

FEBRUARY 2012



Fayette County Cooperative Extension Service
1140 Red Mile Place
Lexington, KY 40504-1172
(859) 257-5582
Fax: (859) 254-3697
ces.ca.uky.edu/fayette

By The Yard...

HORTICULTURE

Selecting the Best Apples for Backyard Orchards

Apples, the most popular of the pome fruits, are a treat for gardeners and hobby orchardists. Although backyards do not have the immense disease pressure experienced in commercial orchards, a proactive disease-control program is still essential. Apple production requires a dedicated gardener and a preventative spray schedule. An effective disease-management program can include 10 or more fungicide applications, and without some type of program, disease loss will be extremely high. Some of the most destructive diseases affecting apple include fire blight, apple scab, cedar apple rust, and powdery mildew. Their prominence makes organic apple production in Kentucky extremely difficult. Thus, it is recommended that gardeners desiring low-pesticide fruit begin with disease-resistant cultivars. Those included in the table below produce high-quality fruit and exhibit resistance to a variety of diseases. Incorporation of these and other cultivars can greatly reduce fungi-

cide applications in the home orchard. However these cultivars have no resistance to the insects that find apples particularly enticing. Alternatively, bagging individual fruit when they are roughly an inch in diameter significantly reduces fungicide and insecticide spray requirements.

<http://www.ca.uky.edu/entomology/entfacts/ef218.asp>

Additional information on pest control can be obtained by accessing publications ID-21 Disease and Insect Control Programs for Homegrown Fruit in Kentucky, ID-92 Midwest Fruit Tree Spray Guide, or other UK Plant Pathology Extension publications

Source: Nicole Ward, University of Kentucky Fruit Crops, Ornamentals, Forestry Plant Pathology

PLEASE NOTE: Gardener Toolbox Class: "Disease Resistant Apples", Tuesday, March 6th at 6:30 p.m., see enclosed registration for details.

Disease Resistant Apples Recommended for Kentucky

Cultivar	Resistance to:				Time to Harvest
	Apple Scabs	Cedar Apple Rust	Fire Blight	Powder Mildew	
Pristine	VR	S	S	R	Mid June
Redfree	VR	VR	S	S	Early-August
Dayton	VR	R	MR	R	Mid-August
Liberty	VR	R*	R	R	Late August
Spartan	MR	R	MR	R	Early September
Jonafree	VR	S	S	R	Early September
Pixie Crunch	VR	-	-	-	Early September
CrimsonCrisp	VR	MR	S	S	Mid September
Priscilla	VR	VR*	VR	R	Mid September
Sir Prize	VR	S	R	R	Mid September
Enterprise	VR	VR*	MR	R	Mid October
Gold Rush	VR	S	Mr	S	Mid October
Wine crisp	VR	MR	VR	MR	Mid October
Sundance	VR	VR	VR	VR	Mid October

VR=very resistant, R=resistant., MR=moderately resistant, S=suseptable-=insufficient information
*=although resistant to cedar apple rust, these cultivars are susceptible to cedar quince rust.

Fayette
County

Invasive Plant: Bush Honeysuckle



Bush honeysuckle refers to several species; the most common to Kentucky is the Amur honeysuckle (*Lonicera maackii*). This native to northern China, Korea and parts of Japan was introduced to the U.S. in 1897. Escapes from ornamental plantings were recorded in the 1920s and promoted for conservation and wildlife uses in the 60s and 70s. This effort coupled with ornamental plantings led to range expansion from the Midwest to

areas south and east.

Bush honeysuckle spread by seed. Amur flowers in June, and the white and yellowish flowers can result in more than 1 million red seeds on mature (25-year-old), 20-foot tall plants. The seeds are consumed and spread by some species of songbirds only after other more nutritious native foods are gone. As with many invasive species, bush honeysuckle can grow and thrive over a wide range of habitats. Amur is one of the first colonizers of disturbed areas in its native China and easily can invade disturbed areas in the U.S. Unfortunately, seeds can also germinate and grow in moderately shaded woodlands. Because of this, bush honeysuckle growing in the understory in wooded areas need to be controlled prior to creating openings in the forest canopy that increases the light they receive. Bush honeysuckle also have the competitive advantage of being one of the first species to leaf out in spring, and they retain their leaves in fall later than most native species. There is also increasing evidence that Amur produces chemicals that hinder native plant growth, a condition referred to as allelopathy. Collectively, these attributes have caused Amur to have severe ecological and economic impacts where it has successfully established. Fortunately, there are no native bush honeysuckle species with which it can be confused, and all shrub-sized honeysuckle are exotic and invasive.

Woodlands at Risk

Because bush honeysuckle can grow under moderate light conditions and tolerate a range of soils, all of Kentucky is at risk from these species. The greatest occurrence of Amur honeysuckle is in northern and central Kentucky. Once thought to be restricted to central Kentucky soils, Amur and other species are starting to be found in eastern and western Kentucky. It is now believed that it can and will spread throughout the state.

Control

Feasible and effective control options depend upon plant

size, number and location. Because bush honeysuckle can sprout prolifically from the stump, any control method must ensure that the stump is removed or deadened. Most removals will require the hand application of herbicides.

Mechanical control that removes the stump is an option, and any lateral roots left are unlikely to sprout a new plant. Small, knee-high plants can be pulled by hand. Larger plants can be removed with devices (weed wrenches and poppers) that are designed to remove shrubs. The larger versions of these devices are typically effective on bushes up to two inches in diameter, which is roughly a plant six to eight feet in height. The disadvantages of mechanical control are the significant labor times (see treatment cost section) and the size limitation.

Effective herbicide control methods include foliar spray, cut stump application, tree injection and full basal bark. However, foliar applications for small plants and cut stump treatments for large plants are generally recommended and can be used in most situations.

Foliar spray can be effective for plants less than head height unless a machine-mounted power sprayer is used. Typically power spraying is reserved for fence lines or edges of woodlands. While it is relatively fast to foliar spray, this method often results in damage to native plants, and foliar spraying should not be used if native seedlings and forbs are present. Typically, common brush herbicides such as glyphosate can be used at recommended foliar rates (for example, two percent solution from concentrated glyphosate [> 40 percent active ingredient]). Because plants often have several stems, it is important to ensure that all leaves and branches are sprayed. The early leaf-out of bush honeysuckle can widen the spraying window and help to avoid native plants.

The most common method to treat bush honeysuckles and the method of choice for larger plants is cut stump. This requires cutting of the shrub close to the ground and application of herbicide within one to two hours of cutting. Use a full strength (greater than 40% active ingredient) glyphosate herbicide (Accord™ is labeled for use in woodlands, agricultural brands can be used for fence rows and field edges) or other concentrated labeled for forestry use and composed of picloram and 2,4, D™, Arsenal™ (imazapyr), or Garlon 3a or 4™ (triclopyr). Spray the entire stump until runoff and any branches or stems that were cut at the ground line. This method is appropriate for larger size plants one inch or more in diameter. Also, this method should not be used in late winter or early spring prior to leaf-out, as sap rising at this time will reduce the amount of herbicide taken up by the plant.

Continue on page 3

Invasive Plant: Bush Honeysuckle (continued)

Tree injection using the E-Z-Ject™, a relatively new dry granular injector, has also been used. It is more time consuming than cut stump treatments because the injector has to be lined up fairly precisely to inject a capsule, which requires maneuvering under the bush. Further, research using glyphosate capsules has shown it to be inconsistent with relatively high levels of re-sprouting using the recommended rate of herbicide. Double the rate is required to achieve good kill.

Basal bark treatments require spraying the outer bark of small trees and shrubs (less than four to five inches in diameter). The herbicide penetrates the relatively thin bark and is an effective option, but only if special chemical carriers and mixes are used. Normally Garlon 4 is mixed in crop oil or diesel fuel to form a 25 percent Garlon 4 solution. However, this tradition basal bark mix provided inconsistent results. The current recommendation from Purdue University requires the use of Ax-it basal oil (instead of diesel fuel or crop oil) and 15% Garlon 4 and three percent Stalker. If native species, either large or small trees, or native herbaceous plants are present and a large amount of honeysuckle must be controlled this technique is not recommended as there is a potential of Garlon 4 and Stalker poisoning native plants.

Mechanical removal and follow-up foliar spray can be used for severe infestations when a rotary brush hog can be driven through the woods, cutting down and effectively mulching all of the bush honeysuckle. Implement this procedure directly after the bush honeysuckle has leaved out. Follow this with a foliar glyphosate spray of the stump sprouts at or near the end of the growing season. This time lag allows for enough leaf area to be present to provide for effective control. However, this method functionally restarts the woodland regeneration, killing the bush honeysuckle and co-occurring plants (native or otherwise). It is not feasible on steep terrain but has been used by Purdue University for woodland savanna restoration with native warm-season grasses under sparse overstory trees.

Treatment Cost

Treatment of significant infestations of invasive plants can be expensive. This is particularly true when the plants occur in wooded areas. Research at the University of Kentucky indicates an average mechanical removal time of 6.3 minutes using a Weed Wrench™ or similar device for head-high bushes. This compares to 2.1 minutes for cut stump, 1.4 minutes for basal bark, 2.2 minutes for E-Z-Ject and 0.55 minutes for foliar treatments (Figure 2).¹

Herbicide treatments also include the cost of herbicide. On average the cut stump treatment used 0.18 ounces of concentrated glyphosate per plant, foliar 0.03 ounces per

plant, and the E-Z-Ject used 5.5 capsules per plant. If there were 500 plants per acre (a low number for infested stands) the herbicide cost would be \$49.21 per acre for cut stump, \$8.19 per acre for foliar and \$498.87 for E-Z-Ject pellets. The total cost for this stand would be \$421 for mechanical (52 hours at \$8 per hour), \$187 for cut stump (17.2 hours at \$8 per hour [\$138] and \$49 for herbicide), \$644 for E-Z-Ject (18 hours at \$8 per hour [\$144] and \$498 for herbicide), and \$45 for foliar (4.6 hours at \$8 per hour [\$37] and \$8.19 for herbicide).

For most situations it is recommended to use two methods of control – foliar spray for small plants (less than head height) and cut stump for large plants. Since it is almost impossible not to miss plants during an initial treatment, especially if heavily infested, a follow-up treatment should be scheduled for the next growing season. Many times the escapes are small plants that were missed or were not thoroughly treated and stumps that were not sprayed. Follow-up foliar treatments should not occur until the stumps have had time to put on a significant amount of leaf area, generally July through September.

Control methods for bush honeysuckles (<i>Lonicera</i> spp.)		
Method	Timing	Details and Cautions
hand pulling	anytime	Plants less than 3 feet tall
mechanical puller	anytime	Plants 3 feet to head height
herbicide - Foliar	April - September	Plants head height or less. Foliar applications of 2% glyphosate. Accord is labeled for use in woodlands. Use other glyphosate products for other areas
herbicide - cut stump	June - January	Plants greater than 1 inch in diameter. Thoroughly wet stump with concentrate less than 2 hrs. after cutting. Example: Accord herbicide concentrate (>40% active ingredient - glyphosate) spray on stump mildly diluted to facilitate spray. Glyphosate poses the least carry-over problems to native plants.
herbicide - basal bark	fall, winter early spring	Plants greater than head height. Wet lower 18 inches of ALL stems on a plant. 15% Garlon 4, 3% Stalker in Ax-it basal oil. Do not use when large amounts of honeysuckle are present among or underneath native trees as carryover from large application rates of these herbicides could occur.
<i>Other herbicide brands can be used for control. The herbicides that are listed are those commonly used regionally and are labeled for use in forests</i>		

Source: **Kentucky Woodlands Magazine** (<http://www.ca.uky.edu/forestryextension/KWM/Bush%20honeysuckle.pdf>) by: Jeff Stringer, John Cox and Billy Thomas, University of Kentucky, Department of Forestry

February Quick Tips

* The optimum window for seeding lawns is mid February through mid March.



* Continue to monitor house plants for pest problems.

* Now is time to start seedlings indoors. Wait until late February to start quick crops like tomatoes.



* Have your soil tested now for spring gardens.

* Bring branches of early blooming spring shrubs indoors for forcing. Good candidates are Forsythia, Flowering Quince, Flowering Cherries, and early blooming Magnolias.

* Prune large shade trees now. If late in the month, some bleeding may occur. This is no cause for concern



* Plan to prune fruit trees this month. A day with temperatures above 40 degrees will allow you to spray them with dormant oil, which will take care of many overwintering insect pests.

* Shop local garden stores now for best selection of seeds. Complete any mail orders for seeds as newer varieties will sell out quickly. Select varieties with disease resistance where possible.



* Plan to rotate crops in this year's vegetable garden. You want to avoid not only growing the same plant in last year's location but any related plant from that family. Ideally try to set up a four year rotation for each family and plot. (for example, grow other unrelated crops for three years before you plant tomatoes in the same location again) This makes a big difference in the amount of disease pressure.



* Don't forget to register for **Gardener Toolbox Classes 2012**. Registration information included in this month's By The Yard newsletter.

2nd Annual Growing Giant Watermelons and Pumpkins Workshop



Saturday, March 3rd, 2012 ~ 1:00 - 4:00 p.m.

(Doors Open at 12:30 p.m.)

Madison County Extension Office
230 Duncannon Lane

Richmond, KY 40475



WANT TO LEARN HOW TO GROW A 290 POUND WATERMELON OR A RECORD-BREAKING PUMPKIN!

Cost is \$10 per family

For more information, contact: Jonathan Williams at (859) 536-5807 or
Jonathan_williams218@mymail.eku.edu

Sponsored by the Kentucky Giant Pumpkin Growers Association
and the Madison County Cooperative Extension Service



Gardener's Toolbox and Food for Thought Classes Registration Form



Our Gardener's Toolbox classes continue to be a big hit. We are happy to offer you the following opportunities to learn more about gardening. All of this year's classes will be held at the Fayette County Extension Office and will begin at 6:30pm. Gardener's Toolbox Classes unless otherwise noted, classes will be led by Fayette County Horticulture Agent Jamie Dockery. Food for Thought Classes will be taught by our Family Consumer Sciences Agents.

As a reminder: Sign up early for classes to avoid being turned away because class is full.

Please remember all classes are **"Pre-registration" only**. If you are unable to send the registration fee before class time, please note that checks made out to the "Fayette County Master Gardener Association" will be the **ONLY** form of payment taken at the door. To save time and confusion before class please send your payment prior to class. For a full description of classes visit our website: <http://ces.ca.uky.edu/fayette/>

Take advantage of our discount price **per person** by registering for **SIX** classes for **20% Discount**.

Name: _____ Phone: _____ E-Mail: _____

Address: _____ City: _____ State: _____ Zip: _____

_____ Total # _____ (Six Class or more: 20% discount) Total Amount Enclosed \$ _____

Please remember that many of the classes are limited, please register early to assure a spot in the class.
May we suggest that you call the Fayette County Extension, (859) 257-5582,
to inquire about the status of classes before registering.

TOOLBOX CLASSES			
2/21: Home Composting, Cost: FREE		2/28: Low Input Lawn Care, Cost: \$10.00	
3/6: Disease Resistant Apples, Cost 48.00		3/20: New Primocane Blackberries, Cost: \$20.00	
3/29: Home Composting, Cost: Free		4/12: Intro to vegetable Gardening, Cost: \$10.00	
4/17: Backyard Asparagus Patch, Cost: \$20.00		4/26: Get to Know Gooseberries, Cost \$20.00	
5/15: Growing Great Tomatoes, Cost: \$10.00		5/24: Sweet Potatoes in a Home Garden, Cost: \$20.00	
6/19: Making Perennials Work, Cost: \$10.00		6/28: Understanding Weeds, Cost: \$10.00	
7/26: Cover Crops and Green Manures, Cost: \$15.00		8/21: How to Divide Perennials, Cost \$10.00	
8/30: Saving your Own Seeds, Cost: \$10.00		9/18: Building Better Soils, Cost: \$10.00	
9/27: Ornamental Vines for the Garden, Cost: \$10.00		10/16: Growing Garlic, Cost: \$20.00	
10/23: Narcissus and Daffodils, Cost: \$30.00		11/15: Attracting Birds to the Garden, Cost \$10.00	
12/11: Curing County Hams, Cost: \$50.00			
FOOD FOR THOUGHT CLASSES			
2/6: Healthy Heart Baking, Cost: \$10.00		2/29: Healthy Meals on a Budget, Cost: \$10.00	
3/5: Grains from Around the World, Cost: \$10.00		4/2: All About Asparagus, Cost: \$10.00	
5/22: Spring into Salads, Cost \$10.00		6/14: Summer Grillin' Fun...with Veggies, Cost: \$10.00	
7/10: Fresh Ideas for Fresh Tomatoes, Cost: \$10.00		8/22: Sweet on Sweet Corn, Cost: \$10.00	
9/6: Melon Mania, Cost \$10.00		10/11: Greens, Greens, Greens, Cost: \$10.00	
11/8: Apple Alternatives, Cost: \$10.00			

Winter Weather Policy
When Fayette County Schools are closed, our programs will be cancelled

Please make check payable to:
Fayette County Master Gardener Association
and mail:
Gardeners Toolbox
Fayette County Extension Center
1140 Red Mile Place
Lexington, KY 40504-1172