

Kentucky Fruit Facts

January 2006 (1/2006)

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

Upcoming Meetings

Jan. 28 Grapevine Pruning Workshop,
Washington County Extension Office, Springfield.
Contact Dennis Morgeson phone: 859-336-7741 See
program below.

**Feb. 4-6 Midwest Regional Grape & Wine
Conference**, Osage Beach, MO. Contact: 800-392-
WINE

Feb. 7 Southern Illinois Tree Fruit School,
Mount Vernon, IL. Contact Elizabeth Wahle phone:
618-692-9434.

Feb. 7 Southern Illinois Tree Fruit School,
Hardin, IL. Contact Elizabeth Wahle phone: 618-692-
9434.

Feb. 12-14 Ohio Grape-Wine Short Course,
Wilmington (Southern), OH. Register on-line from the
OWPA website: <http://www.ohiowines.org>

**Feb. 16 Commercial Vegetable Production &
Marketing Seminar**, Boone County Extension Office,
Burlington 9:00 a.m. to 3:15 p.m. Participants must
preregister for free lunch. Call 859-586-6101.

**Feb. 17-18 Regional Farmers' Market
Summit**, Jenny Wiley State Resort Park, Prestonsburg.
Contact Janet Eaton 502-564-0260 x 235.



Feb. 18 Bluegrass Beekeeping School,
Marriott Griffin Gate Hotel, Lexington. This meet-
ing will cover beginning beekeeping as well as
lectures for seasoned beekeepers. For program and
registration information see: [http://www.kyagr.com/
state_vet/bees/index.htm](http://www.kyagr.com/state_vet/bees/index.htm) or call Phil Craft: 502-564-
3956.

**Feb. 17-18 Tennessee Viticultural & Oe-
nological Society Annual Meeting**, Meadowview
Marriott and Convention Center, Kingsport, TN.
Contact Terry Way at 423-239-4060.

**Feb. 21 Clay and Laurel County Fruit
Tree Pruning and Grafting Workshops**, London.
Contact Jeff Casada 606-598-2789 or Bonnie
Sigmon 606-864-4167.

**Feb. 21-22 Ohio River Valley Farm
Marketing Conference**, Clifty Falls State Park,
Madison, IN. The conference will address: as-
sessing and evaluating new market opportunities,
market development, and marketing for value-added
agriculture. Registration \$40 before 2/6/06. Contact
Sharon Ellison 317-290-3100 x 429, e-mail: Sharon.
ellison@in.usda.gov

Feb. 24-25 Grape Field Day, U.K. Re-
search and Education Center, Princeton. Contact
Kaan Kurtural 859-257-1332 or Joe Masabni
270-365-7541 x 247.

Inside This Issue:

- 1 -- Upcoming Meetings
- 2 -- Grape Pruning Workshop - Washington Co
- 3 -- Kentucky Farm Bureau's Certified Roadside
Market Program
- 3 -- 2006 Commercial Fruit Spray Guides and
the 2005 Research Report are Printed
- 3 -- Overview of the Agricultural Diversification
Program for Commercial Vineyards
- 5-9 - Substitute pages for ID-92.

Feb. 28-Mar. 1 Greenhouse Tomato Short Course, Jackson, MS. See agenda at: <http://www.greenhousetomatosc.com>
Contact Richard Snyder 601-892-3731

Mar. 1 Vegetable Production for Farmers' Markets, Catlettsburg. Contact Lori Bowling 606-739-5184.

Mar. 2 Apple Tree Grafting Workshop, Breathitt County Extension Office, Jackson. Contact Lowell Hamilton 606-666-8812.

Mar. 3 Northern Piedmont Specialty Crops School, Person County Cooperative Extension Service office, 304 South Morgan Street, Roxboro, NC. This years school will feature many ideas for specialty crop growers to be successful in their ventures. A diversified tobacco grower will explain how he converted his N.C. tobacco farm into growing vegetables. Extension workers will inform growers about growing blueberries and fresh market table grapes, and how to creatively market crops. Registration is \$25 for the first person in the family or business and \$15 for the second individual and this includes lunch. Pre-registration is required by February 24 to guarantee a seat and lunch. Contact Carl Cantaluppi at carl_cantaluppi@ncsu.edu or call at 919-603-1350.

Mar. 7-8 Illinois Small Fruit and Strawberry School, Mount Vernon Holiday Inn, Mount Vernon, IL. Contact Elizabeth Wahle phone: 618-692-9434 or Bronwyn Aly phone: 618-695-2444.

Mar 10-11 Regional Farmers' Market Summit, Lake Cumberland State Resort Park, Wayne county. Contact Janet Eaton, 502-564-0260 x 235.

Mar. 14 Breathitt County Farm and Home Night - Fruit Production for Home Gardeners, Breathitt County High School, Jackson, Lowell Hamilton 606-666-8812.

Mar. 16 Wolfe County Farm and Home Night - Fruit Production for Home Gardeners, Campton. Contact Ted Johnson 606-668-3712.

Mar. 18 Plastic Layer Vegetable Transplant Demonstration, Catlettsburg. Contact Lori Bowling 606-739-5184.

Mar. 25 Floyd County Farm and Garden Expo. - Fruit Production for Home Gardeners, Prestonsburg. Contact Anthony Tackett.

Apr. 22 Kentucky Nut Growers' Association Spring Meeting, Elizabethtown Extension office, Elizabethtown. Contact: Kirk Pomper 502-597-5942, e-mail: kpomper@dcr.net

Grapevine Pruning Workshop

Saturday 28 January 2006 at 1:00 PM
Washington County Extension Office

Agenda (All times are EDT)

1:00 PM	Registration
1:15 PM	Dormant Pruning Basics for Grapevines -Dr. Kaan Kurtural UK
1:45 PM:	Travel to grower site#1
2:00 PM:	Pruning and Training Young Grapevines -Dr. Kaan Kurtural UK
3:00 PM:	Travel to grower site#2
3:15 PM:	Pruning and Training Mature Grapevines -Dr. Kaan Kurtural UK
4:00 PM	Adjourn

For Registration information please contact:

Dennis Morgeson,
County Extension Agent for Horticulture
Phone: 859 336-7741
e-mail: dennis.morgeson@uky.edu

Directions to Washington County Cooperative Extension Office:

Directions from Lexington: Take the Bluegrass Parkway to Exit 42, turn left at top of ramp, take Hwy 555 to Springfield, (approximately 11 miles), Continue on through the first light, take the second turn on the left onto Progress Avenue. We are the third building on the left.

Directions from Louisville: Take Hwy 150 to Bardstown, Turn left at the light on to John Rowan Blvd. and continue on through the next several lights. (this is a bypass type road) The road will end with a light, turn left and continue on to Springfield. At the first intersection in Springfield, turn left and take the next right onto Progress Avenue. We are the third building on the left.

Directions to the Vineyards from the Extension Office:

Boone's Vineyard (Site#1)

From the Extension Office (Progress Avenue) turn right onto Hwy 555, turn left at the next intersection which will be Hwy 528 (Lincoln Park Road). Travel approximately 5 miles and turn left onto Mudd-Kelly Lane. The Boone's Vinyard is where the gravel road begins (approximately .6 of a mile).

Hatchett's Vineyard (Site#2)

From the Boone's, turn left from Mudd-Kelly Lane onto 528. The road will fork onto Beechland Road (you will be in the middle of Lincoln Homestead State Park at a stop sign.) Continue straight and Jim Hatchett's Vinyard is directly to your right.

Kentucky Farm Bureau's Certified Roadside Farm Market Program

by J. K. Henshaw, Director of Commodity Relations
Kentucky Farm Bureau Federation

Bringing more customers to your market is the purpose of the Kentucky Farm Bureau's Certified Roadside Farm Market Program. Last year by collectively advertising with 22 ads in five statewide publications, we helped our markets reach more customers for a fraction of the cost of advertising individually, reaching 2.3 million households.

Promotion of vineyards and wineries is a natural fit to our program. Services provided last year included color advertising; internet listings at <http://www.kyfb.com>; roadside brochures; educational marketing tours; and our Attractions and Festivals guides. We plan to offer similar programs again during the coming year.

This year we are looking for more opportunities to work with each member market, targeting local media outlets for promotion and agri-tourism development. All of these services are available to members of the Certified Roadside Farm Market Program at the cost of \$250 per market per year. First-time members receive a \$50 discount off this cost. Applications are due by February 28.

If you have an interest in expanding your customer base and increasing sales contact J. K. Henshaw for more information by February 25 at 502-495-5106.

2006 Commercial Fruit Spray Guides and the 2005 Research Report are Printed

The 2006 Commercial Tree Fruit Spray Guide (ID-92), Midwest Commercial Small Fruit and Grape Spray Guide (ID-94), Vegetable Production Guide for Commercial Growers (ID-36), and 2005 Fruit and Vegetable Crops Research Report (PR-521) are now printed and should be available through your local county extension office over the next month. There is no charge for these publications.

ID-94, ID-36 and PR-521 are now posted on our Horticulture Department web page at: <http://www.uky.edu/Ag/Horticulture> Click on Commercial Horticulture and then Fruit.

NOTE: Due to an oversight, the tree fruit herbicide recommendations in ID-92 were not completely updated. The insert found here should be substituted for the Herbicide Recommendations in ID-92.

Overview of the Agricultural Diversification Program for Commercial Vineyards

by S. Kaan Kurtural, Extension Viticulturist

In an effort to promote and advance the Kentucky Grape and Wine Industries, a program sponsored by the Kentucky Agricultural Development Fund and the University of Kentucky was established on 21 September 2001 and was amended on 16 December 2005. The 50/50 cost share program is intended to provide incentives to growers to devote new acreage exclusively to the production of wine and table grapes.

The goals of this program are listed in the Kentucky Agricultural Development Fund: Agricultural Diversification Program II. Eligible Investment Areas B. Commercial Fruit and Sweet Sorghum Production. Questions concerning these guidelines should be directed to the Governor's Office of Agricultural Policy at (502) 564-4627. Applications for funds must be directed through the local County Agricultural Development Councils. **A grower may obtain up to a maximum of \$5,000 per year as a 50/50 cost share through the county extension office. The amount available through the county extension office depends on the county and will range from \$0 to \$5,000.**

What are the eligible cost share items?

In contrast to previous years the amendments to the program in this year include seeds, cuttings, potted and rooted cuttings, scion/rootstock combinations and other materials related to production of grapes in conformance with University of Kentucky recommendations. Reimbursement for grapevine cuttings, potted and rooted cuttings, scion/rootstock combinations that are on the Grapevine Cultivar Requirements List (Table 1), reviewed annually by the State Viticulturist, are also eligible investment items.

How does the cost-share system work?

Prospective grower contacts their UK Cooperative Extension Service (CES) County Agricultural and Natural Resources or Horticulture Agent indicating that he/she would like to invest in a vineyard. The CES assists in conducting soil tests and contacts the UK Horticulture Department. UK Horticulture Department, at the request of the agent, conducts a site visit and digitally maps grower site. UK Horticulture Department will also interpret the results of the soil test and make recommendations for vineyard site preparation.

UK Horticulture Department, based on the site visit, will then advise the prospective grower if the site is suitable for commercial grape production and give cultivar recommendations based on the approved cultivar list. The UK Horticulture Department will also give site preparation

recommendations according to soil test results and recommended cultivars. Also, based on the site visit and the cultivar recommendations, the UK Horticulture Department will give vine spacing and trellising system recommendations.

The County agent will oversee the land/site preparation as recommended by the UK Horticulture Department and also oversee that the cultivar recommendations are followed and report to the UK Horticulture Department that the planting is completed. UK Horticulture will then visit the site to digitally measure planted area and inventory the percentage of cultivars planted.

How does the application procedure work?

Interested prospective grape growers can view the application procedures and download the forms by visiting the following URL: <http://agpolicy.ky.gov/funds/documents/diversification.pdf>.

European Grape Cultivars

Due to the lack of field data and experience on performance of several European wine grapes in Kentucky, interested parties should approach planting new varieties with caution. Before establishing a vineyard, you should consider the viticultural characteristics and market demand for the varieties. The major challenge in growing grapes is winter injury, which is likely to occur during the life of the grapevine. The frequency of occurrence of extreme subfreezing temperatures depends on the site; best sites have less frequent (e.g. once in 8 to 10 years) winter damage than poor sites (every 2 to 3 years). Generally, we expect to observe winter injury to dormant buds at about -8F in European varieties. Note that the nature and extent of winter injury are not entirely predictable due to the complex interaction between genotype, the site and the climate. Other considerations for variety selection include disease susceptibility, ripening season (early-, mid-, or late-season), yield potential, growth habit, and cultural requirements.

Table 1. Grape cultivar requirements

At least 75% of the acreage must be planted with the following, American, American-French hybrid or French-American hybrid varieties to apply for the 50/50 cost-share program. Currently, it is not recommended (except for the two cultivars listed below) to plant grapes of European heritage (*Vitis vinifera* L.) in Kentucky until cultivars and/or their clones have been identified that are suitable to the state's climate and soils by the University of Kentucky.

<u>Red wine grape cultivars</u>	<u>Winter hardiness¹</u>	<u>Maturity²</u>
Chambourcin ³	Moderate	September
Chancellor	Moderate	September
Concord	Very hardy	October
Frontenac	Very hardy	August
Foch	Very hardy	August
GR7	Hardy	September
Norton ⁴	Hardy	October
NY73	Hardy	September
St. Vincent	Very hardy	August

White wine grape cultivars

Cayuga white	Hardy	August
Chardonnay ⁵	Hardy	September
Niagara	Hardy	August
La Crescent	Very hardy	August
NY76	Hardy	September
Seyval blanc	Moderate	September
Vidal blanc	Hardy	October
Traminette ^{6,7}	Hardy	September

Seedless table grape cultivars

Jupiter ⁸	Moderate	August
Mars	Hardy	August
Marquis ⁸	Hardy	August
Neptune ⁸	Moderate	September
Reliance ⁹	Hardy	September

European Grape Cultivars

<u>White cultivars</u>	<u>Winter hardiness</u>	<u>Maturity</u>
Viognier #1	Tender	August
<u>Red cultivars</u>	<u>Winter hardiness</u>	<u>Maturity</u>
Cabernet franc 214, 332	Tender	Sept/Oct

¹Winter hardiness is resiliency of grape buds exposed to -15F for one hour under normal cropping conditions.

²Maturity: Fruit composition values of 22.4% total soluble solids, juice pH of 3.30 and titratable acidity of 0.7 mg/L

³It is recommended that Chambourcin be grafted on a rootstock.

⁴Although the Norton grapevine itself is very hardy, it needs ample heat units (>4000 GDD) to ripen a full crop.

⁵It is recommended that Chardonnay be grafted on a rootstock.

⁶It is recommended that Traminette be grafted on a rootstock.

⁷It is recommended that Norton and Traminette be trained to the Geneva Double Curtain Training System.

⁸Jupiter, Marquis and Neptune are susceptible to downy mildew.

⁹Reliance berries are prone to pre-harvest shatter under warm growing conditions.

Herbicide Recommendations for Apple and Pear 2006

Weed Problem	Material & Rate/A	Comments and Limitations
Preemergence		
Annual and perennial grasses and broadleaves	Casoron 4G (granular) (dichlobenil 4% ai) at 100-150 lb	<u>Perennial Weeds:</u> Apply from Nov. 15 to Feb. 15 as a soil surface application at 150 lb. No need to remove old weed growth before application. Can also be applied incorporated in late fall or early spring before May 1 and incorporated immediately. <u>Annual Weeds:</u> Apply in early spring after cultivation before weeds emerge. Rain or irrigation is needed for activation. A shallow incorporation is recommended. Apply 4 weeks after transplanting after soil has completely settled.
Annual grasses and broadleaves	Devrinol 50DF (napropamide 50% ai) at 8 lb in min. 20 gal of water	Apply from late fall prior to soil freeze-up to early spring prior to weed emergence. If no rainfall occurs within 24 hours after treatment, cultivate or irrigate 1" to activate. Apply alone to weed-free soil or in tank mix with Roundup or Gramoxone. Do not allow spray to contact fruit or foliage. Max. 1 application per season. PHI = 35 days.
Annual broadleaves and suppression of grasses	Goal 2XL (oxyfluorfen 2 lb ai/gal) at 5-8 pt in min. 40 gal of water	<u>Dormant Application Only:</u> Effective both preemergence (5-8 pt) and postemergence (2-8 pt) as a directed spray on weeds <4". Do not apply from bud swell till harvest completion. Can be mixed with other preemergence herbicides or with Roundup or Gramoxone. Max. rate is 8 pt per year.
Annual grasses and broadleaves	Karmex 80DF (diuron 80% ai) at 4 lb in 25-40 gal of water	Effective both preemergence and postemergence (min. 70F with high humidity). Apply under trees established at least 1 year. Do not treat trees grafted on full-dwarf rootstocks. Max. 1 application per year. Apple only: May be tank mixed with Sinbar (1.5-2 lb each) in orchards established at least 2 years. Karmex/Sinbar can be applied in the spring before weeds emerge or after harvest in the fall.
Annual and perennial grasses and certain broadleaves	Kerb 50WP (pronamide 50% ai) at 3-6 lb on light soils to 4-8 lb on heavy soils in 40-50 gal of water	Apply as a directed spray in the fall after harvest prior to soil freeze-up or early winter when temperatures are below 55F. Rainfall or irrigation is required to activate. Max. 1 application per year and 8 lb per acre per year. Kerb has early postemergence activity also. <u>Restricted use pesticide.</u>
Annual grasses and broadleaves	Princep 4L (simazine 4 lb ai/gal) at 2-4 qt in min. 40 gal of water	Apply under trees established at least 1 year. Apply in spring before weeds emerge avoiding contact with fruit, foliage, or stems.
Annual grasses and broadleaves	Sinbar 80WP (terbacil 80% ai) at 2.5-4 lb in min. 20 gal of water	<u>Bearing Apple Only:</u> Apply either in the spring before weeds emerge or during early stages of seedling growth or after harvest in the fall. Trees must be established at least 3 years. Do not contact foliage or fruit with spray or mist. PHI = 60 days. <u>Newly-Planted and Non-Bearing Trees, IN, OH, WI only.</u> Use 0.5-1 lb/A after rainfall or irrigation when ground around trees has settled. Make 1-2 applications per season. Max. rate is 1 lb per year.
Annual grasses and broadleaves and suppression of yellow nutsedge	Solicam DF (norflurazon 78.6% ai) at 5 lb in min. 20 gal of water	Apply a directed spray to settled and firm soil from fall to early spring before weeds emerge. Soil should be settled and firm. Rainfall or irrigation 0.5" is needed within 4 weeks. Do not contact fruit or foliage. Do not apply after bud break on sandy loam soils. Check label for maximum amount allowed per year depending on soil type. Apple: Can be applied immediately after planting. Pear: min. 12 months after planting before first application. PHI = 60 days.
Annual grasses and certain broadleaves	Surflan 4AS (oryzalin 4 lb ai/gal) at 2-6 qt in 20-40 gal of water	Make a single band or broadcast application to the ground beneath vines before weeds emerge. Apply alone to weed-free soil or postemergence mixed with Roundup or Gramoxone. Rainfall or irrigation 0.5" is required for activation. Min 2.5 months between applications. Max. rate is 12 qt per year.

Herbicide Recommendations for Apple and Pear

Weed Problem	Material & Rate/A	Comments and Limitations
Postemergence		
Annual broadleaves	Aim 2EC (carfentrazone 2 lb ai/gal) at 2 fl.oz. in 20 gal of water	Apply any time during the season. Always add non-ionic surfactant 0.25% v/v or crop oil 1% v/v. Mix with Roundup or Gramoxone for broader weed control. Max. 7.9 fl.oz. per year. Min. 14 days between applications. PHI = 3 days. <u>Sucker Management:</u> Apply when suckers are green. Do not allow spray to contact fruit, foliage, or green bark.
Annual and some perennial broadleaves	Amine4 (2,4-D) or Saber at 3 pt in 5-25 gal of water	Apply as directed spray to annuals 1-2" high and to perennials up to early bud stage. Do not allow spray to contact leaves, fruit, or limbs of tree. Use coarse spray and low pressure to avoid drift. Non-bearing trees must be established at least 1 year. On bearing trees. Do not apply during bloom or after before irrigation. Do not apply to bare ground. Max. 2 applications per year and 75 days between applications. PHI = 14 days.
Most annual and perennial grasses	Fusilade DX 2EC (fluazifop-P 2 lb ai/gal) at 16-24 fl.oz. in 25 gal of water	<u>Non-Bearing Only:</u> Apply as a directed spray to actively growing grasses before tillering. Always add crop oil 1% v/v or non-ionic surfactant 0.25% v/v. Avoid contact with foliage. Rainfast in 1 hour. Max. rate is 72 fl.oz. per year. Min. 5 days between applications. PHI = 1 year.
Annual broadleaves	Goal 2XL	See 'Preemergence' section above for details.
Most annual grasses and broadleaves weeds and top kill of perennial weeds	Gramoxone Max 3L (paraquat 3 lb ai/gal) at 1.7-2.7 pt in 10-20 gal of water for weeds < 6" in height, and 20-30 gal of water if > 6"	Apply as directed spray to actively growing weeds. Repeat applications are necessary to give sustained control. Apply as a coarse spray. Always add nonionic surfactant 0.25% v/v or crop oil 1% v/v. Do not allow spray to contact leaves, fruit, or green stems. Max. 5 applications per year. <u>Restricted Use Pesticide.</u>
Annual grasses and broadleaves	Karmex 80DF	See 'Preemergence' section above for details.
Annual and perennial grasses	Poast 1.5EC (sethoxydim 1.5 lb ai/gal) at 1.5-2.5 pt in 25 gal of water	Apply as a directed spray to actively growing grass before tillering. Always add crop oil 1.25% v/v. Max. rate is 2.5 pt per application and 7.5 pt per season. PHI = 14 days.
Annual and perennial grasses and broadleaves	Rely 1L (glufosinate 1 lb ai/gal) at 3-6 qt in min. 20 gal of water	<u>Apple Only:</u> Do not apply within 1 year of transplanting. Apply as a directed spray to actively growing weeds. Do not apply on desirable foliage or drift on foliage, green or uncallused bark. Max. 18 qt per year for bearing and 12 qt per year for non-bearing grape. Max. rate is 4.5 gal per year. PHI = 14 days. <u>Sucker Control:</u> a split application approximately 4 wk apart at 4 qt/acre is recommended or spot spray with 3 oz/gal of water. Suckers should not exceed 12" long.
Annuals and some perennial grasses and broadleaves	Roundup UltraMax II 5.5EC (glyphosate 5.5 lb ai/gal) at 0.5-5 qt in 10-40 gal of water. Touchdown Total 4EC at 0.7-3.6 qt in 10-30 gal of water (many other formulations)	Rate depends on weed species and stage of growth. See label for details. Apply as preplant broadcast application or in fall for control of roots and rhizomes of perennial weeds or as a directed spray or wiper application (20-100% solution) to actively growing weeds in established plantings. Always add AMS 8.5-17 lb/100 gal in hard water or drought conditions. Do not allow spray to contact any part other than mature bark. Does not provide residual control; can be mixed with labeled preemergence herbicides. PHI = 14 days.

Herbicide Recommendations for Peach, Nectarine, Plum, and Cherry

Weed Problem	Material & Rate/A	Comments and Limitations
Preemergence		
Annual and perennial grasses and broadleaves	Casoron 4G (granular) (dichlobenil 4% ai) at 100-150 lb	Cherry Only. Perennial Weeds - Apply from Nov. 15 to Feb. 15 as a soil surface application at 150 lb. No need to remove old weed growth before application. Can also be applied incorporated in late fall or early spring before May 1 and incorporated immediately. Annual Weeds - Apply in early spring after cultivation before weeds emerge. Rain or irrigation is needed for activation. A shallow incorporation is recommended. Apply 4 weeks after transplanting after soil has completely settled.
Annual grasses and broadleaves	Devrinol 50DF (napropamide 50% ai) at 8 lb in min. 20 gal of water	Apply from late fall prior to soil freeze-up to early spring prior to weed emergence. If no rainfall occurs within 24 hours after treatment, cultivate or irrigate 1" to activate. Apply alone to weed-free soil or in tank mix with Roundup or Gramoxone. Do not allow spray to contact fruit or foliage. Max. 1 application per season. PHI = 35 days.
Annual broadleaves and suppression of grasses	Goal 2XL (oxyfluorfen 2 lb ai/gal) at 5-8 pt in min. 40 gal of water	Dormant Application Only: Effective both preemergence (5-8 pt) and postemergence (2-8 pt) as a directed spray on weeds <4". Do not apply from bud swell till harvest completion. Can be mixed with other preemergence herbicides or with Roundup or Gramoxone. Max. rate is 8 pt per year.
Annual grasses and broadleaves	Karmex 80DF (diuron 80% ai) at 2-5 lb in 25-40 gal of water	Effective both preemergence and postemergence (min. 70F with high humidity). Apply under trees established at least 3 years. Max. 1 application per year. PHI = 3 months. Peach only: May be tank mixed with Sinbar (2 lb each) in orchards established at least 2 years. Karmex/Sinbar can be applied in the spring before weeds emerge or after harvest in the fall.
Annual and perennial grasses and certain broadleaves	Kerb 50WP (pronamide 50% ai) at 3-6 lb on light soils to 4-8 lb on heavy soils in 40-50 gal of water	Apply as a directed spray in the fall after harvest and prior to soil freeze-up or early winter when temperatures are below 55F. Rainfall or irrigation is required to activate. Max. 1 application per year and 8 lb per year. Kerb has early postemergence activity also. <u>Restricted use pesticide.</u>
Annual grasses and broadleaves	Princep 4L (simazine 4 lb ai/gal) at 1.6-4 qt in min. 40 gal of water	Apply under trees established at least 1 year. Apply in spring before weeds emerge avoiding contact with fruit, foliage, or stems. Peach only: use only in AR, MO, and states east of Mississippi river. Plum and sweet cherry only: use only in MO and states east of the Mississippi river.
Annual grasses and broadleaves	Sinbar 80WP (terbacil 80% ai) at 2.5-4 lb in min. 20 gal of water	Bearing Peach Only: Apply either in the spring before weeds emerge or during early stages of seedling growth or after harvest in the fall. Trees must be established at least 3 years. Do not contact foliage or fruit with spray or mist. PHI = 60 days. Newly-Planted and Non-Bearing Trees, IN, OH, WI only. Use 0.5-1 lb after rainfall or irrigation when ground around trees has settled. Make 1-2 applications per season. Max. rate is 1 lb per year.
Annual grasses and broadleaves and suppression of yellow nutsedge	Solicam DF (norflurazon 78.6% ai) at 3.75-5 lb in min. 20 gal of water	Apply a directed spray to settled and firm soil from fall to early spring before weeds emerge. Soil should be settled and firm. Rainfall or irrigation 0.5" is needed within 4 weeks. Do not contact fruit or foliage. Do not apply after bud break on sandy loam soils. Check label for maximum amount allowed per year depending on soil type. Peach, Nectarine: min. 6 months; Plum: min. 12 months; Cherry: min. 18 months after planting before first application. PHI = 60 days.
Annual grasses and certain broadleaves	Surflan 4AS (oryzalin 4 lb ai/gal) at 2-6 qt in 20-40 gal of water	Make a single band or broadcast application to the ground beneath vines before weeds emerge. Apply alone to weed-free soil or postemergence mixed with Roundup or Gramoxone. Min. 0.5" rainfall or irrigation is required for activation. Min 2.5 months between applications. Max. rate is 12 qt per year.

Herbicide Recommendations for Peach, Nectarine, Plum, and Cherry

Weed Problem	Material & Rate/A	Comments and Limitations
Annual grasses and broadleaves	Treflan HFP 4EC (trifluralin 4 lb ai/gal) at 1.5-4 pt in 5-40 gal of water	<u>Peach, Plum Only</u> : Incorporate within 24 hours to reduce loss of activity. <u>New Plantings</u> : apply 1.25-2 pt and incorporate before transplanting. <u>Established Plantings</u> : apply 2-4 pt and incorporate prior to period of weed germination or after removal of weeds with tillage or herbicides.
Postemergence		
Annual broadleaves	Aim 2EC (carfentrazone 2 lb ai/gal) at 2 fl.oz. in 20 gal of water	Apply any time during the season. Add non-ionic surfactant (2 pt/100 gal) or crop oil concentrate (1 gal/100 gal). Mix with Roundup or Gramoxone for broader weed control. Max. 7.9 fl.oz. per year. Min. 14 days between applications. PHI = 3 days. <u>Sucker Management</u> : Apply when suckers are green. Do not allow spray to contact fruit, foliage, or green bark.
Annual and some perennial broadleaves	Amine4 (2,4-D) or Saber at 3 pt in 5-25 gal of water	Apply as directed spray when annuals are 1-2" high and when perennial weeds are in pre-bud to early bud stage. Do not allow spray to contact leaves, fruit or limbs of tree. Use coarse spray and low pressure to avoid drift. Non-bearing trees must be established 1 year. On bearing trees, PHI = 40 days. Do not apply during bloom or after before irrigation. Do not apply on bare ground. Max. 2 applications per year and 75 days between applications.
Most annual and perennial grasses	Fusilade DX 2EC (fluazifop-P 2 lb ai/gal) at 6-16 fl.oz. in 25 gal of water	Apply as a directed spray to actively growing grasses before tillering. Always add non-ionic surfactant 0.25% v/v or crop oil 1% v/v. Rainfast in 1 hour. Avoid contact with foliage. Max. rate is 72 fl.oz./year. Min. 5 days between applications. PHI = 14 days.
Annual broadleaves	Goal 2XL	See 'Preemergence' section above for details.
Most annual grasses and broadleaves weeds and top kill of perennial weeds	Gramoxone Max 3L (paraquat 3 lb ai/gal) at 1.7-2.7 pt in 10-20 gal of water for weeds < 6" in height, and 20-30 gal of water if > 6"	Apply as directed spray to actively growing weeds. Repeat applications are necessary to give sustained control. Apply as a coarse spray. Always add nonionic surfactant 0.25% v/v or crop oil 1% v/v. Do not allow spray to contact leaves, fruit, or green stems. Max. 3 applications per year. PHI = 14 days (peach), 28 days (plum, cherry). <u>Restricted Use Pesticide</u> .
Annual grasses and broadleaves	Karmex 80DF	See 'Preemergence' section above for details.
Annual and perennial grasses	Poast 1.5EC (sethoxydim 1.5 lb ai/gal) at 1.5-2.5 pt in 25 gal of water	Apply as a directed spray to actively growing grasses before tillering. Always add crop oil 1.25% v/v. Do not apply more than 2.5 pt per application and 5 pt per season. Peach, plum, and nectarine are very tolerant to Poast and may be applied over-the-top of small non-bearing trees. PHI = 25 days.
Annuals and some perennial grasses and broadleaves	Roundup UltraMax II 5.5EC (glyphosate 5.5 lb ai/gal) at 0.5-5 qt in 10-40 gal of water. Touchdown Total 4EC at 0.7-3.6 qt in 10-30 gal of water (many other formulations)	Rate depends on weed species and stage of growth. See label for details. Apply as preplant broadcast application or in fall for control of roots and rhizomes of perennial weeds or as a directed spray or wiper application (20-100% solution) to actively growing weeds in established plantings. Always add AMS 8.5-17 lb/100 gal in hard water or drought conditions. Do not allow spray to contact any part other than mature bark. Does not provide residual control; can be mixed with labeled preemergence herbicides. PHI = 14 days.
Annual and perennial broadleaves	Stinger 3EC (clopyralid 3 lb ai/gal) at 0.3-0.6 pt in min. 10 gal of water	Make 1-4 applications/crop/year, not to exceed a total of 2/3 pt. For control of Canada thistle, apply after majority of basal leaves have emerged but prior to bud stage and at least 30 days before harvest. Stinger may be tank mixed with other herbicides labeled on stone fruits. PHI = 30 days.
Annual and perennial broadleaves	Weedaxe 1.8EC (dimethylamine salt of 2,4-D 0.14 lb ai/gal) at 32-64 fl.oz. in 5-100 gal of water	Apply as a directed postemergence non-selective spray alone or mixed with other herbicides to trees at least 1 year old. Do not apply to crops under stress. Max. 128 fl.oz. per season and 2 applications per season. Min. 75 days between applications. PHI = 40 days.

Herbicide Recommendations for Non-Bearing Fruit Trees Only

Weed Problem	Material & Rate/A	Comments and Limitations
Annual broadleaves and yellow nutsedge	Basagran 4L (bentazon 4 lb ai/gal) at 1.5-2 pt in min. 20 gal of water	Apply as a directed postemergence. Always add crop oil 1% v/v. Avoid spraying stems, bark, or foliage. Max. 2 pt per application and 4 pt per season. PHI = 1 year.
Annual broadleaves and suppression of grasses	Chateau 51WDG (flumioxazin 51% ai) at 6-12 oz in 10-30 gal of water	Do not apply to trees less than 1 yr old, unless with hooded or shielded application. Apply alone preemergence or tank mix with Roundup or Gramoxone postemergence with a crop oil 1% v/v or NIS 0.25% v/v. Do not incorporate. Do not allow drift to contact foliage or green bark. Max. rate is 24 oz per season. Min. 30 days between applications. PHI = 1 year.
Most broadleaves	Gallery 75DF (isoxaben 75% ai) at 0.66-1.33 lb in min. 10 gal of water	Apply in late summer to early fall; or preemergence in early spring prior to weed germination or immediately after cultivation. Do not apply to new transplants until soil has settled with no cracks present. Rainfall or irrigation 0.5" is needed within 21 days of application. Not effective on germinated weeds. Min. 60 days between applications. Max. rate is 4 lb per acre.
Annual grasses and broadleaves	MSMA 6 Plus at 2.66 pt in 50-100 gal of water	Apply as a postemergence directed spray. Max. 3 applications per year. Do not allow spray to contact foliage, stem or bark. PHI = 1 year.
Annual grasses and certain broadleaves	Prowl 3.3EC (pendimethalin 3.3 lb ai/gal) at 2.4 qt for short-term and 4.8 qt for long-term weed control in min. 20 gal of water	Do not apply if buds have started to swell. May be applied preplant incorporated, preplant surface or preemergence. For best results, rain or irrigation is needed within 21 days of application. Not effective on germinated weeds. Do not allow spray to contact leaves, shoots, or buds. For new plantings, do not apply until soil has settled and no cracks are present.
Annual grasses and broadleaves	Reglone 2L (diquat 2 lb ai/gal) at 1.5-2 pt in min. 15 gal of water	Apply postemergence as a directed spray using a shield for contact burn of weeds. Complete coverage is essential for good control. Can be used during site preparation and up to 1 year of harvest. Do not allow contact with green stems, foliage or fruits. Do not use for food or feed for 1 year after application.
Most annual and perennial grasses	Select 2EC (clethodim 2 lb ai/gal) at 6-8 fl.oz.	Apply postemergence as a directed spray to actively growing grasses before tillering. Do not use crop oil. Always add non-ionic surfactant at 0.25% v/v. May be applied as a spot treatment at 0.65-1.3 fl.oz. per gal. Rainfast in 1 hr. Max. rate is 32 fl.oz. per year.
Annual grasses and certain broadleaves	Snapshot 2.5TG (isoxaben+trifluralin 2.5% ai) at 100-200 lb	Apply preemergence on weed-free clean soil. For best results, 0.5" rain or irrigation is needed within 3 days of application. Not effective on germinated weeds. Min. 60 days between applications. Max. rate is 600 lb per year.

Receiving The Fruit Facts Newsletter Electronically on the Internet

Fruit Facts is available electronically 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 regular mail, you can subscribe to the University of Kentucky Listserve.

To subscribe, send an e-mail message addressed to:

listserv@lsv.uky.edu

Subject: Fruit Facts

Message: subscribe ky-fruitfacts,
followed by a blank line.

You will receive two responses. The first notifying you that your request has been received and to wait for the second message. The second message describes how to confirm your request. You must confirm your request using one of the three ways shown (web access, e-mail reply or new e-mail message). Upon successfully confirming, you should get a welcome message.

To unsubscribe, send an e-mail message as above, but with a message of "unsubscribe ky-fruitfacts", followed by a blank line.

To receive a mailed hard copy, contact:

Joe Masabni

Research & Education Ctr

PO Box 469

Princeton KY 42445-0469

270/365-7541, Ext 247

OR

John Strang

Dept. of Horticulture

University of Kentucky

N-318 Ag. Sci. North

Lexington KY 40546-0091

859/257-5685



John G. Strang,

Extension Fruit & Vegetable Specialist

Cooperative Extension Service
University of Kentucky
Horticulture Department
N-318 Ag. Science Ctr. No.
Lexington KY 40546-0091

