UNIVERSITY OF KENTUCKY
COLLEGE OF AGRICULTURE
Lexington, Kentucky 40546

COOPERATIVE EXTENSION SERVICE

Kentucky Fruit Facts

Research & Education Center
P.O. Box 469, Princeton, KY 42445

July
1998 (7-98)

Prepared by John Strang, and Jerry Brown, Extension Horticulturists; John Hartman, Extension Plant Pathologist; Ric Bessin, Extension Entomologist; 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

In general the apple crop looks good and early varieties are being harvested. Fruit are sizing well due to the more than generous rains in June and fruit finish is generally good. Several growers have experienced hail storms.

The 1998 season has generally not been too bad for insects. High early spring rosy apple aphid levels experienced this spring in some orchards are becoming more evident on the fruit. Japanese beetles have emerged and levels are relatively high in the western Kentucky counties along the Ohio River, particularly from Daviess to Carlisle. Growers using pheromone traps for codling moth should have changed their lures July 1. When five codling moths are caught in one week, begin counting degree days. A codling moth spray should be applied when 250 growing degree days have accumulated or approximately 5 to 7 days after the fifth codling moth is caught. Watch for mites! Most growers have not had much of a problem with mites this year, because of all the rain, but hot July weather is ideal for mite population growth. Treatment is warranted if the threshold of more than 7.5 mites per leaf is reached.

This has been a good year to test the effectiveness of apple scab spray programs. Apple growers that experience excessive apple scab infections this season should reevaluate their spray programs. We are seeing some frogeye leaf spot, but levels have not been excessive. There is very little fire blight.

Remember that July is the month for taking apple foliar analysis samples.

Most strawberry growers have renovated their plantings. Growers with higher levels of leaf diseases have been encouraged to mow their foliage off in the renovation process to get rid of this inoculum.

Blackberries are now being harvested across the state and size is excellent.

We now have most of our fruit and vegetable publications up on our horticulture department home page under Extension programs & Publications. (Strang, Brown, Bessin and Hartman)

Meetings

Jul. 16 - University of Kentucky All Commodities Field Day, UK Research and Education Center, Princeton, KY. This year's field day offers something for everyone. There will be over 40 educational exhibits under the big tent, youth activities, and home economics taste testing and displays. There will be 18 walking, wagon, and bus tours, which will run continuously throughout the day. There will be an Ornamentals/Small Fruit Tour and an Orchard/Vineyard Tour. Contact Lloyd Murdock 502/365-7541 ext 207.

Jul. 16-19 - International Herb Association Annual Conference, "Herb Smart Day" open to the public, July 19. Contact International Herb Association 847/949-4372, www.herb-pros.com.

Jul. 22-24 - 23rd Annual Meeting American Society for Enology and Viticulture, Eastern Section, Crown Plaza Hotel, Grand Rapids, Michigan. Contact Ellen Harkness 765/494-6704 or Harkness@foodsci.purdue.edu

Jul. 25 - Beginning Beekeeping Workshop, Getting Started Session 3, 1:00 to 4:00 P.M. Kentucky State University Farm, Frankfort, KY. This session will emphasize honey harvesting and preparation for winter. Beekeeping techniques will be demonstrated and hives will be opened to remove honey, weather permitting. Bring your bee veil! Contact Tom Webster 502/227-6351.

Aug. 8 - Kentucky Gourd Association Fall GED Meeting, Ohio County Extension Office, Hartford, KY. 9am-3pm, Tentative classes: Basket weaving; Painting for Halloween; Erecting an arbor from start to finish; Harvesting, storing and drying gourds; Making storage bins; and Marketing your crafts. Contact Janet Barnett 502/477-8543 or CeCe Thomas 502/298-3093.

Sept. 6 - Central Kentucky Harvest Festival, Noon to 6:00 P.M., The Red Mile, Red Mile Rd., Lexington, KY.

Sept. 13 - Ohio Valley Harvest Festival, Noon to 6:00 P.M., Riverfront Plaza/Belvedere, Louisville, KY.

Sept. 24 - Commercial Apple IPM/Pumpkin Meeting, Dale DePoyster Orchard, Big Clifty, KY.

Jan. 4-5 - KVGA/KSHS Annual Meeting, Holiday Inn

North,1950 Newtown Pike, Lexington, KY.

Raised Beds Are Best For Raspberry Phytophthora Root Rot Control

Raspberries are a favorite crop for pick-your-own farms and for home gardens. Sometimes, however, first and second-year canes are stunted, leaves are yellowed, and plants die back and decline in the field. Worried and frustrated growers take samples of the sick plants (including roots) to their County Extension Agent, and then the U.K. Plant Disease Diagnostic Laboratory for a diagnosis. Each year, we observe root rot caused by *Phytophthora fragarae* var. *rubi* as a cause of decline and death of raspberries.

Phytophthora root rot is favored by wet soils because in such soils, roots are attractive to the fungus, and the fungus has a swimming phase which allows it to move from plant to plant. Thus, it makes sense to use raised beds to reduce disease. In addition, fungicides such as Ridomil will suppress this disease.

A recent experiment done by plant pathologists in Washington, and reported in volume 12 of the journal *Biological and Cultural Tests for Control of Plant Diseases*, reaffirms the wisdom of using raised beds for raspberry culture. Raspberries were planted in spring on raised beds (about a foot high) or flat ground; within each group half were treated with Ridomil and half were not. Cane weight, percent survival, and numbers of primocanes per plant were measured during the first and second falls after planting, and the results are presented in the accompanying table.

Impact of raised beds on Phytophthora root rot of red raspberry.

Treat-ments	Cane wt.	First fall % Survival	Primocane no.	Second fall %Survival
Flat bed	33	100	5.8	54
Flat + Ridomil	26	95	3.8	46
Raised bed	104	100	27.1	79
Raised + Ridomil	135	100	34.5	100

These results are similar to those obtained by researchers in New York a few years ago. With the frequent heavy rains and temporary flooding we experience here in Kentucky, it makes sense to use raised beds for brambles to avoid Phytophthora root rot problems. (Hartman)

Notes From The Kentucky Fruit Tour To Ohio

We had a very informative Kentucky Fruit Tour to Ohio in late June. The following are a few notes and items of interest that we gleaned during the tour.

Based on some of Dr. Dave Ferree's work and others, the Bud 9 apple rootstock appears to be one of the most productive and most efficient rootstocks and is proving to be considerably more resistant to fire blight than M. 9. It is important not to prune apple trees too hard to keep production efficiency up. Good drop control was obtained with Retain in 1997 in Ohio. This can be very helpful where labor is short to extend the harvest season for some varieties. NAA plus a spreader sticker or Sevin is much more consistent in thinning from year to year than NAA alone.

Dr. Celeste Welty indicated that her work is showing that a spray for leafhoppers on apples is warranted when an average of one leafhopper nymph is found per leaf after examining 25 leaves early in the season. Also one predator mite per 10 mites is a good ratio to have on apple trees.

According to Dr. Jim Tew, OSU apiculturist, if you can count 15 to 30 honeybees per apple tree at 10:00 a.m. and hear a pleasant hum, you are getting adequate pollination on your trees. Spraying your trees with a sugar solution will not improve pollination, because the bees will spend their time collecting the sugar solution and not visiting the flowers.

'Bluecrop' is one of the named blueberry varieties that has performed better than many other varieties and selections in a study at the Ohio Agricultural Research and Development Center on upland mineral soils with a pH of 6.5.

Grape studies at the OARDC have shown that leaf removal combined with a GA application is just as effective at reducing bunch rot as using Rovral on 'Vignoles' grapes. However, 'Vignoles' had fewer clusters per shoot the year following GA use. Dr. Mike Ellis pointed out that Abound, a new fungicide that is cleared on grapes works well on four of the major grape diseases; black rot, powdery mildew, downy mildew and phomopsis. It costs about $23.00/acre which is about the same as Nova plus mancozeb. Vangard, another new fungicide is very good for botrytis bunch rot. The most critical sprays on grapes are those applied from two weeks before bloom to two weeks after bloom.

Mitch Lynd and his son Andy gave us an excellent tour of their 400 acre plus Lynd Fruit Farm. Andy is the 7th generation of Lynds' raising apples on the farm. Currently they are cutting back on wholesale apple marketing, because of reduced profit margins and concentrating on retail and U-pick marketing. Mitch feels that the 'Big Red Gala' is one of the most promising apple varieties for the wholesale market and 'Honeycrisp' is one of the hottest apple varieties for the retail market. They like the 9' angle iron tree stakes for high density French axe plantings. They have had a number of trees break off at the graft union where they were supported by square wooden stakes that rotted or broke off in the wind. The Lynds' have increased the size of their corn maize from ½ acre for the past four years to a 12 acre maize that consists of three mazes, with increasing levels of complexity.

Finally, I couldn't tell the difference between flash pasteurized and unpasteurized apple cider at the OARDC Fruit Field Day. (Strang)

An Effective Deer Fence Less Than Eight Feet High?

In 1994, the Gallagher Corporation in New Zealand, a manufacturer of electrified fencing equipment, which had been previously suggesting eight-foot-high (or even higher!) fences for excluding deer, began recommending a fence only five feet high. A five-foot-high vertical fence offers no challenge to high-jumping deer, but the Gallagher design is slanted outward (toward the deer), making an angle of 45 degrees or slightly less with the ground. The fence has seven electrified high-

tensile wire strands spaced about a foot apart; the lowest wire can be located less than a foot off the ground so as to hinder entry of ground hogs, raccoons, and other small animals. Some weed control maintenance is required, and warning signs are a must to warn curious passers-by about climbing on the fence. Children who come in contact with the wires will not be permanently harmed.

Does the slanted fence work? It certainly does, according to Virginia extension horticulturist Charles O'Dell, who writes about the experiences of a commercial strawberry producer in Cumberland County, Virginia, who installed such a fence in 1995 after having sacrificed several acres of his crop to deer each winter for a number of years. Since the fence went up, the producer reports no deer damage. And O'Dell claims that other producers are also experiencing similar successes with the slanted fencing. He says that the typical cost per perimeter-foot for the materials required (not counting any labor costs) to build such a fence is less than one dollar — substantially below the cost of an eight-foot-high vertical fence.
Reference: Charles R. O'Dell (Dept. of Horticulture, Virginia Tech, Blacksburg, VA 24061), "Slant Fence Foils Deer", American Fruit Grower 118(3), March 1998, 33-34. (Meister Publishing Co., 37733 Euclid Eave., Willoughby, OH 44094). (Brown)

USDA Finds No Difference in Safety of Imported Vs Domestic Foods

There is a perception that the U.S. food supply is becoming less safe, that it contains increasingly dangerous levels of pesticides and harmful microorganisms. Further, there is a perception that imported foods are less safe than those domestically produced and that increasing levels of U.S. food imports means increasing imports of dangerous toxins and microbial pathogens.

In response, a number of federal lawmakers have introduced a wide range of bills, most of which would require strict labeling of imported foods, especially fresh produce. Some proposals would require inspections of foreign produce growing, processing and handling facilities to assure they match U.S. requirements. The cost of such inspection services would be significant, and there is evidence it may not be needed.

Both the quantity of U.S. fresh fruit and vegetable imports and their share of domestic consumption are rising, according to a USDA study. Imports made up 21 percent of U.S. fresh produce consumption in 1996, up from 17 percent in 1990. Despite the relative infrequency of fresh produce being identified as the vehicle for foodborne disease, there is evidence that fruits and vegetables are becoming a more frequent carrier. The fact that the point of contamination can not always be determined complicates comparing the safety of imported and domestically produced products, says USDA.

For example, in a case involving frozen strawberries, the raw produce was grown in Mexico, but the berries were processed in a plant in the United States. "It has not been determined whether contamination occurred before the berries entered the United States or whether it occurred during processing in this country," USDA says.

Contamination of fresh produce can occur anywhere in the production and marketing chain. However, foodborne illnesses are most frequently attributable to food handling and preparation practices, the most common being improper holding temperatures. Poor personal hygiene of food handlers, inadequate cooking and contaminated equipment also are frequently implicated with foodborne illnesses. It is important to the debate to recognize that these shortcomings and sources of contamination occur not only in commercial channels, but also (and often with greater frequency) in the course of home preparation of foods.

In the case of pesticide residues, USDA says available data do not provide a clear answer to the question of whether there are differences in the safety of imported and domestically grown produce. FDA's regulatory monitoring program has typically shown that imported produce violates tolerance limits more frequently than domestically grown produce. However, according to USDA, "this greater frequency of violations in itself, does not reveal whether there is a difference in the level of health.

Scientists and regulatory personnel generally view contamination by microbial bacteria and naturally occurring toxins as the greatest foodborne dangers to human health. Compared with animal products, fresh produce is identified as the vehicle carrying disease-causing pathogens in relatively few instances. Yet, evidence compiled by USDA suggests that fresh fruits and vegetables are becoming the conveyance for microbial pathogens more frequently than in the past.

Studies indicate that consumer concern about the dietary risks associated with pesticides may well be out of proportion with the actual danger, says USDA. Compared with most other tabulated causes of death and illness, cancer from pesticide dietary intake appears to be a low-probability risk. In conclusion, USDA found "There is no clear evidence that health risks due to pesticide residues or microbial bacterial contamination are greater with either imported or domestically grown produce."
(from the Sparks Commodities Daily Report, 6/24/98)

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John Strang, Extension Horticulturist