



# Kentucky Fruit Facts

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

August/September 1998 (8-98)

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

## Fruit Situation

Apples are sizing well and most growers are finding that harvest is roughly 10 to 14 days earlier this season. There have been several reports of early cracking on Stayman Winesap. Unfortunately it is too late to apply ProVide, which should be applied from mid June to mid July as 3-4 consecutive sprays to help control this. Just about everyone has mites now. Growers that used Apollo, Savey or Agri-Mek this spring generally have greatly reduced mite levels. At this time growers can use summer oil, Pyramite, Carzol or Kelthane for mites. We are now slightly past the time for the second generation codling moth spray. Keep up the sooty blotch, flyspeck and scab sprays.

This was a bumper crop year for thornless blackberries due to the mild winter and ample rainfall.

Strawberry growers should be thinking about an early September preemergence application of Devrinol (napropamide) for winter annual weed control. Devrinol must be irrigated in within 24 hours of application. Poast (sethoxydim) can also be used to control fall grasses, particularly to suppress perennial grasses when they are actively growing.

Japanese beetles in general have not been as much of a problem as they were last season, but green June beetles were out in force in several areas.

## Meetings

**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. See article below.

**Jan. 4-5 - KVGA/KSHS Annual Meeting,** Holiday Inn North, 1950 Newtown Pike, Lexington, KY.

## Commercial Apple IPM Meeting,

## September 24

DePoyster's Orchard, Owners Dale and Yvonne DePoyster, 20121 Salt River Road, Big Clifty, KY. 502/862-3528

### Directions

Exit the West Kentucky Parkway at the Leitchfield exit and go north on KY 259 to US 62. Take US 62 east approximately 0.5 miles and take KY 920 approximately 6 miles north across the county line into Hardin county. Drive through a valley and to the top of the first hill. The farm is on the left.

**Note: Seating is limited, please bring a lawn chair.**

### **Program**

10:00 A.M. **Eastern Time**

Orchard Introduction, Scouting Exercise and Discussion - Dale DePoyster and Specialists

10:20

Apple Round Table Discussion led by Don Haney, President of the Kentucky State Horticultural Society.

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 4:40 PM EDST weekdays before September 22 and give her a count for the Apple IPM meeting at DePoyster's Orchard.

12:45

Codling Moth, Mite Control and Evaluating Your Spray Program - Ric Bessin

1:05 P.M.

Apple Scab, Summer Rots and Storage Diseases - John Hartman

1:25

Fruit Quality - Jerry Brown

1:45

Foliar Analysis Update Chris Smigell

1:55

Apple Cultivar Showcase in Cooperation with Rocky Meadow Orchard - Ed Fackler

2:30

Pumpkin Production and Observation of New Powdery Mildew Resistant Varieties - John Strang

2:50

Adjourn

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.

## Secondary Apple Scab Can Infect Fruits

Apple scab, caused by the fungus *Venturia inaequalis*, has been severe this growing season, especially in poorly sprayed trees, but many growers did manage to apply fungicides between the rains this spring to achieve excellent control in the orchard. As the end of the summer approaches and apples are nearly ready to harvest and store, growers sometimes have a tendency to reduce their fungicide spray program. In most seasons, this makes good sense, but this year inoculum levels in the orchard or in neighboring crabapple or unsprayed apples is high. Thus, there is a risk of additional fruit infection, especially if the weather is mild and moist in the coming weeks. Secondary infection of fruit can occur in the late summer and fall, but not show up until the fruit have been stored for several months. These fruit infections lead to small dark scab lesions sometimes called pinpoint scab. Although small, these scab lesions penetrate the skin and will make the fruit less valuable. There is another reason to continue scab fungicide treatments up to a couple of weeks before harvest. Scab disease can also build up on the leaves after harvest, resulting in high overwintering inoculum for the next year.

Fungicides such as Benlate, Captan, and Ziram used for fruit disease and scab control in the late summer have a 14-day waiting interval before harvest. This should be sufficient to provide good control of scab for fruit going into storage and provide some protection on leaves after harvest. If apple scab has been serious in the orchard this season, growers may want to reduce scab potential by making applications of 5% urea to the foliage this fall just before leaves drop. This application of nitrogen will hasten leaf decomposition and reduce primary inoculum for next season. In addition, after leaves fall, if they can be chopped into small pieces, overwintering inoculum will be reduced. (Hartman)

## Watch Out for Late Season Codling Moth

As many apple producers are gearing up for harvest of their early varieties, codling moth remains a serious threat. Typically, there are three generations of this insect each year in Kentucky. This year we expect at least three generations and development is one to two weeks ahead of where it usually is in a normal year.

The control decision for the rest of the season is based on the number of moths captured in pheromone traps. When an average of five or more are captured per trap, an insecticide should be applied 250 DD later. Keep in mind that there are three to four generations of codling moths each season, so traps need to be maintained and monitored for the ENTIRE season. For a description of codling moths and an explanation on how to calculate degree days, see ENTFACT 202, Codling Moth.

If codling moth reaches the threshold two weeks in a row, an additional insecticide cover spray is not necessary. The spray targeting the emerging larvae corresponding to the first week's capture should provide 10 to 14 days protection, enough to control the larvae resulting from the moth flight the second week. A second insecticide cover spray may be necessary when excessively large trap catches occur. When moth captures exceed 20 moths per trap per week, a second application may be necessary. (Bessin)

## Warning Labels On Cider:

It's official, cider made this year MUST have warning labels, unless you pasteurize. The FDA has issued its final rule, which is a 54 page document that addresses the comments which were submitted in response to the proposed rule. Very few substantive changes have been made. The following is my attempt to boil it down to address many of the common questions and concerns you may have.

### Who must use warning labels?

The rule on warning labels applies to everyone who sells cider regardless of the amount, effective Sept. 6, 1998.

There is some confusion surrounding the exemption if you produce less than 40,000 gallons per year. This exemption only applies to the proposed HACCP rule but not the rule regarding warning labels. You do not have to apply warning labels if you have a HACCP plan which results in a 5-log (100,000 time reduction) in pathogens. At the moment, pasteurization is the only way we know of to achieve this.

If you are not selling cider directly to the public, but to another manufacturer to be used in the production of another product, warning labels are not required, however the fact that the cider is not pasteurized must be stated in documents accompanying the cider. The FDA wording is "...juice that is not for distribution to retail consumers in the form shipped and that is for use solely in the manufacture of other foods or that is to be processed, labeled, or repacked at a site other than originally processed, is exempt from the warning statement requirement, provided that for juice that has not been processed in the manner described [pasteurized] the lack of such processing is disclosed in documents accompanying the juice, in

accordance with the practice of the trade." Unpackaged cider sold for immediate consumption (e.g., at a cider bar) does not require a warning label.

#### What does the warning label have to say?

"WARNING: This product has not been pasteurized and, therefore, may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune systems."

The word "pasteurized" was chosen because the FDA felt that it was something that the public could relate to and understand, even though in the future technologies other than heat pasteurization may be used to achieve the 5-log reduction in pathogens.

#### Does the warning label have to be on the jug itself?

In the future, yes, the warning label will need to be on the jug. But, for this year only, until September 8, 1999 the warning label may be in the form of a sign on the display case where the cider is sold. In the FDA's words, "...the provision in the juice labeling proposal that the warning statement requirement may be met, in the short term, by labeling (i.e., a sign or placard that is displayed at the point of sale) rather than by application of the warning statement to the product label..." When signs or placards are used, the type size should be not less than one fourth inch in height.

#### How large do warning labels need to be?

If you are going to place warning labels on jugs this year (see the above comment), they must appear on the principal display panel or the information panel on the cider container. "...the act requires that mandatory label information be prominently placed on the label with such conspicuousness (compared with other words, statements, designs or devices in the labeling) as to render it likely to be read and understood by the ordinary individual under customary conditions of use." The word WARNING is to be capitalized and be in bold type and the warning statement should be set off in a box by the use of hairlines. The type size must be no less than one-sixteenth inch in height for container labels. Stickers may be used to display the warning statement on the container provided that they meet the requirements of the label rule.

#### If cider is pasteurized, does it have to be stated on the label?

Again, from the FDA, "the agency is not requiring that the term "pasteurized" or any similar term, i.e., heat treated, appear on the label of juice that has been pasteurized. The agency advises that labeling a pasteurized juice product as "fresh" is a misbranding violation under section 403 of the act. Such products are subject to regulatory enforcement action."

#### If cider is to be sold through a supermarket or other retailer, who bears the responsibility for correct labeling?

"Under the applicable law, regulations, and agency policy, the firm that is identified as the manufacturer or distributor on the product label bears the principal responsibility to ensure that the product meets all applicable legal requirements, including labeling. However, retailers and wholesalers also have legal responsibility to ensure that products they sell are properly labeled."

#### If someone becomes sick from my cider and I have labeled it, can I still be held liable?

I'm no lawyer, but think about the tobacco companies. They have warning labels on their products, but that does not seem to have helped them too much in the courts recently.

#### What's the deal with HACCP?

The FDA's final rules regarding HACCP are not yet final and will not be in place for the coming cider season. The way it looks now is that cider makers who produce less than 40,000 gallons per year will be exempt from the HACCP rule. This will mean that warning labels will need to be used. If you produce more than 40,000 gallons per year, it seems likely that a HACCP plan that achieves a 5-log reduction in pathogens is on the way. We expect the final rule from the FDA in the next few months, but this won't impact you for this season, and you may have a couple of years to comply with the rule. (From Facts for Fancy Fruits by Peter Hirst and the U.S. Apple Association)

## Big Red Gala, A New Large Fruited Gala

'Big Red Gala' (PP10458), which is 30 to 40% larger than other Gala strains, was discovered as a limb sport by Tina Fackler of Rocky Meadow Orchards and Nursery in 1992. This promises to be a very popular cultivar, since size is one of the primary production problems with this cultivar. Ed Fackler points out that the flesh density of 'Big Red Gala' is much greater than regular Gala apples and the typical fruit is 380 grams compared to 200 grams for regular Gala. Flowering and harvest dates and fruit flavor are similar to other Gala strains. The fruit is also diploid like other Gala strains.



The cultivar has been evaluated in southern Indiana and in central California and more recently in Ohio, Michigan, New York, Virginia, Georgia, and Washington in commercial orchards. Purdue University, University of Kentucky, Ohio State University, Michigan State University and the University of Massachusetts are also evaluating the cultivar.

'Big Red Gala' is available through Protree Nurseries of Brentwood, CA phone 800/634-1671 and Rocky Meadow Orchards and Nursery, New Salisbury, IN phone 812/347-2213.

# Dim Prospects for Tobacco *and* Alternatives? The 1998 Legislative Session

At the time of this writing, debates on the senate floor over the tobacco settlement had gravitated toward issues like whether a Democrat or Republican tax cut would look best to voters. Behind the scenes, non-tobacco state members of congress balked at how much money might be paid out to tobacco farmers.

## Meanwhile back at the farm...

Kentucky tobacco growers are setting plants, battling blue mold and, according to an increasing number of County Extension Agents, battling with bouts of depression thinking about the future of this crop. Higher cigarette taxes are expected to lead to lower demand and lower prices for growers. Lower margins will accelerate the ongoing consolidation of production toward those with the best access to land, labor, and capital.

## Meanwhile back in Frankfort...

Investments in applied horticultural research were apparently not considered worthy of support during this legislative session. The Kentucky Horticulture Council<sup>1</sup> drafted a proposal last September to seek \$1.7 million in support of research and extension in the University of Kentucky's Department of Horticulture and Landscape Architecture. This included such things as hiring support staff to help with variety testing, nursery crop research, much needed research farm improvements, and research on disease resistance and integrated pest management to reduce pesticide use.

Hort Council members backed up their initiative by visiting lawmakers during the 1998 Legislative Session. The Hort Initiative was included in the overall request for new funding which came from the College of Agriculture. This was in addition to the \$19 million request (to be bonded) for Phase II development of the animal science research farm in Woodford County and a \$5.4 million request to pay for a portion of the new plant sciences building. The Hort Initiative was strongly supported by the Kentucky Farm Bureau as one of their legislative priorities for the 1998 session.

Despite budget surpluses and an uncertain tobacco situation, this legislative session ended without funding the Hort Initiative or any other of the College of Agriculture's requests. The only thing the College did get was the state's approval to spend the university's own funds to finance part of the new plant sciences building. This can only further delay our efforts to explore possibilities of old and new "alternative crops"--crops that are already supplementing declining tobacco incomes.

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<sup>1</sup>Members of the KY Horticulture Council: KY Vegetable Growers Assn., KY State Hort Soc., KY Chapter Am. Soc. of Landscape Architects, KY Nursery and Landscape Assn., Louisville Nursery Assn., Kentuckiana Greenhouse Assn., KY Arborists Assn., KY Vineyard Soc., KY Nut Growers Assn., Central KY Ornamental and Turf Assn., KY Florist Assn., Garden Club of KY, KY Turfgrass Council.

## Ag Project 2000 and Legislative Session 2000

The "Ag Project 2000 Plan" was developed in 1992 with participation from all farm and commodity groups in Kentucky. Numerous individual farmers from across the state helped identify what was needed to move Kentucky agriculture forward into the next millennium. This comprehensive master plan for growth in our agricultural economy clearly identified the University of Kentucky College of Agriculture's role as the major educational and research institution of the Commonwealth. The plan called for the further development of applied research and extension programs in animal, plant, and economic facets of agriculture as the cornerstones of the College.

To help implement this plan, KARDA<sup>2</sup> identified critical investments, including the Hort Initiative, which would provide infrastructure, personnel, and operational support needed to serve rapidly changing agricultural needs in the state. KARDA made these recommendations to the Governor for funding. Unfortunately, we struck out in 1998; we can only continue to call attention to these issues and better prepare ourselves for the next session in the year 2000. Marketing and Promotion--The good news

Some good news from this legislative session was that the Commissioner of Agriculture received \$7.5 million in support of new marketing and promotion programs through the Kentucky Department of Agriculture for locally-produced commodities. A portion of this money has been designated for horticultural marketing and promotion in an ongoing effort to make the KDA more of a service agency rather than what has been heretofore a regulatory agency. This is a welcome leap forward and is something that we strongly supported (see May 1995 *NewHarvest*: "Reducing Risks--The State's Role in Vegetable Marketing") and which was strongly supported by the Kentucky Horticulture Council.

The KDA is now making serious efforts to assist in the marketing and promotion of Kentucky vegetables, aquacultural products, and other commodities. Promotion campaigns for local produce will be funded. The KDA recently conducted a produce buyers tour and sent representatives to the 1997 Produce Marketing Association's national meeting--evidence of important new marketing roles being taken seriously by the Department.

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<sup>2</sup>KARDA is the Kentucky Agricultural Resources Development Authority, a body of agricultural leaders representing Kentucky Farm Bureau, the University of Kentucky, and Ag. commodity groups. The group was formed in 1992 in order to make agricultural policy recommendations to the Governor and General Assembly.

## Marketing What?

The only down side is that all the marketing and promotion in the world won't amount to much without equal efforts to support production with the required research and extension infrastructure. You who are experienced fruit and vegetable growers know that marketing is part of production or production is a component of marketing. The two have been inseparable for the best vegetable growers. You can't have one without the other; you can't support one without supporting the other. We are now in a situation where serious marketing and promotion of Kentucky products are possible on a national scale but those products themselves are likely to be in short supply.

It will be impossible to build on the efforts of an emerging vegetable industry (or any other fledgling horticultural industry) without the research and extension infrastructure to support it.

Take our Horticultural Research Farm in Lexington as just one example. Budgets and staff at the farm have been cut below the critical level required to carry out more than two or three variety trials a year. There are only two permanent, full-time staff at the farm--one of whom is the Farm Manager. Extension Specialists, conducting the lion's share of the applied research, have no technical support staff. This is in spite of a number of internal and external reviews concluded that this should be one of the highest priorities for the Horticulture Department. Similar situations exist for vegetable crops, greenhouse and nursery crops, and at UK's other two facilities conducting horticultural research in the state. The money just isn't there to fund these positions.

This is not to say we won't continue to do as much as possible with meager resources. We have identified resistant varieties that brought new life to Kentucky pepper growers who previously experienced devastating losses to bacterial leaf spot epidemics. Each year we test and identify the best sweet corn varieties among the hundreds available. We know what pumpkin varieties will bring the highest profits to commercial growers in the new Central Kentucky Vegetable Growers Association and will identify the best tomato variety for two other fledgling vegetable producers' cooperatives in the state.

Every year we show six to ten tobacco growers how to use specialized equipment to apply plastic mulch and how to use drip irrigation to make serious money in commercial vegetables. These efforts need to be augmented and multiplied across the state. But lacking technical support staff and serious budgets for operation of our research farms, it is currently impossible to conduct much of a proactive program to provide growers with new information needed to compete in the national marketplace. There are numerous specialty crops and new opportunities which we are unable to evaluate. Specialists have difficulty conducting statewide programs (vegetable IPM to reduce pesticide use is just one example) because they must stay close to the research farms during summer months. At present it is not possible to conduct applied research (including variety testing) on commercial vegetables in all of Kentucky west of Frankfort. There are no researchers working full-time with commercial vegetables stationed west of Lexington so that a statewide system of testing is impossible.

Kentucky is entering this arena decades after similar support systems were established in states like North Carolina, Tennessee, and Ohio. We have a lot of catching up to do. Obviously our state has not yet decided that this is an important role and worthy of serious support.

## **Hand and Mechanical Pruning of Thorny, Erect-type Blackberries in Alabama**

Two thorny, erect blackberry cultivars (Cheyenne and Shawnee) were subjected to 4 pruning methods and evaluated for yield, berry characteristics and plant vigor in 1991 and 1992. The pruning treatments consisted of: (1) hand pruning spent floricanes immediately after harvest in the summer, summer topping primocanes to 120 cm, and pruning lateral branches to 45 cm during the dormant period (standard hand pruning); (2) hand pruning dead floricanes during the dormant period, summer topping primocanes to 120 cm, and pruning lateral branches to 45 cm during the dormant period (dormant hand pruning); (3) mechanically pruning dead floricanes and primocanes to 30 cm immediately after harvest in the summer; and (4) mechanically pruning dead floricanes and primocanes to 15 cm immediately after harvest in the summer. Standard and dormant hand pruning resulted in the highest yields, and simulated mowing to 15 cm resulted in the lowest yields for both cultivars tested. The amount of yield reduction from mowing due to reduced primocane vigor indicated that one year of profitable production will probably be lost. Berry characteristics were not affected by pruning method. Dormant hand pruning of dead floricanes appears to be the most economically viable alternative pruning method relative to removing the dead floricanes in the summer. (Brown, Reprinted from A.L. Busby and D.G. Himelrick, Department of Horticulture, Auburn University, Auburn, Alabama)

## **Apple Cider Flash Pasteurization in Kentucky**

Joe Garrett of Garrett's Country Market, Versailles, KY 606/873-3767, has leased one of the Goodnature Micro Flash Pasteurizers this season. It will be set up in late September. Joe has indicated that he is interested in selling flash pasteurized apple cider to other apple growers in the state for \$2.95 per gallon. (Strang)

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## Publications

The publication Disease and Insect Control Programs for Home Grown Fruit in Kentucky Including Organic Alternatives (ID-21) has recently been revised and printed. The one major change is that the fungicide Immunox, myclobutanil (commercial growers know this as Nova) has been cleared for home fruit grower use. This is the first material that can be used by home fruit growers that has significant kick-back activity on diseases.

## Receiving Fruit Facts Electronically on the Internet

Fruit Facts is now 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 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.

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