UK COOPERATIVE EXTENSION SERVICE
University of Kentucky – College of Agriculture

Lexington KY 40546

Kentucky Fruit Facts

June 2007 (6/2007)

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

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

Fruit Crop News

The strawberry season is over and grower yields across the state were about 30 to 40% of normal for matted row plantings. Berry sizes were generally small to very small and the high temperatures later in the harvest period had a negative effect on flavor. Now is the time to renovate strawberry plantings. June bearing raspberries are in production and the crop appears to be about 60% of normal. A very small crop of blueberries is also being harvested. Growers are encouraged to trim dead terminal growth that was killed by the Easter freeze off of blueberry plants to keep these terminals from being colonized by some of the canker diseases. This pruning should be done when the plants are dry to prevent spreading these diseases. One welcome surprise is that we have a blackberry crop. Early flower assessments after the Easter freeze turned up very few live flowers and our concern over collapse of cold injured canes upon exposure to hot weather is not as severe as projected. Thus, we appear to be looking at a blackberry crop that is 50 to 60% of normal.

Abnormally dry weather has become established in Kentucky. The latest drought indices indicate severe drought in Central, Eastern and Western Kentucky.

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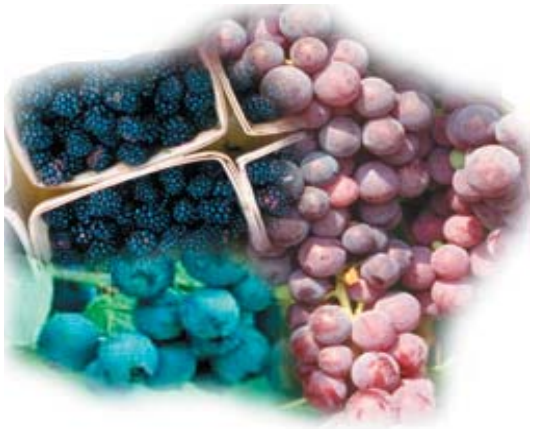

The 6 to 10 day outlook for the period July 2 through the 10th calls for above normal temperatures and below normal rainfall. The long range forecast calls for normal temperatures and rainfall.

La Nina, which is characterized by cool sea surface temperatures in the Pacific ocean has not kicked in as yet. The sea temperatures are trending downward, but have not reached the ½ ˚ C lower temperature across the Pacific that designates the La Nina phase. Under La Nina conditions Kentucky generally, but not always experiences drier than normal conditions.

The combination of the Easter freeze, which caused wood injury to blackberries, Asian pears, grapes, blueberries and Persian walnuts and the drought mean that these fruit and nut types require added care in the form of irrigation and weed control to help them recover to prepare for next seasons crop.

Japanese beetles have emerged in fairly high numbers in Western Kentucky and are defoliating crops. In central Kentucky, they are beginning to emerge in mass as localized rain storms wet the soil. Entomologists recommend that growers spray to control the first major emergence to prevent the first beetles from attracting more to your crops. Green June beetle emergence is expected the first week of July with the peak flight being the last two weeks of July in central Kentucky.

This seems to be a good year for potato leafhoppers on apples, grapes, brambles and strawberries. Inspection of leaf undersides will show the whitish-yellow potato leafhopper nymphs which crawl sideways. Use a pesticide before the yellowing starts to get serious on the edges of new leaves.

Mites also like dry weather. If European red mite populations exceed 15 per leaf at this time or later in the year on apple a miticide spray is recommended.

Please note that the phone number and address for the July 14 KNGA Summer meeting at Don Compton's farm in Marengo, IN were incorrect in the April/May Fruit Facts. The correct address and phone number may be found below.

Upcoming Meetings

Jul. 2-3 Indiana Horticultural Society Summer Field Tour. July 2 will be at Beiersdorfer Orchard in Guilford and July 3 will be at Wesler Orchards in New Paris, OH. Check http://www.hort.purdue.edu/fruitveg/ for details.

Jul. 7 Viticultural Field Day, University of Kentucky Horticultural Research Farm, Lexington. 10:00 a.m. - 5:00 p.m. Registration $25 for KVS members; $50 non KVS members, includes lunch and KVS wine glass. Preregister by July 2. Contact Kate Edwards 859-527-6635. See program below.

Jul. 11 A Day Trip to the Lincoln County Produce Auction, This is a Kentucky Department of Agriculture sponsored event. The auction manager will meet with the group and explain the fine points of the auction process. KDA staff will answer questions and the group will stay for part of the auction. There is no cost, but participants are responsible for their own lunch (there is a concession stand at the auction). You must register to reserve a seat in the van leaving from Frankfort. Participants can also meet the group at the auction. For more information call Janet Eaton at 502-564-4983 or janet.eaton@ky.gov

Jul. 14 Kentucky Nut Growers Association Summer Grafting Workshop, Don Compton's Farm and Nursery, 4400 E. County Road 890 S, Marengo, IN 47140, Phone: 812-723-0099.

Jul. 26 All Commodities Field Day, UK Research and Education Center, Princeton. Contact Joe Masabni 270-365-7541 X 247; e-mail jmasabni@uky.edu for information on the fruit and vegetable tours.

Aug. 16 Asparagus Twilight Meeting to Showcase New Varieties. Garnet Carr farm, 982 Flem Clayton Rd., Roxboro, NC. 6:00 p.m. For more information contact Carl Cantaluppi at carl_Cantaluppi@ncsu.edu or call 919-603-1350.

Sept. 29 Healthy Food, Local Farms Conference, Bellarmine University, Louisville, KY. Featured Speaker Alice Waters, Chef and owner of Chez Panisse Restaurant, leader in school garden movement, and organic, local food advocate. To register call 231-922-2201, $40 (deadline Sept. 15), Only $35 if check is sent by July 13 to Shelly Campbell, 400 W. Front St., Suite 204, Traverse City MI 49684. Food served will be locally and sustainably grown, antibiotic and hormnoe-free.

Oct. 27 Kentucky Nut Growers Association Fall Meeting, UK Research and Education Center, Princeton. Contact Joe Masabni 270-365-7541 X 247; e-mail jmasabni@uky.edu

Jan. 7-8, 2008 Kentucky Fruit and Vegetable Conference, Embassy Suites, Lexington, KY. Contact John Strang 859-257-5685; e-mail: jstrang@uky.edu

From the Kitchen of Linda Ison Crestwood KY

Strawberry Preserves

5 C. strawberries
6 C. sugar
6 Tbsp. lemon juice
1 to 2 pouches liquid pectin

Bring 1st three ingredients to a boil;
boil 3 minutes.
Add the pectin according to directions.
Ladle into hot jars with a funnel.
Tighten rings only finger tight.
Boiling water bath for 10 minutes.
Remove from water bath, cool.
The 1.2 pint jars sell for $5.00 at Bardstown Rodd Market in Louisville.
The extra lemon juice really puts a zing in the flavor.

2007 Viticulture Summer Field Day

July 7, 2007
10:00 am – 5:00 pm EDT
University of Kentucky
Horticulture Research Farm
4332 Emmert Farm Lane, Lexington, KY 40514

The U.K. Horticulture Research Farm is located on the South side of Lexington approximately one block west of the intersection of Man O'War Blvd. and Nicholasville Road (U.S. 27) The entrance to the farm (Emmert Farm Lane) is off of Man O'War Blvd. at the traffic light opposite the entrance to Lowes and Walmart.

Cost: $50.00 for non-KVS members,
$25.00 for KVS members

Program

10:00 am	Registration opens
10:30 am	**Welcome Message** Dr. Dewayne Ingram UK Department of Horticulture
10:45 am	**State of The Industry** Charles A. Smith Kentucky Vineyard Society
11:00 am	**Sampling Fruit in The Vineyard** Bradley Beam University of Illinois Enology Specialist
11:30 am	**Crop Estimation in The Vineyard** Brandon O'Daniel UK Department of Horticulture
12:00 pm	**Barbeque lunch** (included with registration)
12:45 pm	**Mechanical Canopy Management Demonstration** John Dietzler, BDI Machinery
1:15 pm	**Canopy Management in Small Vineyards** Dr. Kaan Kurtural UK Department of Horticulture

1:30 pm	**Japanese Beetle Management Strategies in Kentucky** Derrick Hammons UK Department of Entomology/ Horticulture
1: 45 pm	**Refreshment break**
2:00 pm	**Mechanical Weed-control in Vineyards** Jerry Holder, Lovers Leap Vineyard
2:15 pm	**Weed-free Strip Management by Herbicides** Dr. Joe Masabni UKREC
2:30 pm	**Summer Grape Diseases in Year with Little or No crop** Dr. John Hartman, UK Plant Pathology
2:45 pm	**Managing Summer Diseases in the Vineyard via Canopy Management** Patsy Wilson UK Department of Horticulture
3:15 pm	**French-American Hybrid Cultivar Trial and Vinifera Clone Trial Tour** Dr. Kaan Kurtural, UK Department of Horticulture
3:30 pm	**Harvest Parameters for White Wine Cultivars in The Midwest** Bradley Beam University of Illinois Enology Specialist
3:45 pm	**Options for Bird Control in Vineyards** Midwest Vineyard Supply, Inc. Decatur, IL
4:00 pm	**Supervised Educational Tasting Midwestern Wines and University of Kentucky Enology Group Wines** Dr. Tom Cottrell UK Department of Horticulture
5:00 pm	Adjourn

For registration information contact the Kentucky Vineyard Society at 859-527-6635

REGISTRATION FORM

MAIL COMPLETED FORM TO:
TREASURER, KENTUCKY VINEYARD SOCIETY
1500 JONES NURSERY RD LEXINGTON, KY 40509

To assist in our planning

1) What is the most important factor in your decision to attend the extension educational opportunities?

___Location

___Time of the year

___Advertised technical program

___Cost of conference

2) For future extension educational opportunities which month would you prefer summer Viticulture Summer Field Days to be held? _____

Personal information:	
Name:	
Organization:	
Address:	
E-mail:	

Registration costs		
	Cost	**Number attending**
KVS member*	$25/person	
Non-KVS member	$50/person	
	Total:	$

*Member discount available to new members see application for membership on page 4.

Meal Choices		
	Cost	**How many?**
Beef	included w/ registration	
Chicken	included w/ registration	
Vegetarian	included w/ registration	
	Total:	$0.00

For registration information contact the Kentucky Vineyard Society at 859 527 6635

Kentucky Nut Growers Association Summer Grafting Workshop - July 14

The KNGA Summer Grafting Workshop will be held at Don Compton's Farm at 4400 E. County Road 890 S, Marengo, IN 47140, Phone: 812-723-0099.

Directions:

Coming from the south take I-64 to Carefree (Exit 84) and then north on SR 66. Stay on 66 for 12 miles to Marengo, IN. Continue straight through the 4 way stop light in Marengo over an iron bridge. Bare to the left for about one block and at the stop sign turn right on Valeene Rd. Proceed 4 miles and turn right onto County Road 850 S. Drive one mile and Don Compton's farm will be the second house on the left, mail box number 4400.

This will be an all-day meeting, beginning at 10:00 a.m. EDT (Lexington's time). There will be no charge, but please bring a dish for the pot-luck luncheon (a kitchen will be available to heat up lunch items). Don will treat us with a tour of his extensive persimmon planting and fill attendees in on the geology and history of the area.

The KNGA offers you an excellent hands-on learning experience when you attend this workshop. Let the experts teach you how to bud and graft nut trees. For more information contact Kirk Pomper at 502-597-5942 or e-mail: kirk.pomper@kysu.edu

Phomopsis Cane and Leaf Spot is Active on Grapes

by John Hartman, UK Extension Plant Pathologist

Despite a relatively dry spring this year, enough cool, wet weather occurred in early spring to allow for Phomposis cane and leaf spot disease development. Symptoms of this disease have developed in many Kentucky vineyards. Cane and leaf spot disease is caused by the fungus *Phomopsis viticola*. At one time, it was thought that this fungus also caused dead-arm symptoms, but it is now known that *P. viticola* only causes cane and leaf spot while another fungus (Eutypa) causes the dieback characteristic of dead-arm. Incidence of Phomopsis cane and leaf spot appears to be increasing in many Kentucky vineyards and significant crop losses can occur in growing seasons with disease-favorable weather.

Symptoms. On shoots and leaves, infections give rise to black spots or elliptical lesions that appear mainly on the first three to four basal internodes. Although this phase of the disease can appear quite severe, crop loss due to shoot infections has not been demonstrated. Heavily infected shoots are more prone to wind damage. Lesions on shoots serve as an extremely important source of inoculum for cluster stem (rachis) and fruit infections in the spring.

Rachis and fruit infection is the phase of the disease that causes most economic loss. Fruit rot symptoms caused by Phomopsis generally do not appear until harvest. Rotted fruit are a light brown color with black fungal pycnidia that break through the berry skin; the berry soon shrivels. At this advanced stage, Phomopsis fruit rot can be easily mistaken for black rot. Recall that the black rot fungus does not infect berries late in the growing season, and black rot symptoms develop long before harvest.

Disease cycle. The causal fungus, *P. viticola*, overwinters in lesions or spots on one- to three-year-old wood infected during previous seasons. Cool weather and rainfall favor spore (conidia) release and infection.
Conidia are released from pycnidia in early spring and are spread by rain to developing shoots and leaves. Shoot and leaf infection is most likely to occur during the period from bud break until shoots are 6 to 8 inches in length. Lesions appear three to four weeks after infection.

Most fruit and rachis infections occur early in the season although they are susceptible to infection throughout the growing season. The fungus does not appear to be active during warm summer months, and most or all of its primary inoculum is probably released and expended early in the growing season. The tiny green fruits that are infected during this critical period may appear to remain normal. The fungus remains inactive in these fruits as a latent infection. When the fruit starts to ripen near harvest the fungus becomes active and causes the fruit to rot. While the fungus is relatively inactive during the warm summer months, it can become active during cool, wet weather later in the growing season. Thus, fruit rot that appears at harvest is probably due to infections that occurred during or shortly after bloom.

Management of Phomopsis cane and leaf spot disease requires both sanitation and application of fungicides.

*During the dormant season, prune out diseased canes as a sanitation measure that will reduce primary inoculum.

*Make timely fungicide applications for disease control. The critical period to provide fungicide protection for fruit and rachis infection is when the fruit clusters

are first exposed and continuing until two to four weeks after bloom.

*Be sure that the vineyard sprayer has been properly calibrated to provide complete coverage of all grapevine surfaces including leaves, stems, and flowers.

*For suggestions of fungicides to use and application timing for grape disease management consult U.K. Cooperative Extension Publication ID-94, Midwest Commercial Small Fruit and Grape Spray Guide, 2007, available at County Extension Offices statewide.

USDA-NASS Kentucky Grape Acreage Survey

by Kaan Kurtural, UK Extension Viticulturist

In November of this year the USDA-NASS will conduct a vineyard survey to determine Kentucky grape vineyard acreage. The survey will be repeated every 5 years. If you do not receive a survey with a number on it please contact the NASS office at the below URL to make sure that you get counted. An accurate survey of the acreage within our state is needed not just for record keeping purposes but also for release of emergency funds in times of a natural disaster such as the 2007 Easter Freeze. Viticulture in the Commonwealth is of interest to the Federal Government now, due to our rapid industry growth.
https://www.agcounts.usda.gov/cgi-bin/counts

American Society for Enology and Viticulture Eastern Section Annual Technical Conference and Symposium

by Kaan Kurtural, UK Extension Viticulturist

The American Society for Enology and Viticulture Eastern Section's (ASEV-ES) annual technical conference and symposium will be held near Allentown, Pennsylvania on July 15-17. The theme for this year's symposium is "Soil Moisture and Vine Vigor." Grape growers in the Midwest and East know that vine vigor, usually too much of it, is a constant challenge to achieving a balanced vine and high wine quality. A distinguished group of researchers will address this issue. Graduate student research papers will be presented, as well. One of the students from my lab is also presenting his work on Sustainable Management of Japanese Beetle and its Impact on Cold Hardiness at this meeting. ASEV-ES is all about good food and wine and celebrating our industry. The awards banquet will be held on Monday and a Pennsylvania wine lunch on Tuesday. There will be plenty of wines from around the Eastern Section region to be tasted. ASEV-Eastern Section is YOUR professional association. It hasn't really gotten the support it needs in recent years from our community. One way to get more recognition for the society is to have more people attend its main annual function, the annual conference and symposium held each July in an Eastern Section state.

Apple Scab Resistance Breakdown

by Janna Beckerman, Extension Plant Pathologist at Purdue University from June 7, 2007, "Facts for Fancy Fruit" newsletter.

In Indiana, the Midwest, and most of the United States, apple scab is the most important disease of apples. For this reason, plant breeding programs, like the PRI collaborative program between Purdue University, Rutgers, the State University of New Jersey, and the University of Illinois, developed scab resistant apple cultivars like Williams' Pride, Enterprise, Prima, Priscilla, and GoldRush. These cultivars were developed by breeding resistance from *Malus floribunda* 821 into commercial cultivars with high fruit quality to produce high quality eating apples with scab resistance.

Since 1970, approximately 80% of the scab-resistant cultivars that have been released worldwide purportedly carry the Vf gene from *M. floribunda* 821, with very few cultivars carrying other sources of resistance. In 1993, scab lesions were found on 'Prima,' a Vf-selection in an orchard in Germany (Parisi et al. 1993). Although 'Prima' was now susceptible to this race of scab, these isolates were not able to infect the resistant parent M. floribunda 821. These isolates were designated Race 6. One year later, inocula from an unlabeled *M. floribunda* was found capable of infecting *M. floribunda* 821, thereby identifying a new race of the pathogen, Race 7 (Roberts and Crute 1994).

Back in North America, we still only had five races of scab, none of which could infect our scab resistant apples. However, in a pathogen like scab, it was only a matter of time until new races would be identified. On May 18, 2007, Ryan Deford and I found scab on *Malus floribunda* 821 in the Old Hort Farm. Subsequent searches on resistant varieties like 'Williams' Pride,' 'Enterprise,' 'Prima,' 'Priscilla,' 'Scarlett O'Hara,' and 'GoldRush' has NOT revealed scab on these cultivars to

date. This would strongly suggest that Race 7, but not Race 6 is present in this orchard. Further work is currently underway to confirm this in the laboratory.

Nationally and internationally there is no doubt about the economic importance of reliably scab-resistant apple cultivars in both organic, and sustainable apple production. With the majority of resistant cultivars possessing single gene scab resistance from *M. floribunda* or *M. floribunda* '821' (Vf) we've created a situation where "all of our eggs are in only one basket." The reliance on a single Vf- gene for resistance in apples that are cultivated worldwide places tremendous pressure on the pathogen, and a likelihood that this gene would fail and infection would occur. This is evolution at work.

What does this mean for growers? In the absence of any spray, as is the case at the Old Hort Farm, the scab infection on *M. floribunda* 821 is significant in one of the driest years on record. The question regarding how widespread Vf breakdown is remains to be seen, but I have identified a scab-infected *M. floribunda* in Ohio that was previously reported as resistant for over thirty years. These two findings in two different states suggest that Race 7 is widespread, and not an isolated occurrence in Indiana.

What does this mean for the future of scab resistant apples? In looking to Europe, where they've dealt with this issue for almost 20 years, it's important to note that a few Vf- resistant cultivars ('GoldRush,' 'Reanda,' 'Regine,' 'Renora,' 'Resi,' 'Rewena' and 'Enterprise') remain uninfected and show clear resistance reactions to Race 6.

To date, cultivars like 'Nova EasyGro,' with another resistance gene, called Vr, derived from *Malus pumila* 'R 12 740 7A' have never shown any scab symptoms, whereas cultivars crossed with Va resistance from 'Antonovka' have only lightly sporulating lesions occasionally reported. Additional good news: The spread of Race 6 and 7 has not been rapid: In fact, in several locations in southern Germany, Vf-resistant cultivars remained free of infection, despite susceptibility of *M. floribunda* in regional apple genebanks. The various scab occurrences are presumably based on different race spectra in each location, including Race 6 in northern Germany and Race 7 in southern Great Britain. In other locations, the race spectrum is still being investigated. Races 1–5 are not yet able to break the scab resistance of Vf cultivars.

I would state that as of right now, the other shoe hasn't dropped—yet. However, for organic or sustainable apple production, it is essential to rigorously apply fungicides to prevent primary infection during key scab periods when the weather is cool and wet while the tissue is young and susceptible to infection. The simple, but conscientious application of one to three sprays to prevent primary infection in the spring should keep resistant cultivars free of scab for the entire season. To date, these minimal, or organic practices to control other diseases like powdery mildew and cedar-apple rust may have contributed to the preservation of scab resistance in these lines. This is the "glass is half full" view. Alternatively, the apples at the old Hort Farm, or Meig's, or areas surrounding known Race 7 infections, may have only escaped disease, and that scab is a matter of time, and that the time will be sooner rather than later. This would be the "glass is half empty" view. Being a pragmatist, I suggest we agree the glass has water in it, and keep an eye on things.

Good Agricultural Practices, Your Marketing Advantage

by Janet Eaton, Kentucky Department of Agriculture

Spinach contaminated with *E. coli* is recalled. A food poisoning outbreak is linked to tainted melons. Iceberg lettuce is suspected as the vehicle for an illness outbreak in Nebraska.

What does a producer do to reassure their customers that their produce is safe to eat? What steps do you take to reduce the chance for contamination on the farm?

To assist Kentucky producers and reassure Kentucky consumers, a partnership has been formed among the Kentucky Department of Agriculture, The Kentucky Department for Public Health and the University of Kentucky Cooperative Extension Service.

After researching science-based programs, the partnership identified simple steps Kentucky producers can take to greatly reduce the opportunity for their produce to become contaminated.

Proper manure handling, avoiding cross-contamination from on-farm livestock and wild animals, proper sanitation during harvest and packing, and close monitoring of the water used in all aspects of production are some of the key components of best practices. Part of the reason consumers want to buy locally is because they perceive that local food is safer.

During the spinach scare, farmers' markets reported heavy sales volume for local spinach. Consumers trusted the Kentucky farmers that they buy from every week.

We want to keep the credibility high for our local farmers' markets and on-farm stands by avoiding any incident of food-borne illness associated with Kentucky produce.

The voluntary Kentucky Good Agricultural Practices (GAP) program offered a one day workshop at the Kentucky Farmers' Market Summits where components of the best practices were explored.

With input from the producers who attended those workshops, the partners developed a three-hour curriculum for producers. In November 2007, Cooperative Extension agents will be offered a training-for-trainers class to prepare to take the information back to their producers.

Consumers are asking for assurances, and the certificates that participants will earn in this educational program may be displayed to show that producers are aware of the critical control points in their production system.

Producers who complete the educational program will be offered a kit to conduct a self-assessment of their production system. This kit walks producers through the various components of a good farm plan and gives them space to write out changes they want to make and formulate a time line.

Growers and marketers will also have the opportunity to obtain this training at the Kentucky Fruit and Vegetable Conference and Trade Show on January 8, 2008.

For more information on the Kentucky GAP program, visit our Web site at www.kyagr.com, click on Programs button, then click on the GAP link or contact Janet Eaton or Mac Stone with KDA at (502) 564-4983.

John G. Strang,
Extension Fruit & Vegetable Specialist

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