



Kentucky Fruit Facts

Research & Education Center

P.O. Box 469, Princeton, KY 42445

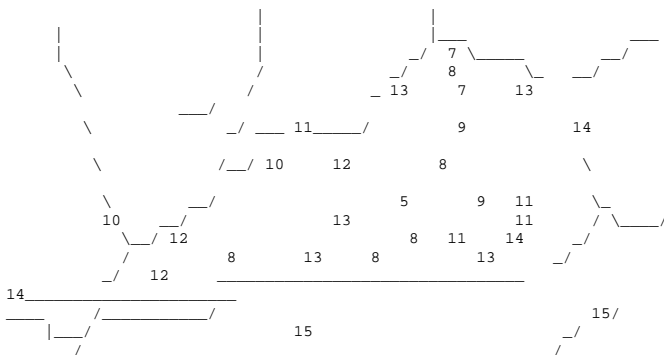
April 1998 (4-98)

Prepared by John Strang and Jerry Brown, Extension Horticulturists; John Hartman, Extension Plant Pathologist; John Strang, Editor, Marilyn Hooks and Elizabeth Griffin, Secretaries

<http://www.uky.edu/Agriculture/HLA/> follow the link to Extension Programs & Publications and click on Fruit Facts.

Fruit Situation

The minimum temperatures sustained in Kentucky for the morning of March 12 can be found in the following figure. Our assessment as of April 4 is that there is essentially little or no damage to apples, pears, tart cherries, grapes, blackberries, strawberries, and blueberries. We are not sure about June bearing raspberries. The crop was lost on Oriental plums and some European plums and Asian Pears. Damage to peaches was variable between cultivars and sites and there seems to be a little more injury than was initially thought due to subtle pistil injury. However, Kentucky and Illinois growers still feel that they have peach crops. Some growers in Tennessee lost their peach crops. (Strang and Brown) Minimum Air Temperatures ($^{\circ}$ F) for the morning of March 12, 1998 from local weather stations:



Meetings

Apr. 25 - Kentucky Nut Grower's Association Meeting, Hardin County

Educational programs of the Kentucky Cooperative Extension Service serve all people regardless of race, color, age, sex, religion, disability, or national origin.

UNIVERSITY OF KENTUCKY, KENTUCKY STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND KENTUCKY COUNTIES, COOPERATING

Extension Office, Elizabethtown, KY, phone 502/765-4121. Meeting begins at 10:00 a.m. EST and includes a graft wood exchange and a plant auction. Contact Jim Durrell, 502/875-5691.

May 20 - Commercial Apple IPM Meeting, Schlei's Orchard, Hopkinsville, KY. See program below.

Jun. 6 - Beginning Beekeeping Workshop, Getting Started Session 2, 1:00 to 4:00 pm, Kentucky State University Farm, Frankfort, KY. This session will emphasize mites, diseases, pests and swarm control. Beekeeping techniques will be demonstrated and hives will be opened, weather permitting. Bring your bee veil! Contact Tom Webster 502/227-6351.

Jun. 14 - Kentucky Herb Festival, Lakeview Park, Frankfort, KY. Contact Sue Clifford 606/234-1452.

Jun. 23-26 - Kentucky's Fruit Industry Tour of Ohio. See article below. Contact Jerry Brown 502/365-7541 ext. 204 or John Strang 606/257-5685.

Commercial Apple IPM Meeting, May 20

Schlei's Orchard, Owner John Schlei, 6175 Sisk Lane, Hopkinsville, KY.

Directions

Coming from the North: From Western KY Parkway take Pennyriple Parkway South, Continue on Pennyriple Parkway to Exit 12 (Bypass 1682) - First Hopkinsville Exit, Take 1682 West (left to US 68/80 West), Go 3.4 Miles - Turn left on Petsch Lane

(Petsch Lane is first paved road on left past cemetery), Go 1 mile-turn right on Sisk Lane. Orchard is 3/10 of a mile on Left.

Coming from the East: Take US 68/80 West to Hopkinsville (Going toward Cadiz), Petsch Lane is approximately 4 miles, Turn Left on Petsch Lane, Go 1 mile-Turn Right on Sisk Lane. Orchard is 3/10 of a mile on Left.

Coming from the West: Take 68/80 East to Hopkinsville, travel through Gracey 4.5 miles to Petsch Lane, turn right on Petsch Lane, Go 1 mile-turn right on Sisk Lane. Orchard is 3/10 of a mile on Left.]

Program 9 am-2:30 PM Central time
9:00 Orchard Tour - John Schlei
9:30 Apple Round Table Discussion led by Don Haney, President, Kentucky State Horticultural Society.
10:30 Pumpkin Production, Varieties, Weed Control and Equipment - John Strang
10:50 Pumpkin Insect IPM - Ric Bessin
11:10 Pumpkin Disease IPM - John Hartman
11:30 Marketing Apples and Pumpkins - Dale DePoyster
11:40 Pumpkin IPM Demonstrations - Chris Smigell
Noon Lunch will be available at cost for those that preregister. The cost will be in the \$6.00 range.
Preregister by calling Mary Ann Kelley at 502/365-7541 between 8:00 AM and 4:30 PM CDST weekdays before May 18 and give her a count for the Apple IPM meeting at Schlei's Orchard.
12:30 Apple Thinning and Apple Cider Update - Larry Van Dyke and Jerry Brown
12:50 (In the orchard) Disease Situation - John Hartman
1:10 Scale and Insect Control - Ric Bessin
1:30 Foliar Analysis - John Strang
1:50 Foliar Analysis Sampling and Foliar Analysis Program Sign Up - Chris Smigell
2:00 Management First for Apple IPM - It really works! - Steve Isaacs
Questions? Contact Jerry Brown 502/365-7541 Ext. 204 or John Strang 606/257-5685.
All UK Cooperative Extension Service Meetings are open to everyone.

Ohio Agriculture Research & Development Center. Not only is this a great opportunity to see other fruit plantings, this is also an opportunity to visit and share ideas with others in the fruit industry and Cooperative Extension personnel from Kentucky and surrounding areas. Our hosts are going all out to make this an enjoyable experience.

The tour is a 2-night, 3-day tour. The tentative schedule and stops are listed below.

Tuesday, June 23, 1998

Central time

6:15 AM -Bus leaves Southern Kentucky Bus Lines, 125 Dishman Lane, Bowling Green, KY*

All following times are Eastern time

8:30 AM - Bus leaves, 70 miles later, Hardin County Extension Office, 201 Peterson Drive, Elizabethtown, KY 42701-9379. Phone: 502-765-4121; Fax: 502-769-0426. Rest stop and board bus,*

11:30 AM -135 miles later, The Mall, Burlington, KY. Lunch, 45 minutes.

12:15 PM -Leave the Mall

12:30 PM -2 miles - Boone County Extension Office, P. O. Box 876, Burlington, KY 41005-0876. Phone: 606/586-6101; Fax: 606/586-6107; Rest stop and final boarding*.

1:15 PM - 30.9 miles - Beiersdorfer Orchard, Guilford, Indiana. This is an active orchard with a one-year-old Thermaline pasteurizer.

3:00 PM - Leave Beiersdorfer Orchard.

4:30 PM - 56 miles - Valley Vineyards, Morrow, Ohio. Tour 45 acres of French Hybrid and vinifera grapes, winery, (they make ice wine), wine tasting and dinner.

6:30 - Dinner is strip sirloin, salad,

7:30 PM. potato, dessert, beverage. Tax and tip is included in tour registration fee. After dinner, board bus for one hour drive, 75 miles to Exit 100, Best Western Executive Inn, Grove City Ohio.

Kentucky's Fruit Industry Tour of Ohio

June 23, 24 & 25, 1998

The Kentucky State Horticultural Society, The Kentucky Vineyard Society, and the University of Kentucky Extension Service have developed a tour of the Ohio fruit industry June 23, 24 and 25 by chartered bus. June 24 is a fruit field day at The Ohio State University

Wednesday, June 24, 1998

Breakfast

8:00 AM -Leave motel - 107 miles.

9:30 AM -Arrive OARDC (Registration fees included in tour fee). Lunch can be purchased at the field day. Tour re-search activities that include, apple rootstock trials, peach rootstock trials, apple cultivar trial, Agricultural Engineering research plots, grape cultivar trial (vinifera and French hybrids), wine and cider research including pasteurizer, pear selections, small fruit entomology research, plant pathology research in tree and small fruits and pesticide application re-search. Late PM dinner and board bus for 43 mile trip to The Emmett Dan House Hotel, Mt Vernon, Ohio.

Thursday, June 25, 1998

Breakfast

7:45 AM -Leave motel

8:30 AM -23 miles later - Lynd Fruit Farm, Pataskala, Ohio. This is a very progressive fruit farm with good PYO and retail trade. Mitch Lynd is a leader in the fruit industry and is taking an active role in obtaining funding for cooperative fruit industry, university research.

10:30 AM Leave Lynd Fruit Farm.

Lunch

12:30 PM 92 miles - Dale Stokes Fruit Farm. An outstanding berry farm with black raspberries and red raspberries. If black raspberries are ripe (average year they ripen June 20) we will view a mechanical raspberry harvester. In addition to operating a first class fruit farm, Dale Stokes is taking the lead in developing an midwestern raspberry production and marketing organization to coordinate supply with increasing demand in an orderly manner.

It is possible that this organization may wish to include Kentucky producers.

2:30 PM - Leave Dale Stokes Fruit Farm.

4:00 PM - 69 miles - Boone Co Extension Office, Burlington, KY.

* Free parking is available, at your own risk.

Registration is \$142 per person if received before May 5 and includes bus transportation, dinner at Valley Vineyards, and registration fees for Field Day. Registration received after May 5 is \$160/ person. If there is a sufficient number registered by May 5 to cover the cost, the checks will be deposited to the Kentucky State Horticultural Society Account. Advance registration can be canceled with a full refund prior to May 5. After May 5 deposits of those who must cancel (if any) will be held until the completion of the tour. If income then exceeds expenses, refunds or prorated re-funds will be made. Since KSHS agreed to

underwrite the trip, income over expenses, if any, will be KSHS's.

NOTE: Registration covers only bus transportation, dinner at Valley Vineyard and registration for the OARDC Ohio Field Day. You are responsible for all other costs, such as other meals, lodging and incidentals. The motels were suggested by Ohio State Extension personnel and rates are listed below. We will reserve rooms, as requested, and you will pay for the motels upon arrival.

June 23 - Best Western Executive Inn
quoted rates include continental
breakfast. (Bob Evans is across
the street)

\$57.77 including tax for one person/room

\$68.23 including tax for two people/room

June 24 - The Emmett Dan House Hotel
quoted rates, including choice of
continental or buffet breakfast.

\$52.30 including tax for one person/room

\$57.77 including tax for two people/room

See registration form on last page.

If you have questions, call Jerry Brown,
502/365-7541, ext. 204 or John Strang,
606/257-5685.

Strawberry Gray Mold

Gray mold, caused by the fungus *Botrytis Gcinerea*, is the most devastating fruit rot of strawberries in Kentucky. The disease is favored by our typically moist spring weather. Infected fruits develop a soft, brown decay which becomes covered with gray, dusty-looking fungal growth and spores on ripening berries.

Botrytis survives the winter in dead tissues of strawberry and many annual weeds. Spores, carried by air currents, infect strawberry flowers and fruits in wet weather. Gray mold is more severe in shaded areas or areas where air movement is poor. Berries touching the soil, or diseased berries are most commonly infected. Spores of the gray mold fungus spread easily during and after harvest and bruised berries can become rapidly infected. Baskets of harvested, seemingly healthy berries can become rotted and moldy within 48 hours.

Evaluation of calcium chloride for Botrytis gray mold control. A report of research done on this topic at Ohio State University was recently published. The research group, headed by Dr. Mike Ellis, was testing the hypothesis that sprays of calcium applied to strawberry foliage and flowers might reduce fruit rot. Calcium is an important component of the cement in the cell walls which bind together the strawberry fruit cells, so it was thought that additional calcium might make these walls stronger and more decay resistant.

The results of their field studies showed that foliar applications of calcium chloride did not significantly reduce the incidence of Botrytis gray mold at harvest or during post-harvest storage when compared to untreated strawberries. Foliar applications of Ronilan plus captan applied on the same schedule as the calcium chloride did significantly reduce gray mold fruit rot compared to the untreated plots.

Thus we are not recommending application of calcium chloride for Botrytis gray mold fruit rot control. (Hartman)

Gray mold disease management.

- * Choose a planting site with good air movement and sun exposure.
- * Avoid crowding the plants and producing excessively dense foliage due to over-fertilization with nitrogen. Control weeds.
- * Use straw or other mulching material between the rows so berries will not touch the soil.
- * Avoid overhead sprinkler irrigation or use it early in the day so plants and foliage can quickly dry off.
- * Avoid bruising the fruit during harvest; remove rotted berries; refrigerate berries after harvest.
- * During renovation, mow off old leaves to reduce survival of the fungus.
- * Use fungicide sprays during bloom which is when they are most effective. Fungicides such as Benlate, Topsin-M, Rovral, and Ronilan should never be used by themselves, but are excellent for gray mold control when used in combination with Captan or Thiram.

Orchard Floor Management

(Teryl Roper, UW Extension Horticulturist)

Most apple growers know that to maximize yields they must not allow weeds, especially grasses, to compete with their trees. Most growers are able to apply a single herbicide treatment in the spring. However, by mid to late summer the herbicide treatment is long gone and weeds are again encroaching on the trees. Growers wonder whether weeds are competing with fruit development by this late in the season.

Recent research from Cornell University has shown that the timing of weed control in apple orchards can have significant effects on tree vigor, yield and fruit size. The research was conducted on young Gala/M.26 trees. A combination of 9 weed control timings and 4 weed control areas were examined. Weeds were controlled with a single application of Gramoxone at the beginning of the months indicated.

During the early years of the trial

the timing of weed control was the most important factor. Early weed control was the most important to obtaining good tree growth. Figure 1 shows the relationship between trunk cross sectional area (TCSA) and the timing of weed control. The best control was obtained when weeds were controlled during May through July. The second best treatment was May and June. Surprisingly, weed control in May was equal to weed control of June through August.

The trees produced their first crop in 1993. Again, early weed control was most important in encouraging fruitfulness. Weed control in May through July was best, followed by May and June or June through August (Fig. 2).

Weed control in only June or July did not encourage fruitfulness.

There was not a great effect on weight per fruit. Weed control in only June or July produced fruit that was similar to the weedy control (Fig. 3). Almost any weed control would produce fruit that were larger than the control.

The area of weed control was also important. When weeds were not controlled there were almost no fruit. When even a small area around the trees was kept weed free far more fruit were produced (Fig. 4).

This research is very important for apple growers. It shows that it is most important to control weeds early in the season. If you can only get on a single herbicide application, apply it in May and tank mix a post emergent herbicide (Roundup, Gramoxone) with a pre-emergent herbicide (Princep, Karmex, Surflan, Solicam, Sinbar). This combination should provide weed control into July. After that if you have time a second application could be made. However, if you are unable to make a second application the most critical time for weed management will be past and the least amount of competition will have occurred.

The worst possible situation is to have weeds (especially grass) growing right up to the tree trunks. Mowing close will help, but won't completely eliminate the competition. Even a single herbicide application per year, when properly timed, is better than no application at all. (The material in this article was taken from research conducted by Ian Merwin at Cornell University.)

Apple Bits

You may want to use this health information in your advertising program. Remember the old saying, "an apple a day helps keep the doctor away"? Well, a new study alters the adage a little: "an apple a day helps keep heart disease and stroke away." Eating fresh fruit daily appears to significantly reduce the risk of dying from heart disease, stroke and other causes before age 80, according to a study published in the British Medical Journal last October. Scientists at Oxford University's Imperial Cancer Research Fund found that people who ate fresh fruit daily had 24 percent fewer heart attacks, 32 percent fewer strokes and 21 percent fewer deaths from all causes compared with those who did not.

Receiving Fruit Facts Electronically on the World Wide Web

Fruit Facts is now available on the web. To get notification of the monthly Fruit Facts posting automatically and approximately two weeks earlier than it would be received via mail, you can subscribe to the UK College of Agriculture's Almanac Server.

To subscribe, send an e-mail message to "almanac@ca.uky.edu". Be sure that your from: address is correct. The body of the message must contain the line, "subscribe fruitfacts" with a blank line after it, nothing more.

To unsubscribe, send an e-mail message to "almanac@ca.uky.edu." The body

Figure 3. The effect of weed control during different months of the year on weight per fruit of young apple trees.

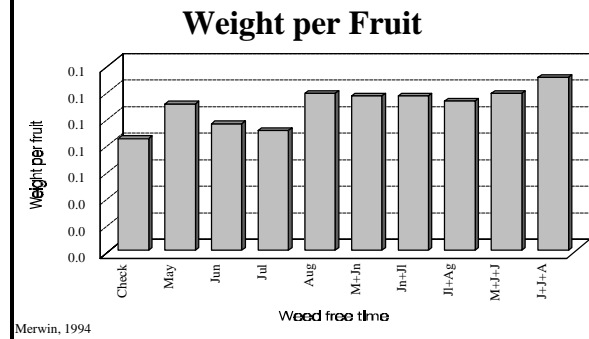


Figure 4. Effect of area of weed control on fruit yield per tree of young Gala apple trees.

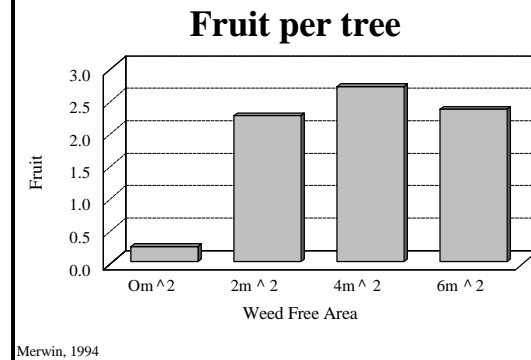


Figure 1. Effect of weed control during different months of the year on trunk cross sectional area of young apple trees.

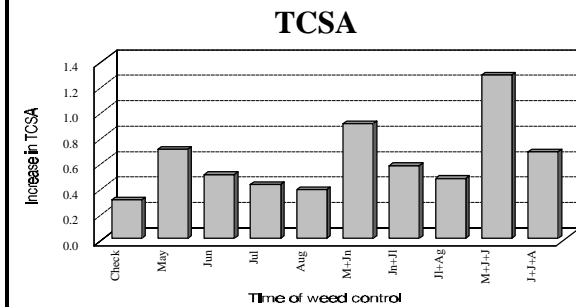
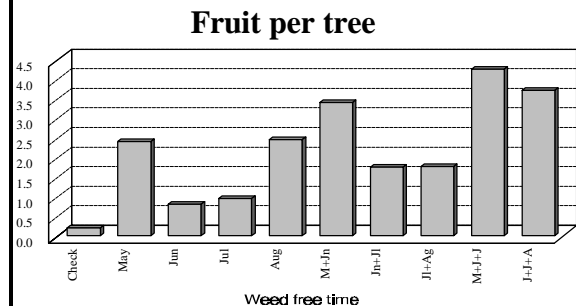


Figure 2. The effect of weed control during different months of the year on fruit number per tree of young apple trees.



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John Strang,
Extension Horticulturist

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Registration for Kentucky's Fruit Industry Tour of Ohio

Name _____

Address _____

Day phone _____ Night phone _____

I want to board the bus at:

Southern Kentucky Bus Lines, 125 Dishman Lane, Bowling Green, KY _____

Hardin County Extension Office, Elizabethtown, KY _____

Boone Co. Extension Office, Burlington, KY _____

I prefer a: Smoking ____ Non-smoking ____ room.

I wish to share a room. Yes ____ No ____ Roommate's name _____

Please assign me a roommate _____

Enclosed is a check for transportation, dinner at Valley Vineyard, and registration fees for Field Day.

A. \$142 per person if received prior to May 5 _____.

B. \$160 per person if received after May 5 _____.

Please make check payable to: Kentucky State Horticultural Society

Mail payment to: 1998 Horticulture Tour, UK Research & Education Center, P.O.Box 469, Princeton, KY 42445-0469

