

Plant Wise

IOWA STATE UNIVERSITY
University Extension

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Pruning Grapevines in the Home Garden

By Richard Jauron
Extension Horticulturalist
Iowa State University



For some home gardeners, pruning grapevines is a difficult, confusing chore. However, it's not really difficult if you understand the basic pruning principles and have the right tools.

Grapevines produce fruit clusters on the previous season's growth. Before pruning, a grapevine may have 200 to 300 buds capable of producing fruit. If the vine is not pruned, the number of grape clusters would be excessive and the grapevine would be unable to ripen the large crop or produce adequate vegetative growth.

The purpose of pruning is to obtain maximum yields of high quality grapes and to allow adequate vegetative growth for the following season.

The most desirable time to prune grapevines is late winter or early spring. In Iowa, pruning can begin in late February and should be completed by early April. Grapevines pruned at this time of year may "bleed" heavily. However, the loss of sap will not harm the vines.

To maximize crop yields, grapevines are trained to a specific system. The most common training system used by home gardeners is the four-cane Kniffin system. The four-cane Kniffin system is popular because of its simplicity. In a four-cane Kniffin system, the canes of the grapevine grow on 2 wires, one located 3 feet above the ground and the second 6 feet high.

When utilizing the four-cane Kniffin system, select four canes on the upper wire, two going in each direction. Also, select 4 canes on the lower wire. To aid identification, some gardeners tie brightly colored ribbons or strips of cloth on those canes they wish to retain. All remaining one-year-old canes should be completely removed.

Going back to the upper wire, select two of the remaining four canes (one going in each direction). Prune these canes back to 1 or 2 buds. These short 1 or 2 bud canes are referred to as renewal spurs. The renewal spurs provide the shoots or canes that will produce next year's crop. Prune the remaining two canes on the upper wire back to 8 to 13 buds. The number of buds left on the fruiting canes is determined by plant vigor. If the grapevine is vigorous, leave 13 buds per cane. Leave only 8 buds per cane if the grapevine possesses poor vigor.

Prune the four canes on the lower wire the same as those on the upper wire. When pruning is complete, no more than 60 buds should remain on the grapevine. When counting the number of buds on the grapevine, include both the buds on the fruiting canes and those on the renewal spurs.

The six-cane Kniffin system is another training system occasionally used by home gardeners. In the six-cane Kniffin system, the canes of the grapevines are grown on 3 wires. The wires are positioned 2, 4, and 6 feet above the ground. After pruning, a grapevine trained to a six-cane-Kniffin system consists of 6 fruiting canes and 6 one- or two-bud renewal spurs. As with other training systems, the maximum number of retained buds is 60.

Tools required to prune grapevines include a hand shears, lopping shears, and saw. Brightly colored ribbons or cloth strips can be used to identify fruiting canes and renewal spurs.

Additional information on pruning grapevines can be found in ISU Extension pamphlet [RG-502 'Pruning Grapevines.'](#)

Care of the Amaryllis after Flowering

By Richard Jauron
Extension Horticulturalist
Iowa State University



Amaryllis bulbs are forced indoors for their large, spectacular flowers. Some individuals discard the amaryllis after flowering. However, it is possible to save the amaryllis and force it to flower on an annual basis.

The key to successful reflowering is proper care. After the flowers fade, cut off the flower stalk with a sharp knife. Make the cut 1 to 2 inches above the bulb. Don't damage the foliage. In order for the bulb to bloom again next season, the plant must replenish its depleted food reserves. The strap-like leaves manufacture food for the plant. Place the plant in a sunny window and water when the soil surface is nearly dry. Fertilize every 2 to 4 weeks with a water-soluble houseplant fertilizer.

The amaryllis can be moved outdoors in late May or early June. Harden or acclimate the plant to the outdoors by initially placing it in a shady, protected area. After 2 or 3 days, gradually expose the amaryllis to longer periods of direct sun. Once hardened, select a site in partial to full sun. Dig a hole and set the pot into the ground. Outdoors, continue to water the plant during dry weather. Also, continue to fertilize the amaryllis once or twice a month through July.

Bring the plant indoors in mid-September. Plants left indoors should be kept in a sunny window. In order to bloom, amaryllis bulbs must be exposed to temperatures of 50 to 55 degree F for a minimum of 8 to 10 weeks. This can be accomplished by inducing the plant to go dormant and then storing the dormant bulb at a temperature of 50 to 55 degree F.

To induce dormancy, place the plant in cool, semi-dark location in late September and withhold water. Cut off the foliage when the leaves turn brown. Then place the dormant bulb in a 50 to 55 degree F location for at least 8 to 10 weeks. After the cool requirement has been met, start the growth cycle again by watering the bulb and placing it in a well-lighted, 70 to 75 degree F location. Keep the potting soil moist, but not wet, until growth appears.

The other option is to place the plant in a well-lighted, 50 to 55 degree F location in fall. Maintain the amaryllis as a green plant from fall to early or mid-winter. After the cool requirement has been met, move the plant to a warmer (70 to 75 degree F) location.



Upcoming Mills County Master Gardener Seminars:

“Starting Your Garden Plants at Home”

Date: Monday, March 15

Time: 7:00 – 8:00 PM

Place: Glenwood Resource Center
Visitor's Center Conference Room

Cost: \$2.00

Rick Lehman, owner of Lehman's Greenhouse, will discuss all the basics and how-to's of seed starting and plant propagation by cuttings and divisions. Learn about the best methods, equipment, and supplies to ensure success! Rick will also go over the crucial steps of seedling care and transplanting to the outside garden. If you have never attempted starting seedlings or propagating plants, this presentation will encourage you to try a fun and economical way to get growing this year!

“Current Tree Issues & Tree Selection”

Date: Monday, March 29

Time: 7:00 – 8:00 PM

Place: Glenwood Resource Center
Visitor's Center Conference Room

Cost: \$2.00

Jeremy Cochran, our District Forester with the DNR, will give a presentation about the current disease, environmental, and insect issues facing many of our beloved tree species. Learn about what to expect in 2010 and strategies for dealing with some of the problems. He will also talk about the recommended species for new plantings of trees in our area. Learn which trees have the best chance to survive and thrive in our environment.

“New Plants for 2010”

Date: Monday, April 12

Time: 7:00 – 8:00 PM

Place: Glenwood Resource Center
Visitor's Center Conference Room

Cost: \$2.00

Bernie Havlovik, Farm Superintendent at the Armstrong Research Farm, will fill us in on the latest improvements and newest cultivars for many different ornamental and vegetable garden plants as well as introduce you to some new varieties to try!

Refreshments served!

Door prizes on April 12 to conclude the series!

For more information, call the extension office at
712-624-8616

Perennial Bed Renovation

By Sherry Rindels
Horticulture Department
Iowa State University



The perennial garden is a continuous source of tinkering. Gardeners will move plants from one area to another, replace those plants that didn't perform up to expectations, and thin those whose performance was more than ever dreamed possible. Sometimes the perennial bed needs more than just a cosmetic makeover. There are times when a complete renovation is in order. Perennial weeds such as quackgrass may be more numerous than the desired perennials, the soil may need improvement, or the gardener may have a new design in mind.

Renovating a large perennial garden is a big job. It can be done in either spring or fall. In the spring, try to complete the project before the arrival of hot, dry weather. The months of April and May are excellent. In the fall, late August through September is optimal.

Begin the renovation process by digging up all the plants in the bed (with a few exceptions). Cut a circle around the crown of the plant with a trowel or spade, then pry the roots up and out. For large perennials it is easier to cut the plants into manageable pieces when they are still in the ground. Don't remove shrubs unless their presence isn't part of the new plan.

Some perennials prefer a certain season for division or transplanting. If you are renovating at the wrong time for these plants, it is better to work around them. After digging set the plants on a plastic tarp spread out in a shady, protected location. Keep the same plants together in groups and label them (even the best of minds forget where they put things). Water the plants as weather conditions warrant to prevent them from drying out. Under good conditions, most plants will survive out of the ground for a few days without any problems.

After the plants have been removed from the bed, carefully remove all weeds, and rake the soil level. If necessary, amend the soil by spreading a 2 to 3 inch layer of organic matter such as compost or peat moss. Sprinkle on the needed fertilizer and other amendments. Then using a shovel or fork, turn over the soil to mix in the amendments. Work backwards to avoid walking on and compacting the prepared soil. When you're finished digging in the materials, rake the area level again and clean the overflow soil from around the edges.

Once the soil is properly prepared the plants can be replanted in their proper locations. Many perennials will not require division; however, this is an excellent opportunity to do so if necessary or if you are looking for more plants of that particular variety. Remove soil from the roots by shaking vigorously or washing the roots off with water. Removal of the soil allows a better view of the crown and roots for division. It is also the only way to remove grass and weeds from within the perennial clump.

Perennials require different techniques and tools for division. Some plants can be pulled apart by hand, others require a sharp knife, still others a sharp spade. After division, set out the plants on the soil and arrange them according to your garden plan and taste. Make sure to allow adequate space between plants for good growth, maintenance paths, and annual flowers you want to use. Once the arrangement is to your liking, begin planting.

Set the plant in the planting hole so the crown of the plant is even with the soil level of the bed. If you are adding new container grown material, break up the root ball or if badly pot bound make vertical cuts in the sides of the root ball with a knife before planting. This helps the plant roots grow out into the new soil quickly.

The final step is the addition of mulch and water. Add 2 to 3 inches of organic mulch such as wood chips, shredded leaves, or compost to conserve moisture and prevent weed growth. Water each plant thoroughly immediately after planting. Water the entire bed weekly if rainfall isn't adequate. Before you can call the job complete, there is always clean up to do. Extra plants will need to find a new home, either in another garden in your yard or the gardens of friends and relatives. Compost unwanted plants and debris. Renovating a perennial bed is a big project. However, the improved appearance of both the plants and flower bed are worth the effort.

Be sure to visit one of these Gardening Events!



Siouxland Garden Show

Friday, March 19, 9 am – 8 pm

Saturday, March 20, 9 am – 6 pm

Location: Marina Center, S. Sioux City, NE

Cost: \$5 per person per day (12 and under FREE)

- ♣ Over 50 exhibitors will showcase innovative products and traditional services
- ♣ 13 educational seminars presented by regional experts
- ♣ Local experts share their tips during 18 “How To” sessions

Visit www.extension.iastate.edu/woodbury

All Iowa Horticulture Expo

Friday, March 19, 9 am – 6 pm

Saturday, March 20, 9 am – 6 pm

Location: Bridge View Center, Ottumwa, IA

Cost: \$10 per day - \$15 for 2-day pass

- ♣ Different keynote speaker each day
- ♣ Educational presentations on diverse topics
- ♣ Large trade show with many exhibitors
- ♣ Show supported by over 20 Iowa horticulture associations and organizations.

Visit www.iowahort.org for complete information

Spring Gardening Conference

Saturday, March 27, 8:00 am – 3:45 pm

Location: The Center, 714 S. Main St., Council Bluffs

Cost: \$30 registration before Mar. 22 (includes lunch)

Walk-in - \$30 and no lunch provided

- ♣ Full day of educational workshops for all gardeners!
- ♣ Presented by Iowa State University Extension Master Gardeners of West Pottawattamie County

Call (712)366-7070 for more information or visit www.extension.iastate.edu/westpottawattamie

Atlantic Garden Seminar

Saturday, March 27, 8:30 am – 3:00 pm

Location: Atlantic Community Center

Call (712) 243-5527 for more information

Early Spring-Flowering Shrubs for the Landscape

By Richard Jauron
Extension Horticulturalist
Iowa State University



After a long (seemingly endless) winter, most Iowans are eagerly looking forward to spring. Sure signs of spring are the emergence of tulips and daffodils, the greening of lawns, and the blooming of early spring-flowering shrubs. Though it may be hard to believe, the flowers of the following shrubs will begin to appear within the next few weeks.

The **corneliancherry dogwood** (*Cornus mas*) is an adaptable, durable, and relatively pest free large shrub or small tree. Plants commonly grow 20 to 25 feet tall and 15 to 20 feet wide. The corneliancherry dogwood produces small, yellow flowers in round, 3/4-inch-wide clusters in early spring. When selecting a planting site, choose a location with a dark-colored background, such as a building or row of pine trees, to highlight the yellow flowers. After flowering, oblong 1/2- to 1-inch-long berry-like fruit develop. The fruit turn cherry red in late summer and are edible. The foliage of the corneliancherry dogwood is dark green in summer. Fall leaf color is inconsistent, occasionally an attractive purplish red. 'Golden Glory' is a heavy blooming, upright cultivar. The corneliancherry dogwood is hardy in USDA Hardiness Zones 4 to 8.

The bright yellow flowers of **forsythia** (*Forsythia x intermedia*) are a common sight in home landscapes in April. When selecting plants, make sure to choose cultivars that bloom reliably in Iowa. Several cultivars, such as 'Lynwood Gold' and 'Spring Glory,' don't bloom reliably in the upper midwest because their flower buds aren't sufficiently hardy. Excellent cold hardy forsythia cultivars for Iowa include 'Meadowlark' (8 to 10 feet tall), 'Northern Sun' (8 to 10 feet tall), and 'Sunrise' (5 feet tall). Forsythia foliage is dark green in summer. Fall color is usually poor. Fall foliage may vary from pale yellow to purple. Forsythias are most often planted in mixed shrub borders or utilized as informal hedges. Plants grow and bloom best in full sun.

Vernal witchhazel (*Hamamelis vernalis*) is usually the first shrub to bloom in Iowa. Yellow to reddish brown flowers appear in February and March in Iowa. The strap-like petals curl up on cold days and unfurl on warm days. Foliage is

reddish purple in spring, medium green in summer, and yellow in fall. Vernal witchhazel grows 8 to 10 feet tall and has a slightly wider spread. Plants perform best in moist, well-drained soils in partial shade to full sun. Widely grown cultivars are 'Autumn Embers' (orange-yellow flowers, reddish purple fall foliage) and 'Sandra' (yellow flowers, yellow to orange-red fall foliage).

The **star magnolia** (*Magnolia stellata*) produces white, fragrant, 3- to 4-inch-diameter flowers in April. Unfortunately, the flowers are often damaged by a late frost or freeze. Damaged flowers quickly turn brown. When selecting a planting site, avoid southern and western exposures that encourage



early bloom. Eastern and northern exposures are often the best planting sites in the home landscape. The star magnolia is a slow-growing, large shrub or small tree that grows 10 to 12 feet tall. Its foliage is dark green in summer with little or no fall color. Plants are completely hardy in Iowa (USDA Hardiness Zone 4). Noteworthy cultivars include 'Centennial' (white flowers with a slight pink tinge), 'Royal Star' (pink buds, white flowers), and 'Waterlily' (pink buds, white flowers, blooms later than 'Royal Star').

The **Nanking cherry** (*Prunus tomentosa*) is a hardy shrub (USDA Hardiness Zone 3) that grows 8 to 10 feet tall. Plants produce pale pink to white flowers in April. After flowering, round fruit develop. The fruit turn red



in early summer and are edible. (A single plant is unfruitful. Plant 2 or more shrubs for fruit set.) The foliage of Nanking cherry is dark green in summer. There is little or no fall color. Nanking cherry is often grown in windbreaks and wildlife plantings. It can also be utilized as a hedge or screen. Plants can be grown in full sun to partial shade.

The **'PJM' rhododendron** (*Rhododendron* hybrids) grows well over much of the upper midwest. The small, evergreen foliage is dark green in summer, but turns to a maroon-purple in fall. The flower buds (hardy to -30 degrees Fahrenheit)

produce bright lavender pink blossoms in early to mid-April in southern Iowa, late April in northern portions of the state. The mature height and spread of the 'PJM' rhododendron is approximately 4 to 6 feet.



Several selections of 'PJM' are available and include 'PJM Compact' (3 to 4 feet tall, lavender pink flowers), 'PJM Elite' (blossoms are slightly more pink), and 'PJM Regal' (medium pink flowers). 'PJM' rhododendrons perform best in protected sites that receive 3 to 4 hours of sun.

Other possibilities include **white forsythia** (*Abeliophyllum distichum*), **flowering quince** (*Chaenomeles speciosa*), and **spicebush** (*Lindera benzoin*). By late winter, most Iowans anxiously await the arrival of spring. To get your spring off to a colorful start, plant some early spring-flowering shrubs in the landscape.

Ask the ISU Extension Gardening Expert

Rabbits have severely damaged several trees and shrubs in my yard. Will they recover?

The deep snow and extended period of snow cover have posed serious problems for rabbits. Denied access to food on the ground, rabbits have fed extensively on small trees and shrubs that stick above the snow. Damage has been common on crabapples, apples, plums, cherries, serviceberries, winged euonymus (burning bush), cotoneasters, viburnums, dogwoods, spireas and many other woody plants.

On many trees and shrubs, rabbits have removed the bark completely around the trunks and stems, effectively girdling them. All growth above the girdled areas will eventually die.

For most home gardeners, replacing the girdled trees is the best course of action. Girdled trees can be saved by bridge grafting. However, bridge grafting is a difficult procedure for home gardeners. Most girdled trees will sucker at their base. However, most fruit and ornamental trees are produced by grafting; suckers that originate from below the graft union will not produce a desirable tree.

Most deciduous shrubs have the ability to produce new shoots or suckers at their base. Because of this ability, many severely damaged deciduous shrubs will

eventually recover. (Several years may be required for some shrubs to fully recover.) In early spring, girdled stems should be cut off just below the damaged areas.

What are some good eggplant varieties for Iowa?

Numerous eggplant varieties (cultivars) are available for the home garden. These varieties differ in color, size and shape. Fruit colors include green, white, pink, purple and black. Some fruit are striped. Fruit may be oval, pear-shaped or long and narrow. Asian types may produce fruit that are 10 to 12 inches long. In contrast, some varieties produce miniature fruit that are only one to two inches long.

Suggested eggplant varieties for Iowa include 'Black Beauty' (oval, six to seven inches long, purple black); 'Black Bell II' (oval, six inches long, purple black); 'Caspar' (cylindrical, six inches long, white); 'Dusky' (pear-shaped, six to seven inches long, purple black); 'Epic' (oval, eight to nine inches long, deep purple), 'Ghostbuster' (oval, six inches long, white), 'Millionaire' (Asian type, slender, ten inches long, purple black), and 'Rosita' (teardrop-shaped, eight inches long, rose pink).

Are gourd seeds difficult to germinate?

Gourd seeds have hard seedcoats. To hasten germination, soak gourd seeds in water overnight or up to 24 hours. Gourd seeds also can be nicked along their edge with a file or other device.

Gourd seeds are typically planted outdoors after the danger of frost is past. Gourds also can be started indoors. When starting gourds indoors, sow seeds in peat pots about three to four weeks before their intended outdoor planting date. Gourd seedlings should be planted outdoors after the danger of frost is past. Harden or acclimate the seedlings outdoors for a few days prior to planting.

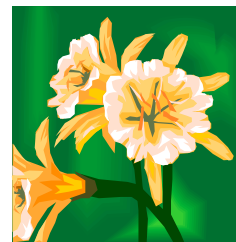
When should I sow tomato seeds indoors?

Tomato seedlings grow rather quickly. Ideal transplants are short, stocky plants. Sow tomato seeds indoors five to six weeks before the intended outdoor planting date. Plant seedlings in the garden after the danger of frost is past. Gardeners in southern Iowa can plant tomatoes outdoors in late April, while those in northern counties should wait until mid-May.



Extension programs are available to all without regard to race, color, national origin, religion, sex, or disability

MARCH GARDENING TO DO LIST



- Prune, Prune, Prune! March is the best month for pruning many plants in our area. See the resource list for several publications to help you know how to prune correctly.
- Prune grapevines and raspberries now to obtain maximum yields of high quality fruit.
- Leave mulch on strawberries and perennials until new growth begins. Be ready to re-apply mulch if a hard frost is predicted.
- Clean out birdhouses before new tenants arrive.
- Wash sand and salt from driveways and sidewalks.
- Don't till your garden when it is too wet. Soil should crumble when squeezed in your hand when it is ready to work. If soil forms a solid ball, it's still too wet.
- Clean up dead debris from asparagus and rhubarb plants.

Resources for Horticulture information

ISU's Hortline at (515) 294-3108

(Monday-Friday, 10 a.m.-noon, 1-4:30 p.m)

ISU/Mills County Extension: 712-624-8616

www.extension.iastate.edu/mills/yardgarden.htm

Iowa State University Publications

PM 780	Pruning and Training Fruit Trees (\$1.00)
RG 501	Pruning Raspberries (free)
PM 502	Pruning Grapevines (Free)
SUL 5	Pruning Trees: Shade, Flowering, & Conifer (free)
PM 1958	Pruning Ornamental Shrubs (\$1.50)
PM 874	Starting Garden Transplants at Home (\$.50)
PM 0819	Planting a Home Vegetable Garden (\$.50)
PM 534	Planting & Harvesting Times for Garden Vegetables (free)

Horticulture Publications on-line

www.extension.iastate.edu/store/ListCategories

Many publications are downloadable