Box 20700, Louisville, KY 40250  
Phone: 502-495-5000, e-mail: [jkhenshaw@kyfb.com](mailto:jkhenshaw@kyfb.com)

# Winter Protection for Grafted Grapevines

by Dr. S. Kaan Kurtural, U.K. Extension Viticulturist

Each grower must weigh the pros and cons of hilling and decide for one's self if hilling up grapevines is a justifiable practice. Hilling or mounding of soil over graft unions of cold tender varieties is one possible way of avoiding potential plant loss due to extreme winter temperatures. Using a tractor-mounted plow, soil is plowed up against the trunks of the grapevines before the advent of extreme winter temperatures. The soil must be hilled up high enough to protect a 4"-10" portion of the trunks. The idea behind hilling up grapevines is that the soil will conduct the heat energy from the earth, insulate the trunks where they are covered and protect them against the extreme winter temperatures. This practice is a form of insurance in the case of an extreme winter temperature event. If the above-ground portion of the grapevine is damaged, new trunks can be trained using latent buds that were protected by the soil. The timing of hilling grapevines is critical since it is important to provide the protection before the advent of extreme winter temperatures. In our region, fall hilling needs to be done at any time before the ground freezes. However, it is recommended that hilling be done no later than one week after the first killing frost.

The capital cost of hilling equipment should be considered in addition to the annual operating costs. Typically, growers use grape-hoes to hill up their vines and these range from \$1,500 to \$5,000. The operating costs range from \$25 to \$40 per acre (machinery and labor per application). The benefits of hilling include the protection in the case of extreme winter temperatures. Cold tender grapevines, like the vinifera, depending on the cultivar, phenology, and crop level, can be injured at temperatures even above 0 degrees F. However, injury will be more common at temperatures below -8 degrees F. Some symptoms of winter injury in the spring can be but are not limited to poor and uneven budbreak, poor shoot growth, development of crown gall, splitting of affected trunks, and uneven ripening and coloring within the cluster. Hilling also mechanically removes fall weed growth and disrupts some of the insect pests that overwinter in the soil.

The hilling of grapevines in the fall must be followed by dehillling in the spring. Dehillling will prevent the scion (the fruiting portion of the grapevine) from rooting. If scion roots are permitted

to persist the original rootstock will die and the grapevine will lose the benefit of the rootstock and make the vine vulnerable to phylloxera feeding.

Repeatedly hilling and dehillling of vines in vineyards can lead to soil erosion. In certain soil types that are prone to erosion the top soil can erode many inches below the graft union and make the hilling-dehillling practice ineffective. The loss of top soil can then exacerbate problems of vineyard management by causing vigor loss, lack of canopy fill and reduced yields. Another problem that is associated with hilling and dehillling is mechanical damage to grapevines. The damage ranges from obvious trunk damage caused by running into vines, to the less obvious damage of root pruning near the soil surface.

An alternative to hilling is the use of bark mulch or straw to protect the trunks against extreme winter temperatures. However, the volume of bark and straw that has to be used must match the density of soil to provide the same heat energy transfer as the soil, since these materials are not as dense as the soil. They must also retain sufficient moisture to conduct the heat energy. Thus, the mechanics and cost of application of these materials should be considered.

In first year vineyards, it is generally recommended that trunks be hilled even at suitable sites. However, trunks and graft unions sometimes may not withstand the impact of heavy clods of soil especially in finely textured sites. In dehillling first year vineyards it is recommended that the soil up to within 4" from the vines be dehillled with the grape-hoe and the remaining soil around the vine be removed by hand hoeing. Dehillling of vines must be done in the spring. The threat of extreme winter temperatures must pass before dehillling is done. Pre-emergence pesticides can be applied only after dehillling is done. Dehilllings should be done between late-February and the third week in March.

## New Publication - Midwest Grape Production Guide

The Midwest Grape Production Guide (Bulletin 919) is an excellent very comprehensive publication and will benefit both new and established Kentucky grape growers. It has 154 pages and has many color plates. It is available through Ohio State University Extension, Media Distribution, 358 Kottman Hall, 2021 Coffey Road, Columbus, OH 43210-1044. Phone: 614-292-1607, [E-mail:pubs@ag.osu.edu](mailto:pubs@ag.osu.edu) The cost is \$11.50 plus shipping.

# Grapes - Post-Harvest Diseases

## Need Management

by John Hartman, U.K. Extension Plant Pathologist

Season-long dry weather followed by the hurricane Katrina has favored two late-season diseases of grapes. After the grape harvest, growers often put away their spray equipment, assuming that disease management tasks are finished for the season. Growers need to be aware that two diseases, downy mildew and powdery mildew, can take their toll on next year's crop if not controlled for the rest of this season. Both downy mildew and powdery mildew cause defoliation. Leaves covered with mildew are not functioning normally, so diseased plants are effectively defoliated, much the same as if the leaves have died or dropped off. Defoliated vines, (whether from downy mildew, powdery mildew, other diseases, or insect feeding), will have reduced fruit production next year and will not survive winter cold temperatures as well as vines retaining their leaves through late summer and early fall.

### Downy mildew

This important disease is present now in many Kentucky vineyards. The fungus causes yield losses resulting from premature defoliation of vines due to leaf and shoot infections, including those that occur after harvest. Premature defoliation is a serious problem because it predisposes the vine to winter injury. In general, vinifera (*Vitis vinifera*) varieties are much more susceptible than American types and the French hybrids are somewhat



intermediate in susceptibility. Highly susceptible cultivars include Catawba, Chancellor, Chardonnay, Delaware, Fredonia, Ives, Niagara, White Riesling, and Rougeon.

Early in the season, infected leaves develop yellowish-green lesions on their upper surfaces and on the underside of the leaves, the fungus sporulates by forming sporangia on numerous branched structures, called sporangiophores, that protrude through stomata. This gives the lesion surface on the leaf underside its characteristic white, downy appearance. Severely infected leaves may curl and drop from the vine. The disease attacks older leaves in late summer and autumn, producing a mosaic of small, angular, yellow to red-brown spots on the upper leaf surface. Lesions commonly form along leaf veins and the fungus sporulates in these areas on the lower leaf surface.

### Powdery mildew

If not controlled on susceptible cultivars, powdery mildew disease can reduce vine growth, yield, quality, and winter hardiness. Cultivars of *Vitis vinifera* and its hybrids (French hybrids) are generally much more susceptible to powdery mildew than are native American varieties such as Concord.



The fungal conidia and mycelia give a powdery or dusty appearance to infected plant parts. Leaves remain susceptible throughout the season. Therefore, a full season fungicide program is generally required for powdery mildew control on susceptible varieties. Leaf wetness is not required for powdery mildew infection; atmospheric moisture consisting of 40 to 100% relative humidity is sufficient for germination of conidia and infection. This is in contrast to downy mildew, that requires free water on the plant surface before the spores can germinate and infect. Thus, powdery mildew can be a serious problem during growing seasons when it is too dry for other diseases such as black rot or downy mildew to develop. Dry, but humid weather for most of the past two months, has been

favorable for powdery mildew. Thick canopies that retain high levels of relative humidity are highly conducive to infections.

### Disease management

In some years downy and powdery mildews cause post-harvest defoliation well before the onset of cool weather in the fall. Post-harvest early defoliation predisposes the vines to winter injury and reduces fruit set the following season. Thus, it is important to maintain protection against foliar infections by these fungi. Since downy mildew and powdery mildew diseases are very different from each other, completely different fungicides are needed for their management. Rates and combinations of fungicides to use are found in U.K. Cooperative Extension publication ID-94, Midwest Commercial Small Fruit and Grape Spray Guide 2005, available at Kentucky County Extension offices.

## **Fruit Insecticide/Miticide Update**

*by Ric Bessin, U.K. Extension Entomologist*

There have been several new insecticides and miticides that have been labeled for use in some fruit crops since the release of ID-92 (Commercial Tree Fruit Spray Guide 2005) and ID-94 (Commercial Small Fruit and Grape Spray Guide).

Actara (thiamethoxam) has been labeled for blueberry and strawberry and has a 3 day PHI (pre-harvest interval) for those crops and a 12 hour REI. This is a group 4A insecticide that controls aphids and leafhoppers on blueberry and aphids and whiteflies on strawberry. Actara has also been labeled for apples (east of the Mississippi River) and stone fruit (peaches, cherry, and plum). The PHI for apples is 14 or 35 days depending on rate and 14 days for stone fruit. It controls aphid, leafminers, leafhoppers, and plum curculio on apples and aphids, plum curculio, stink bugs, leafhoppers, tarnished plant bug, and cherry fruit fly on stone fruit.

Clutch (thiamethoxam) has been labeled for apples and pears and has a 7 day PHI for both of these crops and a 12 hour REI (re-entry interval). This is a group 4A insecticide that is labeled for control of aphids, leafhoppers, plum curculio, apple maggot, codling moth, leafminers, and Oriental fruit moth.

Decis (deltamethrin) has been labeled for apples and pears and has a 21 day PHI for both crops and a 12 hour REI. This is a group 3 insecticide that is labeled for control of leafminers, leafrollers, codling moth, apple maggot, plum curculio, green fruitworm, scale crawlers, Oriental fruit moth, and stink bugs. Decis is a restricted use insecticide (RUP).

GF-120 NF Naturalyte (Spinosad) has been labeled for use on pome fruits, stone fruits, and blueberries and has a 4 hour REI. GF-120 NF Naturalyte controls various fruit flies including apple maggot and cherry fruit fly. It is OMRI certified, approved for use in organic production systems.

Kanemite (acequinocyl) has been labeled for apples, pears, and strawberries and has a 1 day PHI for all three crops and a 12 hour REI. It is a miticide that is labeled to control two-spotted spider mite and European red mite.

Onager (hexythiazox) has been labeled for peaches, plums, nectarines, cherries, and non-bearing tree fruits and vines. On stone fruits the PHI is 28 days. Onager is a miticide labeled for control of two-spotted spider mite and European red mite. On other tree fruits and vines it may not be used the same season those crops are to be harvested.

## Receiving The Fruit Facts Newsletter Electronically on the Internet

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