

Kentucky Fruit Facts

October 2002 (10/02)

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

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Fruit Crop and Weather Situation

Apple harvest is about over and several growers have indicated that the local apple market has been particularly strong this fall. However, many growers are scratching their heads trying to figure out how to resolve some of the problems that occurred this season. Many Kentucky apple growers had abnormally high levels of San Jose Scale show up on their fruit as did many growers in surrounding states. Scale seems to be showing a resurgence, particularly since we lost the use of Lorsban during the scale crawler stage.

Codling moth control has been very poor despite excellent spray schedules for many growers in Kentucky and surrounding states and a lot of cull fruit has been produced. Growers in Illinois have seen codling moth resistance to imidan and guthion. One grower in central Kentucky has had a problem with codling moth for the last several years despite very low moth pheromone trap catches. Dr. Bessin suggested that we look for oriental fruit moth in the fruit



and this turned out to be the problem. It is very difficult to distinguish between codling moth and oriental fruit moth larvae without examining them under a microscope. We are in the process of collecting additional fruit from other orchards to examine the worms.

Apple skin checking and cracking was also a problem late this fall on apples. This was a result of the drought where fruit growth was slowed, followed by rain, which was absorbed through the apple skin.

During a recent Midwest Fruit Specialists Conference, Chris Doll from Illinois brought peach leaves that showed severe shot-holing. This type of injury is typical of that caused by bacterial spot, however there were no fruit infections. Mike Ellis, Plant Pathologist from Ohio State University diagnosed the problem as captan injury.

Kentucky wine grapes are harvested and fermenting. Most wineries are pleased with this years grape quality where a good spray schedule was maintained.

The Kentucky Agricultural Development Board (ADB) had required the Kentucky grape industry to conduct a survey of wine grape acreage, production and expected production. This information will be used to determine

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funding from the ADB that will directly affect our industry. This information will be confidential as was the information collected by MKF earlier in the year. This is why we have to conduct our own survey. The information will only be presented as a composite. Chris Smigell and Shane Bogle will be calling many of you to acquire this information. Please make every effort to help them out as we only have 30 days for a study that is expected to be completed by the end of October.

The two hurricanes that passed through Kentucky gave us welcome drought relief and our moisture levels are now back to normal. We are currently under the influence of an El Nino weather system, which should give us a mild dry fall and winter.
(Strang, Priddy)

Upcoming Meetings

Oct. 26: 22nd Annual Meeting of the Kentucky Vineyard Society, Clubhouse, Buffalo Trace Distillery, Frankfort, KY. See Program and directions below. Advance registration for the luncheon (\$25) is required. Contact John Pitcock, 502/859-0101.

Oct. 26: Fall Kentucky Nut Growers Association meeting, Joe Ballard's, 4600 Carter Rd., Owensboro, KY. See Program below.

Nov 19-21: Small Farm Conference, "The Barefoot Farmer", USDA Agencies, Certified Kitchens and Grant Writing Tips. Kentucky State University Research Farm, 1525 Mills Lane, Frankfort, KY. Registration is required for the conference, but there is no registration for those attending the Third Thursday Program only. Contact Louie Rivers, Jr. 502/597-6327 or 502/597-9505.

Dec 16-17: Tennessee Fruit and Vegetable meetings, Nashville, TN Contact Dave Lockwood 865/974-7208

Jan. 6-7, 2003 Kentucky Annual Fruit and Vegetable Grower Conference and Trade Show, Holiday Inn North, Lexington, KY. Contact John Strang 859/257-5685

Feb. 28, 2003: Northern Piedmont Specialty Crops School, Southern Livestock Center, 1.5 miles south of the I-85 and US 15 interchange on US 15 South, Oxford, NC. Contact Carl Cantaluppi 919/603-1350 or carl_cantaluppi@ncsu.edu

22nd Annual Meeting of the Kentucky Vineyard Society

Buffalo Trace Distillery, Clubhouse, 1001 Wilkinson Blvd., Frankfort, KY

Directions

From I-64 East, Take exit 53B to US-127 North. Follow US-127 North to US-421 South (Wilkinson Blvd.) Turn left onto US-421 South. Distillery is approximately 1.25 miles on left.

From I-64 West, Take exit 58 to US-60 West to US-421 North and follow to distillery, which will be on the right.

Friday Oct. 25

- 6:00 p.m. Deliver wine for Competition to Buffalo Trace
- 7:00 p.m. Amateur Wine Judging and Board of Directors meets with Winery Owners/Operators

Saturday Oct. 26th

- 9:00 a.m. Registration
- 9:30 a.m. Review of Kentucky Wine Market Feasibility Assessment
- 10:00 a.m. Grafted Rootstock - Dennis Rak, Double A Vineyards
- 11:30 a.m. Lunch, Awards, Wine Tasting
- 12:45 a.m. The Process of Tasting Wines
- 1:00 p.m. Common and Uncommon Problems in Winemaking - Mark or Doug, Presque Isle Wine Cellars
- 2:00 p.m. Nomination and Election of 2003 Officers and Directors
- 2:30 p.m. 2003 Legislative Package
- 3:00 p.m. Adjourn

Kentucky Nut Growers Association Fall Meeting Oct 26

Joe Ballard's, 4600 Carter Rd, Owensboro KY 270/685-2719

Directions: Access to Carter Rd is from the Owensboro Bypass (Wendell Ford Expway). All major routes into Owensboro (from West, south, east and north) intersect with the Bypass. General directions are as follows: Arriving from the West (Henderson and point westward) on US 60W or the Audubon Parkway, exit left from the Bypass onto Carter Road; from William

Natcher Parkway (toll road), US 231 and US 431, turn left (west) onto the Bypass and then turn right at Carter Rd. (Watch for Carter Rd Exit sign.) From US 60E, turn left onto the Bypass and then turn right onto Carter Rd. From Indiana on US 231, turn right at the Bypass, then right at the Carter Rd intersections.

Joe Ballard's house is 1 1/10th mi. south of the bypass (60). It is a brick house and set back from Carter Rd (directly across from the junction of South Town Blvd.).

Look for the KNGA signs.

Program

All times are CST

9:30 am Meeting set up begins.

10:00 am Board of Directors Meeting.

This is the time that the agenda for the full meeting will be developed. Anyone wishing to present proposals or bring up any matter for discussion may do so at this meeting.

11:00 am **Nut Display.** This exhibit provides the opportunity to see and examine first-hand those fine nuts that are grown in Kentucky and adjoining states. Other displays of horticultural items and products are welcome.

Door Prizes and Auction Items.

Many members contribute items at each meeting for door prizes and for members to purchase to raise funds for the association.

Noon **Potluck luncheon.** Bring a covered dish, a cake, pie or salad, and /or deserts. Paper plates, cups, and plastic eating utensils will be provided. Coffee and other refreshments will be available.

Grape Crown Gall

by John Hartman, Extension Plant Pathologist

There are more than 600 types of plants susceptible to crown gall disease. Crown gall is especially devastating to grapes in Kentucky

and some vineyards have been lost due to the disease, but it can also affect other fruits such as apples, stone fruits, and brambles. In grapes. *Vitis vinifera* cultivars are more susceptible to crown gall than *V. labrusca* cultivars.

Symptoms. The disease is characterized by galls or knobby overgrowths that form on susceptible plant tissues. New galls first appear in early summer as white, fleshy, callus growth. Galls turn brown by late summer and in the fall become dry and corky. The woody tumors may be gnarled with rough surfaces. Galls can develop rapidly and completely girdle a young vine in one season, or they may take a few years to develop. Galled vines frequently produce inferior shoot growth, and portions of the vine above the galls may die. When galls are numerous or when they are located on the major roots or on the root crown, they disrupt the translocation of water and mineral elements, leading to poor growth, gradual dieback, and sometimes death of vines. In general, affected plants are more susceptible to adverse environmental conditions, especially winter injury.

Cause and biology of the disease. Crown gall is caused by the soil-borne bacterium, *Agrobacterium tumefaciens*. Recent research on this disease suggests that grape crown gall is caused by a very closely related strain of this bacterium called *Agrobacterium vitis*. The bacterium survives for long periods of time in soil, and also in galls and in diseased plants. The crown gall bacterium is widely present in Kentucky soils and may be systemically present in many grape vines, but the bacterium seldom causes disease unless the vine is injured. Galls develop following an injury to grape cells permitting entrance of the pathogen and may appear on the roots, trunk, and arms of grape vines. Such injuries may occur during intermittent freezing and thawing weather common to Kentucky each winter. Such frequent freezing and thawing may not occur as much in other grape growing regions such as New York or California. Overwintering bacteria may be spread to wound sites by splashing rain, running water, on cultivation implements or on pruning tools. Contaminated nursery stock may be another source of the disease. Bacteria can survive in the soil for many years.

Crown gall disease management.

- Use disease tolerant cultivars. In general, *Vitis vinifera* grapes are more susceptible than *V. labrusca*. Highly susceptible cultivars include Baco Noir, Cabernet Franc, Cabernet Sauvignon, Chancellor, Chardonnay, Gewürtztraminer, Limberger, Merlot, Muscat Ottonel, Pinot Blanc, Pinot Gris, Pinot Meunier, Pinot Noir, Riesling, and Sauvignon Blanc. Less susceptible cultivars include Catawba, Cayuga White, Concord, Cynthiana/Norton, Delaware, Einset Seedless, Foch, Fredonia, Ives, Mars, Steuben, Vanessa, and Ventura.
- Select planting sites with no history of crown gall, or wait at least 5 years before replanting such sites.
- Soil fumigation is generally not effective for destroying the crown gall pathogen.
- Plant the vineyard on northeast facing sites to help reduce freeze injury.
- Plant vines in well drained soil.
- Minimize root injuries during planting.
- Plant only certified, disease-free nursery stock.
- Discard plants with galls.
- At planting time, growers may want to try dipping or spraying grape root systems in Galltrol A (*Agrobacterium radiobacter*, Strain 84) a biological control microbial antagonist available from AgBioChem, Inc. In general, this product has been shown not to work well for grapes, but high rates of the preparation may provide some protection from crown gall. This treatment is relatively inexpensive per vine. The biological control preparation will not cure already-infected grapes.
- Adopt management practices that minimize wounding. Hill up soil around grapevines or otherwise protect the lower trunk in fall to reduce winter injury and resulting wound sites needed for infection. Hilling also ensures the development of

new scion shoots that may be needed for trunk renewal. In some areas growers bury young vines in the fall to reduce freeze injury.

- Generally, remove and destroy infected plants, however, galls on the upper parts of the trunk or on canes can sometimes be pruned out.
- Where feasible, apply Gallex (AgBioChem, Inc.), a crown gall eradicator paint derived from petroleum compounds. This treatment is applied to already existing galls and following treatment, the galls gradually shrink and disappear. Gallex only affects treated galls and will not stop nearby untreated galls.
- The double trunk or multiple trunk training systems may be useful for minimizing losses due to crown gall. If one trunk is infected, it can be removed. The remaining trunk(s) can be pruned leaving a full number of buds until the second or additional trunks can be renewed.
- Grape vines with poor vigor are more susceptible to winter injury, thus it is important to use proper pruning practices and leave proper crop loads for maximum vine vigor to result in stronger plants that are less susceptible to winter injury. Manage other vine-weakening grape diseases such as downy mildew and powdery mildew so as to insure maximum vine vigor.

Crown Gall, Galltrol™ and Gallex™

Galltrol is a pure 100% active ingredient culture of the naturally occurring strain of *Agrobacterium radiobacter* (Strain K-84) grown on an agar medium in large plastic petri dishes. These harmless bacteria are grown under controlled environmental conditions until bacterial numbers and vigor are maximized. Fresh Galltrol cultures are produced weekly. Cultures have a 120-day shelf life when refrigerated at 34 to 40° F. Galltrol is easy to apply. The root-

stock is sprayed, dipped or drenched in a suspension of water and Galltrol. It has proven to be an excellent biocontrol agent and is used throughout the world. Galltrol represents the first commercial product of strain K-84 sold in the United States.

Crown gall galls on plants can be eradicated through the use of Gallex. This product was developed at the University of California, Berkley. Gallex is an oil/hydrocarbon based emulsion that penetrates the tissue and kills it.

Galltrol and Gallex are manufactured by Ag. Bio Chem, Inc.; 925/254-0789 PH; 925/254-0186 FAX; web site: www.crowngall.com

Kentucky Blueberry Markets Bursting -- Consumer Survey Shows Continued Strong Demand

By Matt Ernst and Tim Woods

How much is too much to pay for a pint of Kentucky-grown blueberries? How much would people be willing to pay for U-Pick berries? Are quart-size containers a viable way to market blueberries? According to a study funded by the New Crop Opportunities Center this summer, consumers in both big and small Kentucky towns are willing to pay top prices for fresh Kentucky blueberries.

Farmers' Market and Grocery

A survey of blueberry buyers was conducted during the first two weeks of Kentucky's blueberry season to determine blueberry buyer preferences. Most of the surveys (102) were collected at the Lexington Farmers' Market. There were also 25 surveys collected in Metcalfe County, at the "Blueberry Festival" promotion featuring locally grown blueberries at the Edmonton CB Foods grocery store.

The survey took less than two minutes to complete. It included questions about how much consumers were willing to pay that day for retail blueberries, what blueberries were being used for, and how much customers would be willing to pay for U-Pick blueberries.

Market Differences

Consumers at the Farmers' Market were used to paying \$3.00 per pint for fresh blueberries. According to the survey, Lexington Farmers' Market customers would be willing to pay an average of \$3.14 per pint of blueberries in season. Most people responding to the survey at the farmers' market, though, indicated that they were willing to pay whatever the market was.

In Metcalfe County, some 150 miles southwest of Lexington, CB Foods featured local, hand-picked blueberries for \$1.88 per pint. The consumers surveyed there during one Saturday of shopping indicated that they would be willing to pay, on average, \$2.08 per pint for blueberries.

Wholesale prices for local berries at both these outlets were well within the \$1.25 - \$2.00 range Kentucky blueberry farmers are receiving this year. UK estimates show that blueberry growers can make adequate profits from blueberry production at such wholesale price levels. Those growers willing to market their own berries at "premium" markets (like the farmers' market) can expect to generate significantly greater profits from their efforts.

U-Pick Shows Promise

Producers willing to tailor their production for U-Pick markets can often capture higher profits than wholesale producers. This is because U-Pick eliminates labor costs, the largest cost for wholesale blueberry production. In fact, according to university estimates, those willing to develop a U-Pick blueberry market in their area can make \$800 to \$1,500 more per acre over wholesale berry production when charging a price of \$1.25 per pint.

The survey indicated that about half the consumers at both markets would be interested in picking their own berries at a nearby farm. Lexington Farmers' Market customers said that they would pay an average of \$2.13 per pint for berries that they picked themselves. Those surveyed at the grocery indicated that they would be willing to pay considerably less, \$1.24 per pint, for U-Pick blueberries.

Interestingly, some of those surveyed at the Farmers' Market indicated that they would be willing to pay *more* than they were paying at

the market just to go to a farm and pick their own berries. Enterprising farmers willing to provide a hospitable and fun environment for U-Pick berry customers could cash in on the public's taste for these berries.

A complete report of this survey is available on-line at www.uky.edu/ag/hortbiz

Pierces's Disease Found on Grapes in Southern Indiana

by John Hartman, Extension Plant Pathologist

Grape growers and Extension Agents are urged to continue to be alert for Pierce's disease symptoms on grapes in Kentucky vineyards. There are now confirmed reports that this disease has been found on a few grapevines in an Indiana vineyard. The vineyard is located in the southern part of the state along the Ohio River. Thus, it should not be surprising that this disease, which was first found in Kentucky last year, might be present in additional vineyards here. On most varieties, symptoms appear as well-defined brown scorching of the leaf margins with a narrow yellow zone between the brown tissue and the green leaf tissue remaining at the leaf center. Growers or agents observing these symptoms on grape are urged to have grape leaves with symptoms sent to our plant disease diagnostic laboratory in Lexington to be tested for presence of the causal bacterium, *Xylella fastidiosa*.

Receiving The Fruit Facts Newsletter Electronically on the Internet

Fruit Facts is available electronically 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 University of Kentucky Listserve.

We have recently changed the listserv address, so this procedure is different from previous instructions.

To subscribe, send an e-mail message:

Addressed to: listserv@lsv.uky.edu
Subject: Fruit Facts
Message: subscribe ky-fruitfacts,
followed by a blank line

You will receive two responses, the first notifying you that your request has been received and to wait for the second message. The second message describes how to confirm your request. You must confirm your request in one of the three ways shown (web access, e-mail reply or new e-mail message). Upon successfully confirming, you should get a welcome message.

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