



Kentucky Fruit Facts

Research & Education Center

P.O. Box 469, Princeton, KY 42445

May 2000 (5-00)

Prepared by John Strang, Terry Jones, and Jerry Brown, Horticulturists; John Hartman, Extension Plant Pathologist; Ric Bessin, Extension Entomologist; Tom Priddy, Agricultural Meteorologist; John Strang, Editor, Marilyn Hooks and Karen Shahan, Staff Assistants

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

Fruit Crop and Weather Situation

The good news is that we are in fairly good shape with regard to moisture for agricultural crops right now. The northern jet stream has been high up in Canada and there is a Bermuda high off the east coast. This is providing us with warm temperatures and scattered thunderstorms which are producing about an inch of moisture a week. However, the long range forecast is for dry conditions beyond May.

As a side note, you have probably noticed that weather reports often differ between the newspaper and the weather channel. I talked with Tom Priddy about how a grower would obtain the most accurate and timely forecast. Since the local morning newspapers have to go to press the evening before, this forecast is based on the previous evenings forecast. So this is generally less accurate than the weather channel, because of the time factor. To get the most timely agricultural forecasts, log on to the Agricultural Weather Center at <http://www.wagwx.ca.uky.edu> and click on your county for the local forecast. This information is based on the latest national Weather Service forecast and is updated as soon as the forecast is issued.

I have been delaying my assessment of the April 9 freeze, because it was fairly variable and we have had cool wet pollination conditions, which also affect fruit set. This years bloom has been spread out over a very long period of time and growers have

generally found more surviving bloom on apple trees than they initially thought. Temperatures for Kentucky on the morning of April 9 ranged from a high of 30°F to unofficial lows of 20°F. This was a radiation freeze with a dew point well below freezing, but winds in the 5 mph range generally picked up around sunrise when the coldest temperatures were reached. Most peaches were in bloom and apple stages ranged from bloom to tight cluster. Critical temperatures for apple pink to bloom stages are 28°F for 10% kill and 25°F for 90% kill.

A grower phone survey indicates in Henry, Trimble, Boone, Campbell, and Kenton counties that there is little or moderate injury and most peaches and apples have crops. The worst injury was borne by the central portion of the state. Fleming, Bourbon, Scott and Fayette counties have some severe injury, but a crop on later blooming varieties. Henry, Casey, Powell, and Laurel counties have fairly severe crop losses also. Losses are severe in Pulaski county, but there is a light crop on later blooming varieties. In eastern Kentucky, specifically Breathitt and Harlan counties there is a good crop on most varieties. Injury in Warren county ranged from little or none to severe. Davies county has a peach and apple crop where protection was used. McCracken county and the Princeton Research Station in Caldwell county had little or no injury to apples or peaches. Graves county has some injury on apples, but generally a good crop.

Crop injury was generally less on good sites, although there were some exceptions. In the colder

areas blueberries, blackberries, and raspberries were generally not injured. Some grapes lost primary and a few secondary buds. Apple crop losses were most severe on early blooming varieties such as McIntosh, Cortland, Empire, Idared, Lodi, and Red Delicious, while the crop on later blooming varieties such as Jonathan, Melrose, York, Winesap, Cameo, Pristine, Suncrisp, Enterprise, Jonagold, Rome, Golden Delicious, and Honeycrisp, ranged from none to requiring thinning. Early blooming strawberries generally lost their primary and secondary flowers, but last seasons drought left poor plant stands in many fields. Pawpaws showed severe flower bud losses on most varieties in Franklin county. Most European and Asian pears, peaches, and plums were lost in colder areas, but there are a few light crops on exceptional sites.

The crop injury situation in Tennessee is very variable and similar to that in Kentucky. Illinois generally has a good fruit crop. Southern Indiana has severe injury as does southern Ohio.

Disease pressure is severe on apples for scab, cedar apple rust, and powdery mildew this season. We have had numerous scab infections this spring. In the Lexington area we have had 2 severe, 2 moderate, and many light infections. In Princeton we have had 2 severe, 1 moderate and many light infections. Lexington has not had a single fire blight infection, while Princeton had an infection April 20th. In Lexington there were a number of heavy cedar apple rust infection periods and lesions are beginning to show up on the leaves. Powdery mildew is severe on susceptible varieties such as Jonathan and Rome, due to our mild winter where a good spray program was not maintained. We have seen lots of orange rust on susceptible blackberries and raspberries.

This looks like a heavy year for codling moths. We hit the first biofix threshold for codling moths on May 2nd and 3rd at two locations in Lexington. The normal pheromone trap threshold to begin accumulating degree days is 5 moths captured in a week. At one location we caught 30 in a week! In Lexington codling moth sprays should have been initiated on May 16. With this heavy trap catch a second insecticide spray will be needed when the first insecticide treatment wears off. Growers should be using black electrical tape placed sticky side out around a few limbs in trees that are known to have San Jose Scale to monitor for crawlers. When the yellow dust size crawlers are noted stuck to the tape it is time to spray for these.

(Strang, Bessin, Hartman, Jones, Priddy)

Meetings

May 19-20 - Gourd Classes, First Baptist Church (May 19) and Sixth Annual Kentucky Gourd Show, First Baptist Church, 101 West Main Street, Taylorsville, KY (May 19-20). Contact Spencer County Cooperative Extension Office 502/477-2217 or E-mail klilly@ca.uky.edu

June 5-7 - Heartland Wine School, Ohio State University, Columbus, OH. The Heartland Wine School is a joint project of Purdue University, Michigan State

University, and the Ohio State University and was created in response to requests for a regional opportunity to train winery personnel in classic wine making principles. Extensive tasting sessions will complement the presentations. Register early (\$250/person) to be sure your place is guaranteed - space is limited and will be allocated on a first-come-first-serve basis. To obtain a registration packet contact Roland Riesen, OARDC, Department of Horticulture & Crop Science, 1680 Madison Ave., Wooster, OH 44691. Phone 330/263-3685. E-mail: riesen.1@osu.edu

Jun. 22 - Commercial Apple IPM and Blackberry Production Meeting, Billy Reids Orchard, 4818 Kentucky 144, Owensboro, KY, mkt. phone 270/685-2444. This will be an excellent opportunity for growers to see an outstanding high density apple planting and to learn how to prune and train trees to this system. See program and directions below.

Jun. 24 - Kentucky Vineyard Society Summer Meeting, Equus Run Vineyards, 1280 Moores Mill Rd., Midway, KY. Contact Cynthia Bohn 859/846-WINE, Fax 859/269-0541.

Jun. 24-27 International Dwarf Fruit Tree Summer Tour, Quebec, Vermont, and New York. Full details can be found on the IDFTA web site, <http://www.IDFTA.org>

Jul. 1 - Central Kentucky Harvest Festival, Phoenix Park (near the downtown public library), Lexington, KY The Harvest Festival will be held in conjunction with the Lexington 4th of July festivities. Contact Sue Weant 859/233-3056. Please note the Producer Reservation Form below.

Producer Reservation Form CENTRAL KENTUCKY HARVEST FESTIVAL July 1, 2000

Market/Farm Name: _____

Contact Person: _____

Address: _____

Phone No: _____ FAX No: _____

E-mail: _____

Products available in July: _____

For more information, call: 606-233-3056 OR email: msdweant@aol.com
Please make \$25 check payable to Partners for Family Farms

Return \$25* reservation with this form to:
Sue Weant, Partners for Family Farms
PO Box 22259, Lexington KY 40522

* This includes space and one table.

Jul. 20 - University of Kentucky Research and Education Center All-Commodities Field Day, Princeton, KY. Contact Jim Herbeck 270/365-7541.

Sep. 21 - Grapes, Berries, Tree Fruits; Pawpaw Production and Tasting, Kentucky State University Farm, Frankfort, KY. Contact 502/564-5871.

Jan. 8-9, 2001 - Annual Fruit and Vegetable Grower Meeting, Holiday Inn North, Lexington, KY. Contact John Strang 859/257-5685.

Commercial Apple IPM and Blackberry Production Meeting, June 22

Billy Reid's Orchard, 4818 Kentucky 144, Owensboro, KY, Mkt. phone 270-685-2444.

Directions

Upon entering Owensboro, take the US 60 By Pass to the right (east). The By Pass ends at US 60 East; turn right. After approximately two or three miles, KY 144 Y's off to the right. Take KY 144 for one half mile; Reid's Orchard is on the right. (Refer to map at end of article.)

Program

10:00 A.M. CDST Discussion led by John Schlei, President of the Kentucky State Horticultural Society.

10:15 High Density Apple Tree Training, Spraying, Weed Management and Frost Protection
- Billy Reid and John Strang

11:15 Apple Disease Situation - John Hartman

11:35 Apple Insect Management - Ric Bessin

Noon

It is not the responsibility of the meeting host to pay for the meal! Lunch will be available at cost for those that preregister. The cost will be in the \$6.00 range. **Please preregister for lunch by calling Mary Ann Kelley at 270/365-7541 ext. 216 between 8:00 AM and 4:30 PM CDST weekdays by June 20 and give her a count for the Apple IPM meeting at Reids's Orchard.**

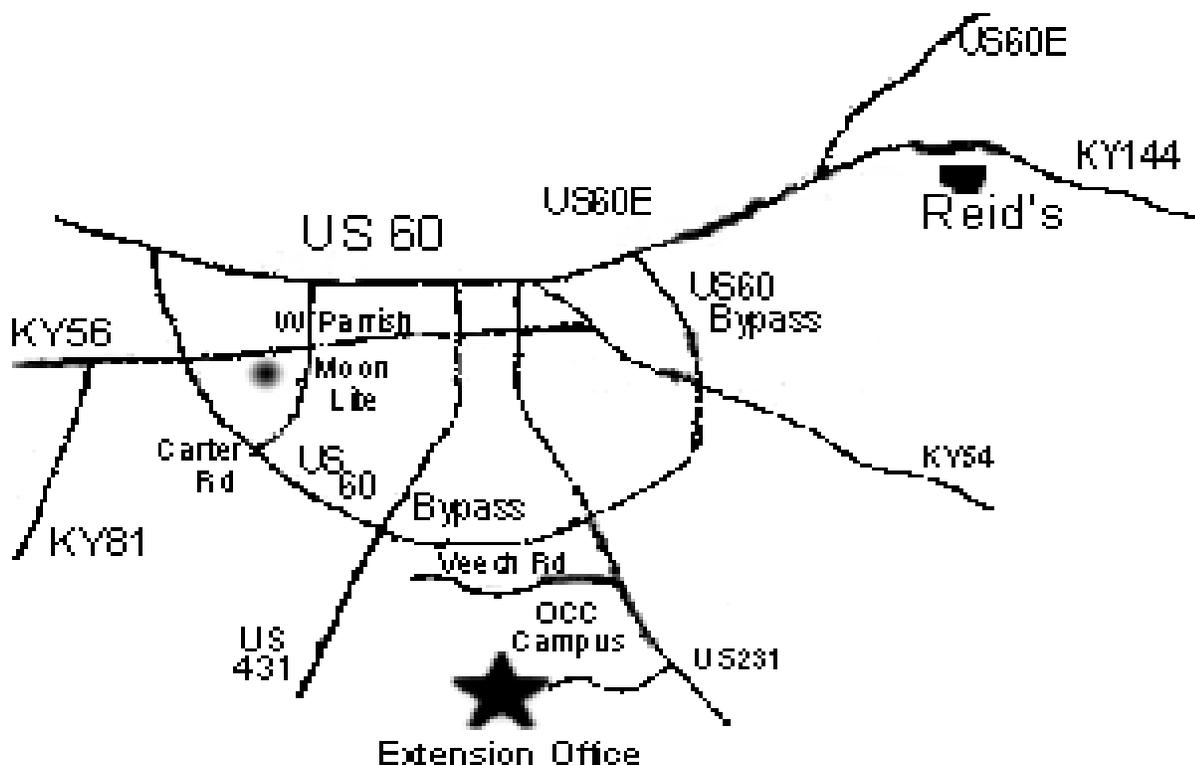
12:30 pm Apple Harvest and Food Safety
- Joe O'Leary

1:00 At this time the group will split and those that wish to continue talking about high density apple production will go back to the orchard while the second group will talk about blackberry production.

Blackberry Varieties and Culture
- John Strang

2:00 Blackberry Disease Management
- John Hartman

2:20-2:40 Blackberry Insect Management



- Ric Bessin

Questions? John Strang 606/257-5685.

All UK Cooperative Extension Service Meetings are open to everyone.

Assessing the Apple Crop and Reducing the Spray Schedule

The freeze and poor pollination conditions have presented many Kentucky apple growers with the problem of determining whether spraying their trees will be profitable. In many cases slight variations in elevation in the orchard have made a big difference in crop load. We are now through most of the fruit drop period and crop load is becoming easier to assess.

Growers should evaluate their orchards in some cases on a tree by tree basis to determine if the crop load is worthy of a full season spray schedule. A tree with a full crop will have an apple approximately every 6 inches on the limb. Keep in mind that frost injured trees will generally have most of the crop in the tops of the trees. This is a seat of the pants estimate, because we don't have any figures on the percent of crop necessary to show a positive return.

Colored surveyors tape can be used to mark trees or blocks to make a rapid tractor seat assessment of which trees should receive a reduced spray program or a full season program while spraying.

The following lays out a reduced disease and insect spray program for trees that lack a commercial crop.

Disease Control

The April 9 Sunday morning, freeze left some growers with little or no crop in certain apple varieties. There may be a temptation to leave crop-less varieties unsprayed for the rest of the season. In the past, when growers have chosen not to spray fungicides due to crop loss, severe apple scab defoliated the trees and it took two years for the orchard to recover from the devastation.

Apple scab - In unsprayed scab-susceptible apple trees, apple scab disease is very severe in many Kentucky locations. Both of our plant disease diagnostic laboratories are receiving numerous apple scab specimens. Be aware that scab spores could come into your orchards from nearby crabapples and abandoned apple trees.

For orchards with no crop, growers will still want to prevent scab from becoming established because it can defoliate the trees and reduce flower bud formation for next year. Thus, 1) Continue regular scab sprays through the first cover period, and if there are no infections observed, consider the possibility to quit

spraying for the season. 2) Carefully observe the orchard for the rest of the spring and early summer, and apply fungicide if an outbreak is noticed, possibly from

scab spores that might come in from nearby flowering crabapples or abandoned apples.

Fruit rots - There will be no need to apply fruit disease sprays past the primary scab infection time if there is no crop. However, many of the fruit rot fungi also cause twig and branch cankers. If the orchard is at risk for such cankers (by being grown under stressful conditions), canker prevention sprays may be helpful.

Insect Control

For those orchards that will not have much of a crop this year, money can be saved by reducing insect control inputs. Basically, controls that were just to protect the fruit such as codling moth and plum curculio sprays are not needed and can be dropped. Below are listed the key pests and their need for control on trees without a crop.

Codling moth - No need to control

Plum curculio - No need to control

Apple aphids - No need to control

San Jose scale - Control as you would in a normal year. This pest does do damage to the tree and it is more difficult to reduce its numbers once it builds to damaging levels. Growers need to monitor with sticky tape and treat with Lorsban when appropriate.

Leafhoppers - No need to control except for potato leafhopper on young trees. Potato leafhopper causes a yellowing then browning of the leaf margins, whereas the other leafhoppers cause a white flecking on the leaves.

Mites - Mite problems should be lessened with a reduced spray program. They may need control only if they become severe by mid summer.

Japanese beetles - Control these on young trees if necessary.

Borers - With the drought last summer, and the possibility of one this summer, growers should watch for flat-headed apple tree borer activity. Like many tree borers, they seek out stressed trees. The drought last year stressed many orchards. For a list of borer sprays, see ID-92. (Hartman, Bessin, Strang)

Dr. Jerry Brown Retires as Extension Fruit Specialist

Retiring from a job I really like brings on mixed feelings. I've enjoyed very much the 20+ years of working with Kentucky fruit producers, and other friends. I was very lucky to get to visit with you while being part of the UK College of Agriculture Extension team. However, I have come to two conclusions:

1. I have too many other things I want to try.

2. It is time to make way for someone younger with new and better ideas to assist agents and growers in exploring horticulture opportunities.

March 31 was my final day as a full time Extension State Specialist. Kentucky has been very good to Mary and I. We expect to stay here and spend more time spoiling the grandchildren, traveling, fishing and gardening.

I expect to stay active in Kentucky horticulture and so will see you at meetings or in the field. I appreciate all of you and consider you my friends.

Thanks again for making my work enjoyable with the Kentucky fruit industry. I have had a ball.
Jerry Brown

Phillip Craft, Kentucky State Apiarist

On June 1, 1999 Kentucky Commissioner of Agriculture Billy Ray Smith employed Phillip Craft as the Kentucky Department of Agriculture's State Apiarist. The mission of the State Apiarist is the prevention and control of disease in Kentucky apiaries (honey bee yards). In recent years Kentucky's beekeeping industry has suffered significant economic loss due to diseases and pests. The State Apiarist aids beekeepers by assisting them in the prevention, identification and treatment of honey bee diseases and pests. Phillip will also work with fruit and vegetable growers to aid in locating beekeepers that rent hives for pollination purposes. Phillip can be contacted by phone at 502/564-4870, FAX 502/564-5699.

Apogee® Cleared for Use on Apples in Kentucky

Apogee is a plant growth regulator manufactured by the BASF Corporation that received a federal and Kentucky state label on April 27, 2000. This compound reduces vegetative growth, allowing a balance between canopy development and fruit production. It reduces both summer and dormant pruning, reduces June drop, improves light penetration

into the tree and improves red color of red varieties. Apogee can also be used along with blossom blight sprays and good sanitation practices as part of a total integrated pest management strategy to control fire blight of shoots.

The active ingredient, prohexadione calcium, makes the new shoot growth less succulent reducing the incidence and severity of fire blight. Apogee is not a bactericide and does not control blossom blight. For maximum reduction of fire blight susceptibility, it should be applied at least 10 days before weather conditions become favorable for shoot fire blight infection. The decrease in fire blight susceptibility does not occur until at least 10 days after application.

Apogee inhibits the biosynthesis of gibberellin, which is a plant hormone that controls cell elongation. This inhibition of cell elongation thus reduces shoot growth. Growth suppression by Apogee lasts from 2 to 5 weeks per application. It does not affect vegetative growth the following year. The best application time is when there is 1-3 inches of new shoot growth and additional applications can be made to prolong the inhibition.

Apogee should be applied with a standard non-ionic spray adjuvant such as Regulaid. If the water source is hard and contains high levels of calcium carbonate, one pound of ammonium sulfate may be added for each pound of Apogee to avoid plugging nozzles. Apogee should not be applied with calcium sprays or through irrigation systems. It is compatible with many insecticides and fungicides and is rainfast 8 hours after application. The reentry interval is 48 hours and the preharvest interval is 45 days.

This product is packaged in 5 pound bottles. The rate of use depends on tree vigor, fruit load and whether single or split applications are used. For more information on Apogee visit <http://www.apogee.basf-corp.com> (Strang)

Guthion Reentry Interval Clarification

Please note the reentry intervals based on orchard activities that are on the 2000 Guthion solupak label.

Hand thinning	14 days
Hand harvesting	14 days
Propping	48 hours
Mowing	48 hours
Irrigating	48 hours
Scouting	48 hours
Other activities including summer pruning	48 hours

(Strang)

COOPERATIVE EXTENSION SERVICE
U.S. DEPARTMENT OF AGRICULTURE
UNIVERSITY OF KENTUCKY
COLLEGE OF AGRICULTURE
LEXINGTON, KENTUCKY 40546

AN EQUAL OPPORTUNITY EMPLOYER

**BULK RATE
POSTAGE & FEES PAID
USDA
PERMIT No. G268**

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

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 Majordomo list processor.

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

To subscribe type "majordomo194@ca.uky.edu" 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 fruitfacts  
end
```

Or, to unsubscribe, the lines:

```
unsubscribe fruitfacts  
end
```

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-fruitfacts@ca.uky.edu

John Strang, Extension Horticulturist

