

Kentucky Fruit Facts

Jun-Jul 2009/ (6-7/2009)

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

John Strang, Extension Fruit Specialist, Editor
Karen Shahan, Administrative Assistant

Fruit Crop News

The 2009 fruit crop generally looks good. The spring strawberry harvest is completed and fruit size, quality and yield were very good. The wet weather led to slug damage and increased levels of leaf spot disease. We are well into harvesting a bumper crop of raspberries, blueberries, and thorny blackberries and are in the early stages of thornless blackberry, peach and apple harvest. Most growers report that peaches set an adequate crop. Apples and pears generally set light crops due to wet conditions during pollination, but this varies based on variety and location in the state. Apples in many cases tend to be unevenly distributed in the trees. It is best to thin whole clusters to allow remaining fruit to size up. Few growers used chemical thinners.

The wet spring weather also affected Kentucky nut crop pollination. Set on shagbark and shellbark hickory and heartnut trees is generally light, black walnuts are sparse, pecan set is variable and Persian and butternut set is good.

The weather has made good spray programs a necessity in comparison with the dry 2008 season.



Fungicide spray intervals should have been tightened up this year. Scab, cedar apple rust and plum curculio are severe on unsprayed apple trees. Fire blight strikes are evident, but have not been too bad so far. Infections of black rot, anthracnose and phomopsis cane and leaf spot are evident on grapes if the spray schedule was not excellent.

A USDA report from the Economic Research Service on Specialized U.S. Fruit and Nut Farm Production Expenses noted that small farms continue to dominate, making up more than half the average number of specialized fruit and tree nut farms in 2004-06. However, small farm numbers declined by 35% from the 1998-2000 survey, while the number of medium, large and very large farms increased. In the North and South, most of the specialized fruit and tree nut tree farms were more diversified than those in the West. More than 60% of fruit and tree nut farm expenses were for hired workers. Agricultural chemicals (including fertilizers) were the second biggest cash expense accounting for 13 percent of total cash expenses. This was followed by machine-hire and custom work (6 percent) and repairs and maintenance (5 percent).

The Mid Mississippi Valley Orchard Tour at Billy Reid's Orchard in Owensboro, KY on May 19 was well attended. Billy and Kathy's son Brad, and daughters Valery and Katie are now all involved in the orchard operation making this a fifth generation orchard

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Mid Mississippi Valley Orchard Tour, Reid's Orchards in Owensboro, KY on May 19



and the 136th year of operation. New additions to the operation include a market expansion, the addition of floral crops, increased hosting of weddings, a Friends of

Reid's Orchard Facebook page that has been tremendously successful and the development of a children's play area with dual giant tube slides. Billy's 'Chandler' strawberry production system, which is a hybrid of the plasticulture and matted row systems was a highlight of the tour.

Upcoming Meetings

July 11 Kentucky Nut Growers Association Summer Grafting Workshop, Don Compton's Farm and Nursery, 4400 E County Rd. 890 S, Marengo, IN. Phone: 812-723-0099. Directions: Coming from the south take I-64 to Carefree (Exit 92-SR 66) and drive North 12 miles to Marengo. Go straight through the 4-way stop. Then go over the bridge, turn left, go one

block to Valeene Road. Drive approximately 4 miles to Co. Rd. 850 S on right, 1 mile to farm on left. KNGA signs will be posted. The luncheon will be potluck and there will be a kitchen available to heat items up. For more information contact Kirk Pomper at 502-597-5942 or kirk.pomper@kysu.edu

July 14 U.K. Nursery Crops Program – Air Blast Sprayer Calibration, Green Ridge Tree Farm, 6100 Bardstown, Rd., Elizabethtown, KY. The UK Nursery Crops program is working in collaboration with USDA and Ohio State University to implement air blast sprayer calibrations and a half rate pesticide program. This is a program that has been widely successful in nurseries in Ohio and has saved growers money due to reduced pesticide costs as well as has tremendous environmental benefits. We are going to cover how to calibrate an air blast sprayer, and how to select ½ rate disk and whirl plate combinations. There will be a panel of growers who are in the ½ rate program that will talk about their experience and level of control and cost savings from the ½ applications. The audience will do a “blind” rating of the two fields – the ½ rate and the full rate fields - for level of control of a few pests – level of damage. Water sensitive paper will be used to demonstrate how sufficient coverage is achieved in the half rate program. Contact Amy Fulcher for registration information (~\$30) at 859-257-1273; email: afulcher@uky.edu

July 19-23 Northern Nut Growers Association 100th Annual Meeting, Purdue University, West Lafayette, IN. In addition to technical presentations the meeting will include and all-day field trip to the HTIRC Juglans collection at the Purdue Martel Forest; black walnut nursery and production fields at Arbor America; and organic apple production research, pawpaw and wine grape variety trials at Purdue Throckmorton Agricultural Center. An optional all-day field trip is scheduled for Gene and Betty Wild's apple orchard with 800 varieties of apples, Charles Spurgeon's Carya collection and Jerry Lehman's persimmon and pawpaw orchard. For registration information see the NNGA web site at: www.nutgrowing.org

July 23 U. K. 2009 Field Day, U.K. Research and Education Center, 1205 Hopkinsville Street, Princeton, KY 42445. 8:00 a.m. – 3:00 p.m. CDT. The one hour long Orchard and Small Fruits Tour, which will run throughout the day includes, Tree Fruit Cultivar and Rootstock Trials, Blackberry and Raspberry Cultivar Trials, and Grape Research and Production. Contact: Win Dunwell, P.O. Box 469, Princeton, KY 42445; 270-365-7541 x 209, Fax 270-365-2667; e-mail, wdunwell@uky.edu

July 28-31 Kentucky Farm Bureau's Annual Roadside Market Tour. This year's Roadside Farm Market Tour will visit markets in Kentucky, West Virginia, and Virginia. Market visits include a tour of an orchard, a greenhouse, farmers' markets, a winery, a direct marketing livestock operation, and much more!

The bus tour departs Lexington, Kentucky at 9:00 a.m. EDT on Tuesday, July 28, and returns around 6:30 pm on Friday, July 31.

The cost of the 4-day tour is \$270/person/double-occupancy or \$400/person/single-occupancy. The registration fee includes bus transportation, hotel room, group meals, and snacks. Incidentals are on your own. Each hotel provides a complimentary breakfast for you to enjoy at your convenience.

Registrations will be accepted beginning June 22 on a first-come, first-serve basis (using postmark date and/or receipt of facsimile). Registrations are limited and the final date to register is July 8.

For a tentative tour agenda and a registration form contact Kara Keeton at kkeeton@kyfb.com.

Aug. 1 U.K. & KVS Grape Summer Field Day, Lover's Leap Vineyards and Winery, Lawrenceburg. Contact Chris Smigell 859-257-3598 or John Strang 859-257-5685. See program below.

Sept. 17 Pawpaw Field Day, Kentucky State University Research Farm, Mills Lane, Frankfort. The tasting of many new cultivars will be featured. Contact Kirk Pomper at 502-597-5942; email: kirk.pomper@kysu.edu

Jan. 4-5, 2010 Kentucky Fruit and Vegetable Conference and Trade Show, Embassy Suites Hotel, Lexington, KY. Contact John Strang 859-257-5685.

Summer Viticulture Field Day

Saturday, August 1, 2009

9:30 a.m. – 5:00 p.m.

Location: Lovers Leap Vineyard and Winery

1180 Lanes Mill Road, Lawrenceburg, KY 40342

Sponsored by: UK Viticulture & KY Vineyard Society

For Registration information please call:

Pam Compton: 859-257-2909

Agenda

8:30 a.m. Registration Opens
9:00 - 9:30 Kentucky Vineyard Society annual meeting
9:45 Welcome address
– Patsy Wilson, UK Horticulture

Vineyard Management Sessions

10:00 Hybrid and vinifera production in the Midwest
Jason Heiligenberg, Huber Winery
10:45 Canopy Management: Starting from the ground up
Jeff Wheeler, UK Horticulture

Vendor presentations

11:30 New and old tools for Midwest Vineyards
Mike Switzer, Midwest Vineyard Supply
11:45 Vineyard air-blast sprayers
John Ditzler, Wabash Valley

Progressive Viticulture

12:00 p.m. Tractors and equipment for your vineyard
Ron Nash, Central Equipment
12:15–1:00 Catered Lunch (included with registration)
Preregister for lunch by calling 859-519-0936

Disease Management Sessions

1:00 Managing black rot and downy mildew
Chris Smigell, UK Horticulture
1:30 Pesticide use during times of high disease pressure
Brandon O'Daniel, UK Horticulture
1:50 Biology and management of Japanese and green June beetles
Derrick Hammons, UK Entomology
2:10 Round Table discussion: Bring vineyard disease samples pictures and stories
Chris Smigell, UK Horticulture
3:30 Break

Enology Sessions

3:45 Managing sulfite levels in the winery
Dr. Tom Cottrell, UK Horticulture
4:15 Practical production techniques for fruit and grape wines
(this session includes wine tasting)
Jason Heiligenberg, Huber Winery
5:00 Closing Remarks
Patsy Wilson, UK Horticulture

Directions:

From I-64: Take Frankfort/Lawrenceburg exit 53A and follow US127 south about 5 miles. Look for sign for "Lovers Leap Winery". Turn Left on McCormick Rd – which makes a sharp right and becomes Hammond Rd. At 1.2 miles turn left on Ninevah Rd (Route 326 at Ninevah Christian Church) about 20 yards BEFORE the stop sign. Go 1.7 miles to Lanes Mill Rd. (second road on left) and turn left. Go about 1 mile and look for Lovers Leap Winery on the right.

From Bluegrass Parkway: Take Lawrenceburg/Harrodsburg exit #59 (US 127) towards Lawrenceburg (north). Follow US127 bypass North (DON'T take Bus 127 into town!) until you see the sign for Lovers Leap Winery on right. Turn right on McCormick Rd – which makes a sharp right and becomes Hammond Rd. At 1.2 miles turn left on Ninevah Rd (Route 326 at Ninevah Christian Church) about 20 yards BEFORE the stop sign. Go 1.7 miles to Lanes Mill Rd. (second road on left) and turn left. Go about 1 mile and look for Lovers Leap Winery on the right.

Summer Viticulture Field Day Registration Form

- Cost of registration is \$25.00 for KVS member and \$30.00 for non-KVS member.
- Registration fee includes lunch and wine tasting.
- Preregister for lunch by leaving a message at 859-519-0936 on or before July 27, 2009.

Names (s) As you would like it on your Name Tag:

**Please make checks payable to:
Kentucky Vineyard Society**

Mail completed registration form to:
Pam Compton
Department of Horticulture
N-318 Agricultural Sciences North
University of Kentucky
Lexington, KY 40546-0091

-or-

Pay at the door. Preregistration for lunch is required.
Please call 859-519-0936 to register.

Gerald R. Brown, 1937-2009

Dr. Gerald “Jerry” R. Brown, retired University of Kentucky Professor and Fruit Extension Specialist passed away May 30, 2009 in Caldwell County. He was born October 22, 1937, the only child of the late Richard and Elsie Magee Brown. Many will remember Jerry as a dedicated fruit specialist that provided outstanding support and expertise for Kentucky and Midwest fruit growers. He was highly respected and very active in the Kentucky State Horticultural Society. Jerry worked out of the U.K. Research and Education Center in Princeton, Kentucky and retired in 2000.

During his career Jerry worked in Holland, Egypt and Ecuador assisting in agricultural programs. He and his wife Mary lived in Scotland for three months, while working with Scottish researchers. Jerry and Mary had the privilege and pleasure of visiting many countries of the world. He will be sorely missed.

Survivors include his wife of 50 years, Mary Martin Brown; two sons, Craig and his wife, LuAnn, of Madisonville and Kevin and his wife Melissa, of Paducah; two granddaughters, Victoria Brown of Madisonville and Elizabeth Brown of Paducah. Memorials may be made to: Kuttawa United Methodist Church Relief fund, P.O. Box 158, Kuttawa, KY. 42055.

To send condolences to the family: write to Mary Brown, 501 South Willow Way, Kuttawa, KY 42055.

Jeff Wheeler Hired as Grape Program Research Analyst

Jeff Wheeler was hired in our grape Research Analyst position which was formally held by Pasty Wilson. Pasty is now our U.K. Viticulturist. Jeff began work in May and will be handling lab analyses, helping some in the research vineyard and you will occasionally get to hear him at our meetings. Jeff has extensive research experience in enology and viticulture and several years



Jeff Wheeler explaining shoot thinning at the Eden Shale Field Day on June 13.

experience in working with the Illinois commercial grape and wine industry. He received his M.S. Degree in the Department of Plant, Soil and Agricultural Systems at Southern Illinois University under the direction of Dr. Brad Taylor in 2009. His work in Illinois included decreasing cluster compactness of 'Vignoles', in-row ground cover trials, virus and nematode characterization, long term comprehensive rootstock and wine-grape cultivar trials and utilizing divided canopy systems to improve yield and wine quality of vigorous 'Cabernet Franc' vineyards. Jeff is a welcome addition to our enology and viticulture program.

Frogeye Leaf Spot is Appearing on Apple

By Dr. John Hartman, U.K Extension Plant Pathologist

Symptoms of frogeye leaf spot have been evident on leaves of apple and crabapple throughout Kentucky in recent weeks. In some plantings, frogeye leaf spot can be more prevalent than other diseases such as scab or rust which are also visible now.

Symptoms. The lesions that have appeared on leaves are small (1/8 - 1/4 inch) distinct circular, brown spots (Figure 1). The center portion of the spot may become tan colored, while the outer edge remains dark brown, giving it a "frogeye" appearance. By contrast, apple scab develops as dark brown to black diffuse spots without sharp margins, and



Figure 1. Frogeye leaf spot disease on apple leaf.

rust spots will have a distinct yellow-orange color. Signs of disease in the form of tiny black pycnidia (fungal fruiting bodies) of the causal fungus may develop in the center of the spot. If present, pycnidia can be examined with the aid of a hand lens and will appear as tiny black "pimples" when viewed through the magnifier. These pycnidia contain thousands of spores that can be a source of continued infections. As leaf spots become more numerous and coalesce, leaves turn yellow and fall.

Cause. Frogeye leaf spot is caused by the fungus *Botryosphaeria obtusa*. This fungus causes three distinctly different symptoms in apple and crabapple. In addition to frogeye leaf spot, *B. obtusa* causes black rot of the fruit and a canker disease of twigs and branches. This fungus is capable of attacking many different kinds of trees and shrubs in Kentucky, so inoculum is quite widespread. The infections now being seen on the leaves most likely originated from cankers on dead twigs and branches in the tree. The black rot fungus frequently invades last year's fire blight infections, causing a canker in the branch or twig (Figure 2). Such cankers may weaken the



Figure 2.

limb or kill the twig or branch. Often a cone-shaped area of affected leaves will appear just beneath such a canker. The presence of high levels of fire blight disease in many apples and crabapples during recent years could account for high levels of frogeye leaf spot this year. In addition, rainy weather this spring has been conducive for disease development.

Fruit infections. In trees with many cankers and spotted leaves, fruit infections have probably already occurred this season, but fruit decay symptoms will not appear until fruits mature.

Infections often begin on flower sepals in spring and progress to the blossom end of the developing fruit. As the fruits enlarge, a brown decayed area appears. The decay is often characterized by a series of concentric rings alternating from black to brown on the fruit surface (Figure 3). Pycnidia are scattered over the surface of the decayed fruit. Eventually, the rotted fruits dry out and mummify, sometimes hanging on the tree until the next season.



Figure 3.

Disease management. Control suggestions include:

- Prune out and destroy all dead twigs and branches. This is best done while trees are dormant to prevent early spring frogeye leaf spot infections. When pruning,



Figure 4.

promote rapid wound closing by not leaving stubs or making flush cuts. Prunings must be removed from the orchard or they can become sources of inoculum.

- Thin out branches to promote good air movement.
- Remove mummified fruit (Figure 4) to reduce inoculum.
- Protect the fruits from injury caused by insects or harsh spray materials.
- Promote optimum growth.

Protectant fungicides such as captan, mancozeb, and polyram, used to control scab are generally effective against frogeye leaf spot. Thiophanate-methyl (Topsin-M) and strobilurin fungicides such as Flint, Pristine, and Sovran are also generally effective.

Diseases Affect Blueberry Production in Kentucky

By John Hartman, U.K. Extension Plant Pathologist

Blueberry harvest is well underway in Kentucky. Blueberries are subject to plant and crop losses due to diseases. Most losses are due to root rot or to stem and twig canker diseases. In recent years, several important blueberry diseases have been observed in the field and diagnostic laboratory.

Twig blights, stem cankers, stem blights. These diseases are caused by several fungi including species of *Phomopsis*, *Fusicoccum*, and *Botryosphaeria*. The most visible symptoms of canker diseases are dieback of twigs, branches, or entire stems, often adjacent to healthy parts of the same plant.



Figure 1. Twig affected by blueberry canker disease.

Dead branches may have brown or reddish-brown leaves clinging to them (Figure 1). Symptoms may begin on smaller twigs and then spread into larger branches and the crown. Some lesions appearing on infected stems may

be a red-maroon-brown color and be centered around a leaf scar, with a bulls-eye pattern. Other lesions may appear as a broad brown or tan discoloration of the woody tissue, often on one side of the stem. Main stem infections can quickly lead to flagging and dieback of the entire stem (Figure 2).



Figure 2. *Phomopsis canker* causing dieback of blueberry branches (APS photo).

Phytophthora Root Rot. Root rot, caused by *Phytophthora cinnamomi* or other species of *Phytophthora* is usually associated with poorly-drained areas of a field where the fungus thrives and survives for long periods of time. The very fine absorbing roots turn brown to black; larger diameter roots may also be discolored.

Above-ground symptoms include chlorosis and reddening of the leaves, small leaves, defoliation, branch



Figure 3. *Phytophthora* root rot killed plants at the end of this row of blueberries (APS photo).

dieback, death of entire stems, stunting, and death of the entire bush. The disease may be present in a few infected plants scattered throughout the planting, but is more often localized in a group of plants in a low lying area of the field (Figure 3). Heavy clay soils often favor root rot.

Mummy Berry. This sometimes-devastating disease is caused by the fungus *Monilinia vaccinii-corymbosi*. The fungus overwinters in mummified fruit on the ground. Young shoot tissue infected in early spring may become blighted, resembling frost injury. The fungus also infects

the developing fruit causing it to become malformed, and turning salmon or grey by midsummer (Figure 4). By fall, these fruit drop to the ground where they turn to mummies, ready to produce spores the next spring.

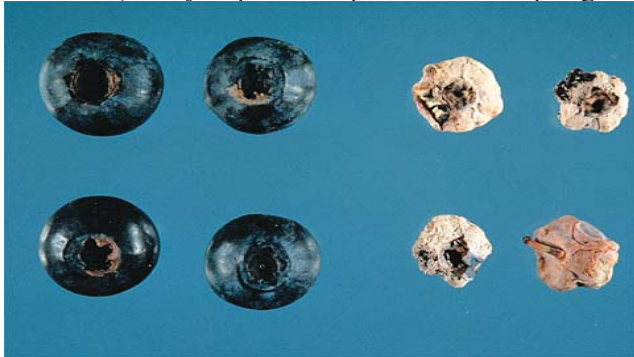


Figure 4. Blueberry mummy berry disease compared to healthy fruit (APS photo).

Botrytis Blight/Gray Mold. The fungus *Botrytis cinerea* causes ripening fruit to rot with a typically gray, moldy cast (Figure 5). The fungus also causes a stem canker which is similar to that caused by other fungi. Cultivars with tight fruit clusters are more prone to gray mold.



Figure 5. Blueberry Botrytis fruit rot (APS photo).

Anthracnose. Caused by the fungus *Colletotrichum gloeosporioides*, anthracnose primarily rots fruit, but also infects twigs and spurs. The disease causes a soft, sunken berry rot, usually on the calyx end, which ruins fruit quality. The fungus may produce a salmon or rust-colored mass of spores on the rotted berry. Anthracnose can also cause a post-harvest fruit decay and is favored by warm, wet weather.

Iron Chlorosis. This abiotic disease appears as chlorotic (yellow) and stunted plants (Figure 6). The major cause of chlorosis is planting on a site with pH levels above 5.5. The best soils for blueberries are well-drained sandy silt loam or silt loam, with a pH of 4.5 to 5.2, organic matter of 4 to 7% and adequate phosphorus and potassium. Blueberries with iron deficiency will be



Figure 6. Interveinal chlorosis of Blueberry leaves caused by iron deficiency.

growing under stress and be more susceptible to many of the canker diseases.

Blueberry disease management. With good crop management, most blueberry diseases can be avoided. The following suggestions should be useful:

- To avoid Phytophthora root rot disease, choose a site that is well-drained or install tiles or raised beds to improve drainage.
- Choose a site that receives full sun with no shade.
- Be sure that soil pH is suitable for blueberries. If needed, begin soil pH adjustments a year or two before planting.
- Select disease-resistant cultivars where they are available.
- Purchase only healthy, disease-free virus-indexed plants from a reputable nursery.
- Sanitation is essential; remove and destroy canker-infected canes and branches, old and weak stems, and badly diseased plants.
- A dormant application of lime sulfur may be helpful in canker disease management.
- If mummy berry disease is a problem: before bud break, rake up and burn mummies or cultivate between rows or apply at least 2 inches of mulch to bury them.
- Remove old canes and twiggy wood to promote ventilation and sunlight penetration.
- Avoid use of excess nitrogen fertilization; do not fertilize in late summer.
- Control weeds to improve drying of the fruit and foliage.
- Water plants during dry periods to reduce stress.

In some circumstances, canker diseases have devastated Kentucky blueberry plantings. In most of these instances, plants were growing under stressful conditions such as drought or high pH soils. For most Kentucky locations, blueberry diseases are not a serious problem as long as the site is well-drained, soil pH is near 5.0, soil has adequate organic matter, good sanitation pruning practices are used, and the plants are watered regularly during dry periods. With good growing conditions and following good cultural control practices, use of fungicides can be minimized.

Disease management advice can be found in U.K. Cooperative Extension Publication ID-94, *Midwest Commercial Small Fruit and Grape Spray Guide 2009* and the *Midwest Small Fruit Pest Management Handbook* available at Kentucky County Extension Offices.

Insight for Farmers' Market Vendors

By Dr. Tim Woods and Sara Williamson, U.K.

Extension Agricultural Economist and Extension Associate Graduate Student respectively

The Kentucky Food Consumers' Panel reports that 72% (of the 600 surveyed) Kentucky households visited a farmers' market last year. With the rapid growth of farmers' markets and food vendors across the state, proper tips for marketing are more necessary than ever.

Here are some tips for selling your food at the farmers' market.

1. Build Attractive Displays. Although you may take for granted that consumers know what you're selling, a business sign and clear prices are key, especially in markets with several vendors. Customers will gravitate toward the tables that are clean and colorful.

2. Communicate Origin. The farmers' market is not a replacement for consumers' grocery store visits. They make the special trip to buy products that are "local", from farmers' they know and trust. As a result, it's a growing trend for customers to look for or ask about food origin, and vendors can save some questioning by listing the county name or "homegrown" on company or price signs.

3. Set a Price. For produce items, vendors can visit the UK New Crop Opportunities Center online and look at weekly farmers' market reports. This helpful tool can tell you what markets in the area were charging last week and during the same time in the past five years. Of course, quality and quantity are major determinants of the final price. Undesirable blemishes that are prevalent, or products that can be found all over the market, will tend to bring lower prices. For proteins, such as meat and eggs, profits can be hard to attain at rural markets where shoppers are looking for economical choices. Producers should keep good production records and determine a price that is profitable, yet attractive to the customer.

4. Offer Extra Value. Frequent shoppers at the farmers' market have a tendency to find vendors they like and stick with them. This type of brand loyalty is very beneficial to those produc-

ers that offer consistent quality and service. For new market vendors, one way to earn new business is by offering extra value. Providing recipes, samples, and a welcoming attitude can cost little and gain much for your business. Certifications such as "Good Agricultural Practices", USDA Organic, etc. should be clearly posted. In addition, keep customers coming back with a newsletter or quick reminder of what might be available next week!

Looking for more information about farmers' markets? Visit the Kentucky Farmers' Market Association online at www.kentuckyfarmersmarket.org or call the Kentucky Department of Agriculture's Office of Marketing & Promotion, 502-564-4983. For more marketing tips, prices, or production profiles, visit the UK New Crop Opportunities Center www.uky.edu/Ag/NewCrops/.

Family Consumer Science Publications on Canning and Freezing Fruit

The economy has increased consumer interest in canning and freezing. Below is a list of publications that deal with this subject that are available through County Extension Offices and from the web.

Selecting, Preparing & Canning Fruit and Fruit Products (FCS3-326)

<http://www.ca.uky.edu/agc/pubs/fcs3/fcs3326/fcs3326.pdf>

Home Freezing Basics (FCS3-334)

<http://www.ca.uky.edu/agc/pubs/fcs3/fcs3334/fcs3334.pdf>

Freezing Fresh Fruits (FCS3-336)

<http://www.ca.uky.edu/agc/pubs/fcs3/fcs3336/fcs3336.pdf>

Drying Food at Home (H.E. 3-501)

<http://www.ca.uky.edu/agc/pubs/FCS3/FCS3501/FCS3501.pdf>

The above and many additional publications on Food and Nutrition can be found at the following site: <http://www.ca.uky.edu/hes/index.php?p=207>

Calculating Fertilizer Cost

By Dr. Frank Sikora, U.K. Regulatory Services, Soil Testing Program

With tough economic times, everyone is trying to figure out how to cut costs while maintaining productivity. An important cost to consider in farming is fertilizer. The essential first step to consider how much fertilizer you need is to take a soil sample from the field and send it to a laboratory for testing. The University of Kentucky offers soil testing if you submit your sample to any of the County Extension Offices. The soil is tested in the lab and a recommendation for nitrogen, phosphorus, and potash will be made based on the crop to be grown.

A calculator is available on the web that will allow you to determine the cost of fertilizer based on nitrogen, phosphorus, and potash recommendations from a soil test. The calculator is called Mult Fert Econ and can be found on the internet at: <http://soils.rs.uky.edu/calculators/index.php>

In addition to the nutrient recommendation in pounds per acre, you enter total number of acres, cost of fertilizer in dollars per ton, and any additional

side-dress nitrogen to be added. An amount needed for each of the fertilizers in pounds per acre and a cost for the fertilizer in dollars per acre will be calculated. A total cost for the whole field is also calculated. You can enter up to three different options in nutrient recommendations and compare the costs from the different options. When entering fertilizers such as urea, DAP, and muriate of potash, a calculation of fertilizer needs will exactly match nutrient recommendations. When entering fertilizers with multiple nutrients, such as 9-23-30, there may be a surplus or deficit for a particular nutrient. The calculator will also allow you to enter animal manure as a fertilizer which contains multiple nutrients.

If you have any questions on soil testing or the fertilizer cost calculator, feel free to contact your local county extension agent. County contact information can be found online at: <http://www.ca.uky.edu/county/> (Regulatory Services News, Second Quarter 2009 — 5)

Multiple Fertilizer Rate Calculator (with costs) HOME

Data Input

Sample ID: Acres:

		N	P ₂ O ₅	K ₂ O
Option 1:	<input type="text"/>	lbs/acre: <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Option 2:	<input type="text"/>	lbs/acre: <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Option 3:	<input type="text"/>	lbs/acre: <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Fertilizer	Cost (\$/ton)			
<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

supplemental

	N
Option 1:	lbs/acre: <input type="text" value="0"/>
Option 2:	lbs/acre: <input type="text" value="0"/>
Option 3:	lbs/acre: <input type="text" value="0"/>

Fertilizer	Cost (\$/ton)	
<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Output

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 Fruit Facts listserv.

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

To subscribe type "ListServer,l-s-v" 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).

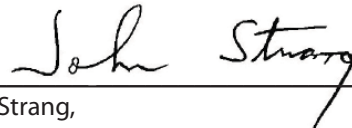
In the message body, enter the following two lines (nothing more!):

subscribe KY-FRUITFACTS

Or, to unsubscribe, the lines:

unsubscribe KY-FRUITFACTS

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-ky-fruitfacts@lsv.uky.edu



John G. Strang,
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