UK COOPERATIVE EXTENSION SERVICE
University of Kentucky – College of Agriculture

Lexington KY 40546

Kentucky Fruit Facts

June 2005 (6/05)

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

Fruit Crop News

Fire blight is this years major apple disease in Kentucky apple orchards. It is also a serious problem in Southern Illinois. We had one fire blight infection period this year in Lexington and at least two in the western end of the state. We have had 8 scab and 7 cedar apple rust infections to date in the Lexington area. Also, in Lexington we have noted 5 blackrot and two downy mildew infections on grapes. Frogeye leaf spot in apples and peach leaf curl have been noted in our diagnostic labs in a number of instances.

Strawberry harvest has been good and it is looking like more of a moderate production year due to some degree of frost injury in a number of plantings. However, berry quality has been superior due to dry weather and cooler temperatures. Blueberry harvest has begun and the crop potential looks excellent.

Orange rust has been prevalent in blackberries and there have been a number of reports of winter injury to the canes in both thorny and thornless varieties.

The weather in May was dryer and cooler than normal, while the early June forecast is for above normal temperatures and precipitation. The 30 day forecast is for normal temperatures and precipitation and the 90 day outlook is for above normal temperatures and normal precipitation.

Inside This Issue:

1 - Fruit Crop News
1 - Upcoming Meetings
2 - Kentucky Vineyard Society Summer Meeting
3 - UK/KY Vineyard Society Viticulture Workshop
4 - Fire Blight -- What Now?
4 - New Information on Health Concerns to Applicators of Selected Disease Control Chemicals
5 - Apples Could be Affected by Soybean Rust Management
6 - Asian soybean rust - a threat to edible legumes in Kentucky?

Upcoming Meetings

Jun. 11. Herb Festival, Ashland , KY. Contact Lori Bowling 606-739-4014.

Jun. 15 Woody Cut Stem Field Day, U.K. Horticultural Research Farm, Lexington. Contact: Amy Fulcher 859-257-1273, e-mail: afulcher@uky.edu

Jun. 16 Eden Shale Field Day and Celebration, U.K. Eden Shale Farm, featuring grape variety and training trials, Owenton. Contact Kim Strohmeier 502-484-5703.

Jun. 24 Lawrence County Farm and Home Field Day, Contact John Sparks 606-638-9495.

Jun. 18 Kentucky Vineyard Society Summer Meeting, Talon Winery, Lexington. Contact John Pitcock, Talon Winery Winemaker 502-229-0334. (See program below.)

Jun. 23 Madison County Field Day, Acres of Land Winery, 2285 Barnes Mill Rd., Richmond, KY 40475. Contact Madison County Extension Office 859-623-4072 or Lowell and Katherine Land 859-328-3000, web site: www.acresoflandwinery.com

Jul. 7. Franklin County Field Day, Frankfort, KY Contact Edie Greer 502-695-9035.

Jul. 11 UK/KVS Viticulture Workshop, Elk Creek Hunt Club, Owenton, KY. Contact Kim Strohmeier 502-484-5703.

Jul. 12-13 Kentucky Farm Bureau 5th Annual Farm Marketing Bus Tour, Gagel's Truck Farm, Louisville, KY; Corya Farms, Seymore, IN; Oliver Winery, Bloomington, IN; Anderson Orchards, Mooresville, IN; and Dillman Farms, Bloomington, IN. Cost: $30, registration fee, $93.24 hotel. Contact J. K. Henshw, Kentucky Farm Bureau, P.O. Box 20700, Louisville, KY 40250. Phone: 502-495-5000; e-mail jkhenshaw@kyfb.com

Jul. 13-15 American Society for Enology & Viticulture Eastern Section 30th Annual Technical Meeting and Symposium, Cutting-edge Cultivars: Highlighting Pinot gris, Traminette, Norton, and New Cold Hardy Cultivars, St. Louis, MO. For information see web site at www.nysaes.cornell.edu/fst/asev/

Jul. 28 U.K. Research and Education Center All Commodity Field Day, Princeton, KY. Contact Richard Coffey 270-365-7541 ext. 244.

Aug. 17-19 North American Strawberry Grower Associations 8th Annual Summer Tour, Farming on the Urban Fringe, lower Hudson area of New York. Check the NASGA website for details, http://www.nasga.org/

Sept. 19 Harvesting the Fruits of Your Labor, (A walk through the orchard to observe different varieties and different root- stocks). Sun Ray Orchard, Shepherdsville, KY. 6:00 p.m. Contact Darold Ackridge 502-543-2257.

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.

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

Kentucky Vineyard Society 2005 Summer Meeting

Saturday June 18

Talon Winery

7086 Tates Creek Rd. , Lexington, KY, 40515
Harriet Allen and Charles Tackett, owners
John Pitcock, winemaker
Phone: 859-971-3214

Directions:

Upon arriving in Lexington**,** follow New Circle Rd. or Man O'War Boulevard towards the south side of town to Tates Creek Rd. (Rt.1974). Follow Tates Creek Rd. South for a little over 5 miles to Talon Winery. Along the way you will pass 1981 on your right and the winery is about a mile past this. You will pass a bed and breakfast on your right and go into a sharp curve to the right. The farm entrance is the first drive on your left just after this. Look for a tall white cylindrical water tower and drive towards the tower.

Program:

All times EDT

9:15 a.m.	Registration
9:30	Opening Remarks - Jim Wight, KVS President
9:45	Welcome to Talon Winery - Harriet Allen, Owner and John Pitcock Winemaker
10:00	Insect Management - Ric Bessin, UK Extension Entomologist
10:20	Canopy Management - Kaan Kurtural, UK Extension Viticulturist
10:50	Disease Management - John Hartman, UK Extension Plant Pathologist
11:10	Vineyard Herbicide Per Acre Costs - Joe Masabni, UK Extension Fruit and Vegetable Specialist
11:30	Crop Estimation - Kaan Kurtural, UK Extension Viticulturist
12:00 p.m.	Barbeque Lunch

Please preregister by June 16, 2004 by calling Talon Winery at 859/971-3214 so that we can plan the meal. There is no charge for the meal for members and their guests.

1:00 p.m. Direct Shipping of Wine In and Out of Kentucky
- Roger Lessor, President of Liquor Barn

(Continued on the next page.)

KY Vineyard Society Summer Meeting (continued):

1:30 **Concurrent Sessions**

1.) Vineyard Equipment
Prospero Equipment Corporation
- Speaker to be announced
Sprayer Nozzles
- George Duncan,
UK Extension Agricultural Engineer

2.) Amateur Wine Making
- Butch Meyer, Amateur Winemaker of the Year, Winemaking Magazine, 2005; Grand Champion, Winemaking Magazine 2005 competition (2,247 entries)

3.) Wine Evaluation Skills
- David Miller, KVS Award Winning Winemaker and Judge

3:15 p.m. Short KVS Board of Directors Meeting

University of Kentucky/Kentucky Vineyard Society Viticulture Workshop

Monday July 11, 2005

Elk Creek Hunt Club/Vineyards
(502) 484-4569
http://www.elkcreekhuntclub.com

Directions:

Elk Creek is located at the Intersection of KY Highways 227 and 330 in Owenton KY. **From Lexington:** Follow Interstate 64 West to Exit 53. At Exit 53, follow Highway 127 North to Highway 227 south. **From Cincinnati:** Follow Interstate 75 south to Exit 144. At Exit 144 follow Highway 330 west. **From Louisville:** Follow Interstate 64 East to Exit 53. At Exit 53, follow Highway 127 North to Highway 227 south.

** Please pre-register by **July 1, 2005**, by calling Kim Strohmeier at the Owen County Extension office at (502) 484-5703 so that dinner arrangements can be made.

For more information regarding the program please call Kaan Kurtural, Extension Viticulture Specialist at University of Kentucky: 859 257-1332.

Program: ALL TIMES EDT

12:30 p.m. Registration
1:00 Disease Management for the Current Season in Grapes
- John Hartman, University of Kentucky
1:30 Insect Control in Kentucky Vineyards
- Ric Bessin, University of Kentucky
2:00 Bird and Deer Depredation Control in Midwestern Vineyards
- Brad Taylor, Southern Illinois University
3:00 Break
3:15 Shale Soils and Their Limitations/ Benefits in Viticulture
- Greg Schwab, University of Kentucky
4:00 Training and Caring for Young Vines
- Kaan Kurtural, University of Kentucky
4:45 p.m. Dinner/Cook-out
Kim Strohmeir, Owen County Extension Agent for Agriculture and Natural Resources

Driving directions/Map to Elk Creek Hunt Club:

Elk Creek is located at the intersection of KY Highways #227 & #330 in Owenton KY, as shown on the map.
It is within an hour drive of Cincinnati, Lexington and Louisville.

Fire Blight-What Now?

by John Hartman, UK Extension Plant Pathologist

Fire blight symptoms are appearing in commercial apple orchards and in backyard apple trees throughout Kentucky. The plant disease diagnostic laboratories have been reporting high numbers of fire blight samples from apples and pears for the last several weeks. Many growers wonder why the disease is widespread and yet sporadic this year.

o Fire blight is widespread because, for several distinct times this spring, conditions were ideal for infections, especially during bloom when primary infections take place. Depending on the location, if apples or pears were in flower around April 11 & 12 or on April 22, then conditions were good for fire blight infections. Frost in some areas may also have played a role

o The disease is sporadic because not all trees faced ideal fire blight conditions this spring. Small differences in microclimate based on the tree location or exposure can make a critical difference in disease potential. In addition, timing of bloom in relation to the weather affected whether or not fire blight would be a problem.

o Fire blight has been a threat over an extended period because cool weather interspersed with the disease-favorable warm weather slowed tree development this spring and because some trees may produce many "trailing blooms.

o Growers and gardeners with infected trees are often tempted to remove infected branches as soon as they see them. In many cases, this would be the wrong strategy, because removing branches can encourage new shoots to develop and these new shoots would also be susceptible to new infections. If fire blight strikes are discovered early, before leaves have turned completely brown, timely removal of infected shoots can help slow the spread of the disease. However, most growers do not discover the disease early enough for this to be helpful. So what is to be done with infected trees now?

o Growers should just let the disease run its course, allowing the tree defenses to stop fire blight spread within the tree. Dead shoots and branches should be removed in winter when there is little chance of spreading the disease.

o Some growers may feel compelled to cut out fire blight infections, possibly for cosmetic or aesthetic reasons. What then? If pruning is begun after obvious symptoms appear, cut back in the direction of a healthy internode of at least two-year-old wood, leaving a stub several inches long. Rely on the tree's natural defenses to prevent further movement into the branch. If needed, paint the stub with bright paint to make it more obvious. This stub can then be safely removed in the winter. Leaving infected stubs rather than pruning all the way back to the main branch reduces the chances for development of undesirable water sprouts in response to pruning.

o The reason not to prune infected branches back to a spur or crotch in summer is because it may not be noticed in winter and could be overlooked. It should not be necessary to sterilize cutting tools between cuts if only blighted shoots are being removed.

o Do not engage in normal summer pruning and training at the same time as fire blight removal without wiping the cutters with sterilizing solutions like Lysol, 70% alcohol or 10% bleach. Don't forget to remove the infected stubs along with dead shoots and cankers next winter.

o Do not apply chemical controls such as streptomycin. They are only effective if used during the normal bloom period.

o Remove trailing blooms to prevent late spring and summer infections.

New Information on Health Concerns to Applicators of Selected Disease Control Chemicals

by Paul Vincelli, UK Extension Plant Pathologist

A long-term study involving several federal agencies was begun in 1993 to address questions about the health of the agricultural community. The Agricultural Health Study is looking at lifestyle habits, genetic factors, and agricultural exposures at work and in the environment affect the risk of disease. Since this is a long- term, ongoing study, only early findings are available at this time. However, several of the early findings reported in a series of fact sheets are relevant to plant disease control and are summarized here.

1. Retinal Degeneration May Be Linked to Fungicide Use

Degeneration of the retina, the light-sensitive lining of the inner eyeball, is the most common cause

of blindness in older adults. There are some animal studies suggesting that pesticides may play a role in retinal degeneration. Researchers in this study compared 154 pesticide applicators who reported having been diagnosed with retinal degeneration to 17,804 applicators that did not. The applicators who reported retinal degeneration were twice as likely to have used fungicides. Significantly, they found an increasing risk of retinal degeneration with increasing days of fungicide use. The researchers found evidence of this trend for five fungicides: benomyl, captan, chlorothalonil, maneb and metalaxyl. The applicators reporting retinal degeneration were more likely to work in orchards, where fungicide use typically is intensive. They were also more likely to have used application methods that have high applicator exposure, such as hand spray guns, backpack sprayers, mist blowers and foggers.

2. Prostate Cancer Risk Greater in Frequent Methyl Bromide Users

Prostate cancer is the only cancer thus far associated with increased incidence in study participants as compared to the general population. Of 45 pesticides evaluated in the study, only one-methyl bromide-was associated with increased risk of prostate cancer with increasing exposure in pesticide applicators. Those with the highest exposure levels had a 3.5-fold higher risk of prostate cancer.

Significance

Pesticides provide substantial benefits in terms of agricultural production. However, each poses potential risks to human health at some dose. The same can be said of sodium chloride, commonly known as table salt, or any other chemical. Nevertheless, these findings serve as a reminder to be respectful of the potential risks that pesticides pose, and to use pesticides in ways that minimize exposure of workers and applicators.

Although I have always advocated care when working with pesticides, given the results reported here, I urge particular caution for those applicators working with crops that often receive intensive fungicide use in Kentucky, such as golf courses, several fruit and vegetable crops, and tobacco. Applications to high-yield wheat crops could also be a concern, and with the advent of Asian soybean rust, so could applications to soybean.

Methyl bromide is in the final year of the phase-out under the Montreal Protocol on Substances That Deplete the Ozone Layer (the Montreal Protocol), and only existing stocks can be used. However, the U.S. has secured critical use exemptions to allow extended production and import for use on a number of crops. Most of these exemptions apply to states other than Kentucky, but those that apply to Kentucky include use on:

1. industry-certified sod by producers who are members of Turfgrass Producers International (interestingly, these uses were considered “critical”)
2. golf courses for a number of uses (ditto from above)
3. government-owned nurseries for production of forest seedlings

Applicators of methyl bromide in these circumstances should be sure to protect themselves from exposure to this gas.

More information on the Agricultural Health Study can be found at www.aghealth.org.

Apples Could be Affected by Soybean Rust Management

by John Hartman

Apple orchards growing near rust-infected soybean fields could be at risk of phytotoxicity from one of the fungicides proposed for soybean rust disease management. The fungicide azoxystrobin, labeled as Quadris for Asian soybean rust control, is phytotoxic to McIntosh and McIntosh-derived varieties of apples. Besides Quadris, azoxystrobin is also sold under the trade names Abound and Heritage. Azoxystrobin is registered on grapes, several tree nuts, stone fruit, cucurbits, and other horticultural crops, but not on apples.

Phytotoxic symptoms on apple trees include leaf and twig necrosis (dead tissue), leaf drop and fruit drop. Conditions favorable for drift have caused problems to apples elsewhere, e.g., azoxystrobin used in grape vineyards adjacent to apple orchards. The current label warns about spray drift and prohibits sprayers used with azoxystrobin for subsequent spraying of apple trees. Use of Quadris for soybean rust management could cause problems for apple orchards or backyard trees adjacent to soybean fields,

especially under unanticipated conditions favorable for drift.

Apple varieties known to be adversely affected are Akane, Asahi, Bramley, Courtland, Cox's Orange Pippin, Cox, Delbarestival, Discovery, Fortune, Gala, Galaxy, Grimes, Imperial Gala, Kent, Kizashi, Lurared, McCoun, McIntosh, Molly Delicious, Mondial Gala, Ontario, Queen Cox, Royal Gala, Spartan, Stark Gala, Starkpur Mac, Summared, Summer Treat, Warabi, Worcester, and Pearmain.

Apple growers are urged to communicate with neighboring soybean farmers about plans for soybean rust management. Fortunately, soybean growers have many other fungicide options to choose from, many of them less expensive than azoxystrobin. Thus, with good planning, soybean rust can be managed effectively with little risk to nearby apple crops.

Information for this article was adapted from the April 20, 2005 edition of the Kansas State University Extension Plant Pathology Plant Disease Alert newsletter, written by Doug Jardine.

Asian Soybean Rust – A Threat to Edible Legumes In Kentucky?

by Kenny Seebold and John Hartman, Extension Plant Pathologists

With the arrival of Asian soybean rust (ASR), caused by the fungus *Phakopsora pachyrhizi*, in nine states in the U.S. in 2004, growers and scientists in the soybean-producing regions of our country are anxiously waiting to see how severe the disease will be in the 2005 crop. There's good reason to be on guard; soybean rust has proven to be a devastating disease in Asia, Africa, and South America, where it has now become well established. What's more, *P. pachyrhizi* can attack a number of other leguminous species, including certain weeds and cultivated crops common in Kentucky. The list of cultivated legumes includes dry and succulent (garden or snap) beans (*Phaseolus vulgaris*), lima and butter beans (*P. lunatus*), blackeyed peas (*Vigna unguiculata*), and green (or English) peas (*Pisum sativum*).

Little information is available as to how ASR will affect edible legumes. Although soybean is highly susceptible to ASR, the susceptibility of beans and peas to the disease is relatively unknown. Reports from Brazil indicate that edible legumes may not be as susceptible to ASR as soybean, but remember that research on this disease has not been conducted in the U.S. Given the unknowns, it is impossible to predict potential losses in edible legumes to ASR at this time. No one knows for certain when or if ASR will strike Kentucky in 2005, but reports from Florida indicate that the pathogen has overwintered successfully and is present in two counties near Tampa. It is reasonable to expect that ASR will begin a steady trek northward. In the event that ASR does reach Kentucky, early detection will be critical in preventing losses. County agents and growers should consider the following:

Pathogen identification

Learn to recognize the signs and symptoms of ASR. On soybean, symptoms include small, tan-to-reddish brown lesions on leaves. Pustules, associated with each lesion, form on the undersides of leaves and sporulation may be evident. It is possible to confuse ASR with other diseases, including common rust of bean caused by Uromyces appendiculatus. Diagnostic guides for ASR are available on the UK Extension Plant Pathology web page. Suspicious symptoms should be reported quickly and samples sent immediately to the Plant Disease Diagnostic Laboratory in Lexington or Princeton so that a definitive diagnosis can be made.

Pathogen biology

Understanding the biology of P. pachyrhizi is crucial in the war against ASR. The fungus will not survive between seasons in Kentucky, because our cold winter temperatures will kill off hosts of P. pachyrhizi, and this fungus needs a live host to survive. It's unlikely, then, that we will see ASR early in the growing season. It is also important to consider the effect that weather will have on ASR. Typically, the disease is favored by warm temperatures and long (> 6 hours) periods of leaf wetness (dew or rain). Disease has been severe on soybean grown in the humid tropics because ideal conditions exist nearly year-round for development and spread of ASR. In Kentucky, where a temperate climate prevails, ideal conditions will be limited to specific times of the year. What does this mean? It means that even if ASR appears in Kentucky, the risk of severe losses should not be as high as in the more southerly states of the U.S (keeping in mind that under ideal conditions we could see severe damage).

Pathogen movement

Knowing where the 'enemy' is in relation to Kentucky production areas, and knowing the enemy's movements are critical first steps in formulating a management strategy for ASR. Resources such as the USDA's Public Soybean Rust site (www.sbrusa.net) are available and can be used to track movement of ASR in the U.S. The University of Kentucky's Department of Plant Pathology maintains a web page that features tools for tracking ASR as well (www.uky.edu/soybeanrust). As always, growers should scout fields regularly to monitor disease and pest levels; however, if ASR is reported near or in Kentucky, these efforts should be redoubled. Be vigilant - Asian soybean rust is an explosive disease and could cause big-time losses in a short period if conditions are favorable.

Control options

Scouting commercial plantings of edible legumes regularly for ASR, other diseases for that matter, is extremely important. If and when ASR is confirmed in Kentucky, quick action will be necessary to reduce the risk of severe losses to the disease. The question is what can be done to manage ASR in edible legumes once the disease arrives in the Commonwealth? The consensus of plant pathologists in the southeastern U.S. is that fungicide programs already in place for control of bean and pea diseases will likely provide some degree of suppression of ASR. At this time, there are no fungicides labeled specifically for control of ASR on edible legumes. Materials that are believed to be effective against ASR (based upon data from soybean trials outside the U.S.) and are labeled on succulent beans include sulfur, chlorothalonil (Bravo, Equus, etc.), azoxystrobin (Quadris 2.08SC), and myclobutanil (Nova 40WP). Florida and Tennessee have recently submitted requests for Section 18 exemptions for Nova, propiconazole (Tilt), and tebuconazole (Folicur) for succulent beans. These exemptions would cover all states east of the Mississippi river; however, the status of the exemptions is not known at this time and they may not be in place for the 2005 season.

The only fungicide options for English pea are sulfur and Quadris. With the exception of Nova, the fungicides that have been mentioned are protectants and must be applied before disease starts for maximum efficacy. Also, materials such as Quadris and Nova must be rotated with other active ingredients; back-to-back applications are prohibited. Please see product labels for rates, application intervals, and maximum amounts of product allowed per season.

Home gardeners will have fewer fungicide options than commercial growers and should remember that no products exist in the home and garden market that are labeled specifically for control of ASR. Certain vegetable fungicides that contain active ingredients such as sulfur, chlorothalonil, mancozeb, or maneb are expected to have some level of activity against ANR. Because most home gardeners do not spray fungicides on a regular basis, they should check plants often and spray products at the labeled rate at the first sign of disease. Product labels should be read carefully for rates and application instructions prior to use. Taking steps to minimize periods of leaf wetness, such as choice of planting site (open, non-shaded areas) and watering when conditions favor quick drying (morning or afternoon vs. late afternoon or evening) should be practiced by commercial growers and homeowners alike.

Asian soybean rust on green bean Phaseolus vulgaris L. leaf.

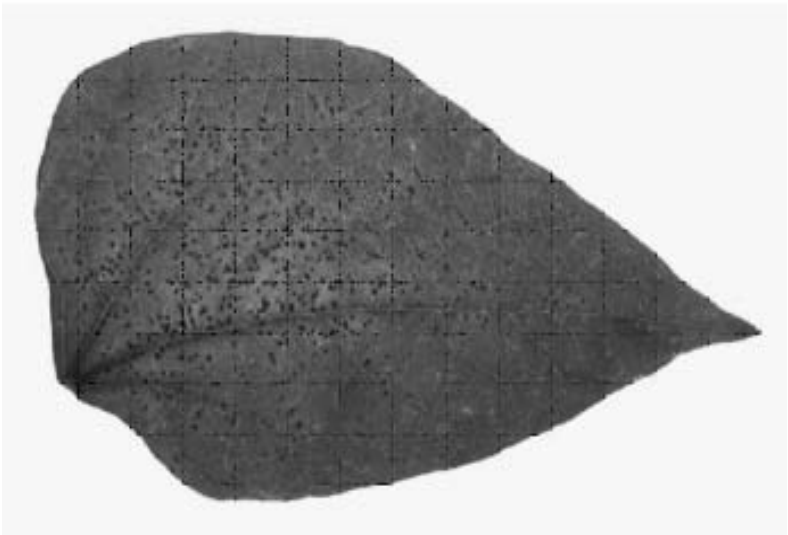

Photo by Borde, Nester, Tipton and Frederick
USDA, ARS, NAA, FDWSRU

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.

To subscribe, send an e-mail message:

Addressed to:	listserv@lsv.uky.edu
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