



Kentucky Fruit Facts

Research & Education Center

P.O. Box 469, Princeton, KY 42445

October 1999 (10-99)

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Fruit Facts can be found on the web at: <http://www.uky.edu/Agriculture/Horticulture/extension.htm>

Fruit Situation

Most of the apple crop has been harvested now. Fruit size has been highly variable between orchards and between varieties. Where growers thinned and received timely rains or irrigated, fruit size is generally very good. Where thinning wasn't heavy enough and/or rainfall was very poor, fruit size is inadequate. Fruit quality and finish are generally very good. Fruit sugar contents are very high and some growers have experienced water core.

Growers should be thinking seriously about vole control in their orchards, as this has been a problem the last several years. Eliminate tall grass and weeds in and around the orchard and chop up old apples on the orchard floor to aid in breakdown. Bait stations should be established and baited with zinc phosphide.

Grape and bramble growers should consider planting a small grain crop between the rows if the row middles are bare to help take up extra nitrogen that was not leached out or taken up this summer. This extra nitrogen could induce the fruit crop to make more vigorous growth and harden off poorly, when rainfall becomes plentiful.

The long term weather forecast calls for a dry fall and a winter similar to last winter. Thus, the forecast is for a relatively warm winter with a few colder periods. Tree hardiness development will be slow this fall due to the drought. Apple growers that had an extremely dry season that have trees that have defoliated and retained

their small fruit need to be concerned about tree survival this winter. The retained fruit is inhibiting tree hardiness development and need to be removed. The early defoliation has kept these trees from moving carbohydrates and nutrients from the leaves to the roots, which are needed for normal hardiness development. Thus, trees will be more sensitive to early hard freezes and pruning, which also slows hardening, should be avoided this fall. (Strang, Brown, Bessin)

Meetings

Oct. 21 - The Second Annual Pawpaw Field Day, Kentucky State University Research Farm, Frankfort, KY. Please RSVP, so we have an idea of how many of you are coming. For a list of hotels in the area, call Ms. Jean Ward at 502-227-6174. For additional information call 502-227-5942 or see our web page at <http://www.pawpaw.kysu.edu/events.htm>. See August Fruit Facts for more information.

Oct. 23 - Kentucky Nut Growers Association Fall Meeting, University of Kentucky E. S. Good Barn, Lexington, KY. Contact John Strang 606/257-5685. See article below.

Oct. 23 - Kentucky Vineyard Society's Annual Meeting, Maker's Mark Conference Center, Loretto, KY. Contact Mitchell Wagner phone: 502/459-6958, Fax: 502/459-2026, Email: MITCH@KORT.COM

Nov. 19-20 - 1999 Midwest Small Farm Conference and Trade Show, "Profitability through Diversification",

Exhibition Center, Hamilton Co. 4-H Grounds Noblesville, IN. This conference features 24 workshops to help build sustainable farming systems and community food systems, and an extensive trade show of goods and services for small farmers. Session topics cover organic and sustainable fruit, vegetable, flower, herb, woody ornamental, fish, hog, and milk production and much more. Registration fees range from \$25 to \$60 depending on the days attended and if there is a late fee attached after 11/10/99. Contact 765/463-9366.

Jan. 3-4, 2000 - KSHS/KVGA Annual Meeting and Trade Show, Holiday Inn North, Lexington, KY.

Kentucky Nut Growers Association Fall Meeting, October 23

The Kentucky Nut Growers Fall meeting will be held at the E.S. Good Barn on the University of Kentucky campus, beginning at 9:30 a.m. At this meeting Dr. Kirk Pomper from Kentucky State University will talk about pawpaws, Les Wilmoth will demonstrate his black walnut huller, there will be nut displays, door prizes, an auction, and John Strang will lead a tour of the UK Arboretum nut planting.

Luncheon

The luncheon will be potluck. Bring a covered dish, a cake, a pie, salad, and/or other desserts. Paper plates, cups and plastic utensils will be provided. Coffee and other refreshments will be available.

Directions

From Bluegrass Parkway:

Turn right off the exit onto Route 60 (Versailles Rd.). Follow this road for several miles looking for New Circle Rd. (4). When you pass under New Circle Road you should begin counting stoplights. You will make a right at the 4th stoplight onto Mason Headley road. Continue for several miles counting the stoplights as you go. (Note: Mason Headley's name changes to Waller Avenue at the 2nd stoplight). At the 5th stoplight make a right onto Nicholasville Rd. and then an immediate left onto Stadium Drive. Proceed not quite one block and the E. S. Good Barn will be on your right. Park anywhere around the barn.

From I-75 South/I-64 East or West:

Take Exit 113 (marked Paris/Lexington). Turn right off the exit ramp onto North Broadway (US 68). Follow through downtown for 3.5 miles. One block past Hyatt Regency Lexington, turn left onto West Maxwell street. At the 6th light, turn right onto Rose Street. At the 6th traffic light Rose

Street will intersect Limestone Street. Turn left and follow Limestone Street for approximately 2.5 blocks and make a left onto Stadium Drive. Proceed not quite one block and the E. S. Good Barn will be on your right. Park anywhere around the barn.

From I-75 North:

Take Exit 104 (marked Athens/Lexington). Turn left off the ramp onto Athens-Boonesboro Road (name changes to Richmond Rd then to East Main St.) and follow 8.2 miles to downtown. Turn left onto Rose Street. At the 6th traffic light Rose Street will intersect Limestone Street. Turn left and follow Limestone Street for approximately 2.5 blocks and make a left onto Stadium Drive. Proceed not quite one block and the E. S. Good Barn will be on your right. Park anywhere around the barn.

Economic Relief for Cider Producers

A flood of cheap apple-juice concentrate imports from China has had a devastating impact on our entire industry. The Food and Drug Administration's (FDA) regulation requiring warning labels on unpasteurized juice products, and impending mandatory Hazard Analysis and Critical Control Points (HACCP) plan for juice processors, has only exacerbated the economic problems currently being suffered by juice and cider processors.

The U.S. Apple Association (USApple) is gravely concerned about the economic hardships being experienced by small cider producers, and is seeking the inclusion of two separate provisions to assist juice and cider producers in the federal agricultural appropriations bill now being considered by Congress.

First, USApple is seeking funds in the farm relief package to make federal matching grants up to \$10,000 per operation available to small cider producers of 50,000 gallons or less per year, for the purpose of improving their efficiency and ensuring that safety of their products. Grants would be made available to any producer having undertaken such an investment over the past two years, and to any producer planning to do so within the next three years.

According to a 1997 survey conducted by USApple of 1,558 cider producers in 33 states, the vast majority of respondents reported average annual production of 50,000 gallons or less. It is unknown how many producers have since been forced out of business due to adverse economic conditions.

Second, USApple is also seeking a moratorium on FDA's impending proposal to

require all juice and cider producers to implement mandatory HACCP programs. Our industry is working with the research community to more clearly identify and legitimate food-safety concerns, and appropriate preventive measures for ensuring the safety of our juice producers. We believe the imposition of mandatory HACCP programs is premature and unjustified, and are seeking support in Congress for an amendment to the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies appropriations bill that would prohibit FDA from promulgating its final HACCP rule. (U.S. Apple Association)

Controlling Post-Harvest Rots in Pumpkins

Rotting of pumpkins after harvest is a serious problem for growers, wholesalers, and retailers. Control of post harvest rotting involves preventative steps taken during the growing season, as well as during harvest, storage and handling. Rescue fungicide treatments are not available.

Several of the pathogens causing pumpkins to rot in storage become established on or in the fruit during the production season. It is therefore essential to control diseases during the growing season - right up until harvest time - by using recommended seed treatments, crop rotations, and preventative fungicide sprays. This is especially true for anthracnose, gummy stem blight (black rot), Microdochium blight, and bacterial leaf spot. It is also important to control root, stem and foliage diseases during the growing season so that fruit develop and maintain the high sugar contents needed for making strong cell walls. Adequate fruit sugar content is important in the defense against pathogen attack and in maintaining long-term shelf life.

Many pathogens cannot invade and damage sound, undamaged pumpkins because the strong cell walls prevent invasion. Therefore, most pathogens that rot ripe pumpkin fruits enter through wounds or weakened areas in the rind. Some pathogens, however, do have the enzymes necessary to degrade rind tissues, but their entry is much easier when rind defenses are weak.

Harvesting and handling operations should be done with care to minimize cuts and bruises in the rind; these wounds leave open gaps in the pumpkins' primary defense against decay organisms. Be especially careful to protect the handles (stems), because damage here is easy and damaged or diseased handles can

drastically reduce marketability of the fruit.

Rind health can be improved significantly by curing pumpkins after harvest for 7 to 10 days at temperatures of 80-85 degrees F with relative humidity of about 80-85%. After the curing steps, it is critically important that both temperature and humidity be lowered to those recommended for storage (50-55 degrees F and 50-70% relative humidity, to reduce the disease potential. If storage temperatures are too high, respiration of the fruit is higher which depletes stored food reserves that the fruit uses to maintain rind health. High humidity favors fungal growth. Cold temperatures (below 50 F) results in chill injury to the fruit, causing irreversible physiological damage and loss of rind defenses. Prolonged exposure to chilling temperatures or even short exposure to temperatures near freezing will result in permanent injury and lead to breakdown of the fruit followed by rot by a number of weak pathogens, especially from *Alternaria*, anthracnose, and *Fusarium*. Pumpkins should be harvested before they are exposed to chilling injury in the field and protected against chilling injury during storage.

Immature fruit are excellent targets for fungi, which greatly reduces shelf-life. Such fruit will serve to rapidly build up pathogen populations in the storage area. Never store immature fruit (if they are harvested), with mature fruit. It is important that pumpkins be well matured before harvest and storage. Do not store pumpkins directly on soil. A layer of moisture absorbing material (straw or hay works well) is needed between the fruit and ground to prevent wet spots from serving as infection sites for a number of fungi. Good air circulation around the pumpkins is important to reduce surface moisture, especially when temperature changes are occurring. Check stored fruits regularly for signs and symptoms of rot and discard diseased fruit. This step eliminates the inoculum they contain and reduces spread to healthy pumpkins. The old analogy applies: "one rotting fruit spoils the whole lot".

Pumpkins keep best when not piled on top of each other. Piled pumpkins are much more prone to rot. (Nesmith, Jones, and Rowell)

Spinosad Receives Additional Registrations

The EPA granted DowAgrosciences additional crop registrations for their spinosad insecticides. These new crop registrations include dry and succulent beans, cucurbits, field and popcorn, stone fruits, soybeans, sorghum, wheat. Spinosad is sold as Spintor for fruits and vegetables and as Tracer for field crops.

Spinosad is effective against lepidopterous larvae, some thrips and Colorado potato beetles.
(Bessin)

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

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John Strang, Extension Horticulturist