

# Plant Wise

IOWA STATE UNIVERSITY  
Extension and Outreach

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## Pruning Deciduous Trees

By Lisa Dytrych  
Master Gardener  
Mills County



Calling all gardeners! Did you know that late winter and early spring are perfect times to prune most of your deciduous trees? Since deciduous trees lose their leaves in the fall, the absence of foliage makes it easier to determine what branches need to be trimmed or removed. Cutting wounds develop callous tissue more rapidly at this time which enables the tree to seal off the vulnerable area that in warmer seasons might be susceptible to disease pathogens and insects. Of course, there are times that it is prudent to prune regardless of the season, as in the case of damage due to injury or disease, or if the tree poses a safety threat.

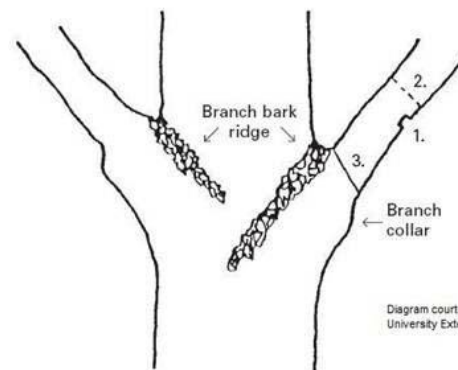
As the saying goes, "hind sight is always 20/20" and it is especially true when selecting trees for your landscape. Consideration of mature size and form at the time of planting will help eliminate maintenance pruning as your tree grows. Equally important is that a properly pruned young tree is less likely to develop structural problems as it matures. Young trees have smaller limbs which can be easily pruned with hand held tools. Smaller, less stressful wounds are created that close faster than larger wounds.

There are trees that "bleed" when pruned during this time. Maple, elm, walnut, honey locust, birch, and fruitless mulberry exude a discoloring sap that however unsightly, does not cause harm to the tree. To avoid "bleeding", these trees may be pruned in late spring to early summer.

Choice of appropriate pruning tools that are sharpened and sanitized is your next consideration, and is largely determined by the diameter of the branch that is to be

cut. Smaller branches up to ½ inch in diameter can be cut with hand pruners. Longer handled loppers are recommended for branches up to 2 inches in diameter. By-pass style tools, which use a scissors-like action, are recommended over anvil styled, which tend to crush or tear. Folding pruning saws that cut on both the push and pull strokes are helpful for those hard to reach cuts and larger branches. Remember, any tree that requires a ladder and power tools to prune is better left in the hands of an expert. For tips and advice in finding and choosing a qualified and reputable arborist, refer to a publication offered through Iowa State University Extension entitled "Choosing an Arborist" (RG 214) online at [www.extension.iastate.edu/store](http://www.extension.iastate.edu/store).

To make a correct pruning cut, it is important to understand a little of a tree's anatomy and physiology. Unlike a human's response to injury, a tree cannot "heal" by repairing or replacing damaged tissue in a wounded area. Instead, trees respond by "walling off" or "compartmentalizing" to protect the rest of the tree from further injury. This is accomplished by the creation of callous tissue or wound wood that eventually grows over the wound, encompassing it in a donut shape. Chemical boundaries are also created to offer additional protection to healthy tissue. Two areas where a branch attaches to the trunk have been found to be critical for these wound responses: the branch bark ridge, a ridge of raised bark that forms in the branch crotch above the limb attachment, and the branch collar, a swollen area at the base of a branch.



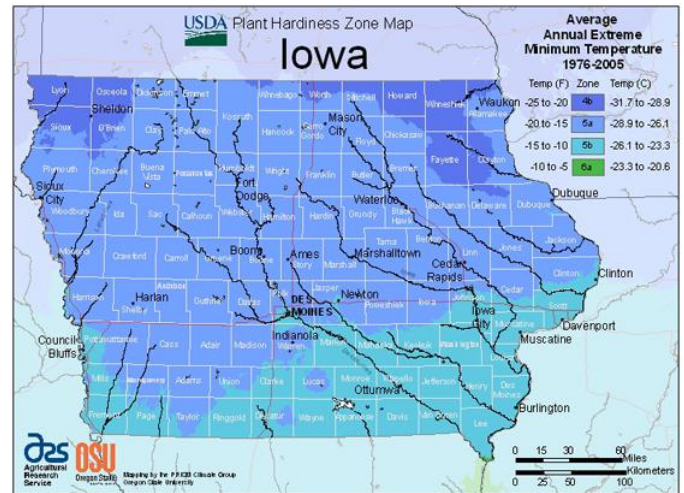
When making a pruning cut, it is important to cut just outside of these two areas, not flush with the trunk, and not leaving a stump. With larger, heavier branches, a three-cut technique is recommended to keep the branch from tearing off. The first cut, an undercut, is made 6 to 12 inches out from the trunk, cutting about halfway through the limb. The second cut is a full cut from the top about 1 inch further out which will cause the branch to fall, breaking off between the first and second cuts. Make the final cut just outside the branch bark ridge and branch collar as previously described. Wound paints and dressings are no longer recommended; research supports good pruning techniques performed when disease vectors are not present is the best medicine!

Now it's time to assess your tree and determine which branches to prune. Working from top to bottom, first remove branches that are dead, damaged, diseased, or rubbing. Next, look for branches that have a narrow angle of attachment, less than 30 degrees. Dead bark, or "included bark", accumulates in these narrow crotches, and without attachment to either limb or trunk, creates weak areas that cannot support the weight of the growing branches and can break off in adverse conditions. Keep strong side branches that alternatively spiral upwards on all sides of the tree to develop a "scaffold", a strong supporting infrastructure. Unless your tree species has a multi stemmed habit of growth, it is best to favor a "central leader", the tallest, dominating, centrally growing branch. Trim competing leaders to help your tree attain correct form and shape. The Arbor Day Foundation recommends to prune no more than 1/3 up from the ground of a tree's total height (raising the crown) and never thin more than 1/4 of the tree's total mass to decrease height (lowering the crown) in one season. Avoid topping, the indiscriminate cutting of large limbs to shorten a tree. This not only disfigures a tree but the large wounds and loss of a large portion of the tree's leaves and limbs, which are vital to energy production and storage, can lead directly to decline and death of the tree.

Pruning your deciduous trees at the right time, using appropriate tools to make correct cuts, and pruning only what is necessary will help keep your landscape safe, and your tree healthy, strong, and attractive. Gardeners, what better way to beat the winter doldrums!

## New Plant Hardiness Zone Map

Gardeners and researchers have a new, [updated plant hardiness zone map](#) to consider as they make plant selection decisions this year. The U.S. Department of Agriculture (USDA) released the new version of the map this week — the first update since 1990 — with much of Iowa now considered Zone 5.



Plant hardiness zone designations represent the average annual minimum temperatures at a given location. The new version has 13 zones, two more than the previous map, which were determined by data measured at weather stations during the 30-year period 1976-2005. Each zone is a 10-degree Fahrenheit band, further divided into A and B 5-degree Fahrenheit zones. Zone 5 has a -10 to -20 degree annual minimum average. Compared to the 1990 version, zone boundaries in the new edition of the map have shifted in many areas.

"The zones have shifted northward pretty much across the map," said Jennifer Bousselot, Iowa State University (ISU) Extension horticulturist and [Iowa Master Gardener coordinator](#). "Locations on the new map are generally five degrees Fahrenheit warmer than the previous map. This half-zone difference doesn't change much for Iowa gardeners."

According to the USDA, some of the changes in the zones are a result of new, more sophisticated methods for mapping zones between weather stations. These include algorithms that considered for the first time such factors as changes in elevation, nearness to large bodies of water, and position on the terrain, such as valley bottoms and ridge tops. Richard Jauron, [ISU Extension horticulturist for Hortline](#), encourages gardeners to consider the zone map as a guide and remember to factor in location details when making plant selections.

"It isn't as simple as concluding that the same plants can be grown in Mason City and Ames just because both cities are located in Zone 5a," Jauron said. "Mason City is often several degrees colder than Ames in winter. For example, Mason City has had below zero temperatures several times this winter, including -17 degrees Fahrenheit on Jan. 2; while the minimum temperature in Ames this winter has been -4 degrees." Jauron said growers also need to consider the differences between rural and urban areas, low-lying areas near streams and hilltops, and other local factors that affect temperatures when making their plant selections.

Jauron said he would not encourage gardeners living north of Highway 20 to immediately plant large numbers of Zone 5 plants. "Over the next few years, gardeners in the northern one-third of the state may experiment with a few plants labeled as hardy in Zone 5a, but the most reliable choices for that part of the state are still Zone 4 plants," he said.

The USDA map is addressing some of the issues pointed out by Jauron, by providing a Geographic Information System (GIS)-based interactive format of the map. Specifically designed to be Internet-friendly, the map website incorporates a "find your zone by ZIP code" function. The intent is to increase accuracy and detail. The new map — jointly developed by USDA's Agricultural Research Service (ARS) and Oregon State University's (OSU) PRISM Climate Group — is available online at [www.planthardiness.ars.usda.gov](http://www.planthardiness.ars.usda.gov). ARS is the chief intramural scientific research agency of USDA.

## Hardy Evergreens Offer Winter Benefits

By Justin Evertson  
Green Infrastructure Coordinator  
Nebraska Forest Service



Although nothing can hold back the cold of winter, we can at least soften the impact of biting winds with well-placed evergreen trees. Coniferous trees, or evergreens, have needles rather than leaves, and bear seeds on cones. Unlike deciduous trees, most conifers retain their foliage throughout the year. Growing slowly but steadily in the Midwest, these trees can survive droughts, fires, deer rubbings and skunk gnawings. Bird lovers will appreciate the great cover evergreens provide for cardinals, blue jays, juncos, waxwings and countless other species.

Although several species of evergreens can be grown in our area, probably the most common native pine is ponderosa pine. It has distinctive bark that mottles into attractive shades of gray, tan and brown as it matures. The tree also possesses long needles (up to 8 inches or longer) that help give it a coarse, shaggy look. Ponderosa pine can grow up to 2 feet per year when young and eventually reach 60 feet tall and 30 feet wide at maturity.

Ponderosa pine is easy to grow, extremely drought tolerant and not particular to soil needs. However, it will struggle in heavy, wet soils and ever-irrigated areas.

Other good evergreen options are jack pine, eastern white pine (which is somewhat shade tolerant), southwestern white pine, Norway spruce, Colorado spruce, Douglas fir and concolor fir. A few species relatively new to our area but that look promising for wider use include lacebark pine, Bosnian pine and Serbian

spruce. Many other species are under trial and evaluation at arboreta across the region.

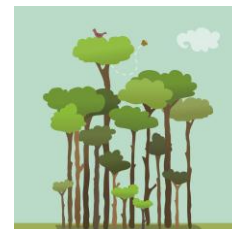
Because of disease or insect problems, several once common pine species are no longer recommended for planting in our area. Chief among these is Scotch pine which is highly susceptible to pine wilt, a fast-acting disease that kills trees within a matter of weeks. Austrian pine is prone to significant foliar diseases and Black Hills spruce (a variety of white spruce) is highly susceptible to spruce mites, which often shorten its life. Finally, eastern red cedar, though native, is now considered an aggressive pest in pastures and natural areas and is usually no longer recommended for general landscape planting.

Evergreens are best used in groups at edges of properties or as backdrops to other plantings. They also can be planted on the west or north side of a home for wind protection. Don't plant them too close to the house or drive — evergreens provide shade all year long and will not allow sunlight to penetrate to help melt snow and ice. It's also best to avoid wet soils or areas that are irrigated frequently.

Selecting an appropriate tree and placing it correctly will enhance your property value and prevent trimming costs and potential damage to your home.

## Still Time to Register - Landscape Design Workshop for Homeowners!

By Denise Fikes  
Horticulture Assistant  
Mills County Extension



Has your landscape lost its luster? Have your perennials petered out? Are you ready to start enjoying your yard again? If you are interested in creating comfortable, functional outdoor living, entertaining, and playing space in your home landscape, then this workshop is for you! An attractive and functionally landscaped yard will not only add value to your property, but can significantly add to your family's quality of life through enjoyment of your outdoor space.

The Mills County Extension office is offering homeowners an opportunity to attend a four-session, hands-on workshop where they will be guided through the design process by knowledgeable speakers, and come away with a completed design for their own property. This can be anything from a new design for the entire yard, a re-design of a portion of the yard, a design for a new planting area, or anything in between. It's entirely up to you! Participants will be provided with a workbook and materials needed to complete their designs.

The workshop will take place in Glenwood on four Thursday evenings – February 16, March 1, March 22, and March 29 beginning at 6:00 PM. Each session will last for 3 hours with time to work on your design.

The content of each session will build upon the previous presentation, so attendance at all four sessions is required. The cost for the workshop is \$40 per landscape (single participant or couple). Pre-registration is required as class size is limited.

**The registration deadline is February 10.**

The scheduled session topics and speakers are:

**Session 1:** Presented by Steven Rodie – Assoc. Professor/Landscape Horticulture Specialist at UNL

*Landscape Design Basics- Why design and how to start.*

**Session 2:** Presented by Kathleen Cue – Horticulture Associate for UNL-Extension

*Creating functional diagrams and designing for sustainability*

**Session 3:** Presented by Barbara Stuckey, Assoc. Professor/Turf & Landscape Management at IWCC

*Plant choices, Color principals, Native plant options*

**Session 4:** Presented by Bill Hickey, owner of A Garden Paradise Landscaping in Council Bluffs

*Finishing details – lighting, water & sound features, garden art, etc.*

For more information or to request a registration form, please contact Denise at the Mills County Extension office by phone (712-624-8616) or print a [Registration Form](#) at [www.extension.iastate.edu/mills](http://www.extension.iastate.edu/mills)

### ***Check out these nearby 2012 Garden Shows!***

What: [Siouxland Garden Show](#)

When: March 16th-17th

Where: Marina Inn Center, South Sioux City, NE

Who: ISU and NE Extension

Price: \$5 for one day, \$9 for two

What: [West Pottawattamie MG Spring Conference](#)

When: Saturday, March 31st from 8:30am-4pm

Where: Council Bluffs Senior Center

Who: West Pottawattamie County MGs

Price: \$30

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## Upcoming Horticulture Events of Interest:

**Spring Into Spring 2011 Seminar Series  
Presented by the Mills County Master Gardeners**

### ***“Perennial Color for Your Perennial Garden”***

**Date:** Monday, February 20

**Time:** 7:00 – 8:00 PM

**Place:** Glenwood Resource Center  
Visitor’s Center Conference Room

**Cost:** \$2.00

Debbie Huetter, owner of Genesis Gardens and Third Day Nursery will cover several aspects of gardening with perennials including: combining perennials with similar growing requirements, filling your beds with perennials that will give you four seasons of spectacular color, and how to propagate a few of her favorite perennials, offering you plants to spread out or share with friends.

### ***“How to Cook a Kumquat and Other Misunderstood Produce”***

**Date:** Monday, March 5

**Time:** 7:00 – 8:00 PM

**Place:** Glenwood Resource Center  
Visitor’s Center Conference Room

**Cost:** \$2.00

Have you ever walked through the produce department in your grocery store, noticed some of the interesting and exotic looking fruits and vegetables, and wondered how in the world you’re supposed to prepare them? Well Chef Corey from Hy-Vee in Omaha will show you how! You’ll also get to taste the items he prepares! This seminar is sure to get you cooking and eating healthier.

### ***“A Kitchen Garden for All”***

**Date:** Monday, March 19

**Time:** 7:00 – 8:00 PM

**Place:** Glenwood Resource Center  
Visitor’s Center Conference Room

**Cost:** \$2.00

Even if you don’t have time, space, or energy for a large vegetable garden, you can grow a smaller “kitchen garden” with surprisingly little effort. Barbary Stuckey, Assoc. Professor / Turf & Landscape Management at IWCC will share the secrets of growing a few plants in containers, combining herbs with vegetables, and making the most of your small space produce garden.

### ***“Basic Lawncare”***

**Date:** Monday, April 2

**Time:** 7:00 – 8:00 PM

**Place:** Glenwood Resource Center  
Visitor’s Center Conference Room

**Cost:** \$2.00

Were you discouraged by dead spots and weeds in your lawn last year? Do you long for lush, green sweeps of turf to stroll barefoot through? You can gain the knowledge and information you need for this year when John Blue, owner of Blue J’s Lawn Service in Council Bluffs presents this seminar. John will talk about everything from seed selection, watering, fertilizing, and cutting to rejuvenation, insects, and disease control. You’ll be seeing green before you know it!

### ***“Native Landscaping / New Plants Available”***

**Date:** Monday, April 16

**Time:** 7:00 – 8:00 PM

**Place:** Glenwood Resource Center  
Visitor’s Center Conference Room

**Cost:** \$2.00

Barbara Stuckey returns to present this seminar. Native landscaping is part of the “sustainability” movement you may have heard a lot about lately. When applied to landscaping, sustainability has to do with creating landscapes that require less time, money, water, labor, and chemicals. You’ll learn how to use plant materials wisely and still create a beautiful, functional landscape. You’ll also learn about the latest introductions in the home landscape industry. Imagine the possibilities!

## **Ask the ISU Extension Gardening Expert**

Selecting seeds is one of the first steps in planting a home garden – along with preparing the seedbed and deciding when to plant. Iowa State University Extension and Outreach horticulturists share information that will guide gardeners as they select vegetable seeds. To have additional plant and garden questions answered, contact the ISU Hortline at 515-294-3108 or [hortline@iastate.edu](mailto:hortline@iastate.edu).

**I have some leftover vegetable seeds from last year. Will they germinate and grow this spring?**

Most vegetable seeds will remain viable for several years when stored in a cool, dry location. If properly

stored, cabbage, broccoli, cucumber, squash, watermelon, eggplant and radish seeds will remain viable for five years. Snap bean, carrot, pea, pepper, tomato, cauliflower and pumpkin seeds can be stored for three to four years. Seeds of sweet corn and onion remain viable for only one to two years.

**What are the differences between open-pollinated and hybrid vegetable seeds?**

A hybrid variety is generally the result of a controlled pollination. Hybrids are produced by crossing two different parent varieties of the same species. Plants grown from hybrid seeds are genetically identical and possess desirable traits, such as high yields, disease resistance or wider adaptability. However, hybrids do not remain true in later generations. As a result, saving seeds from hybrids grown in the vegetable garden are not worthwhile. Hybrids are oftentimes referred to as F1 or F1 hybrids (the first filial generation of seeds resulting from the crossing of different parental types).

Open-pollinated varieties are those varieties that have become stabilized in their growth characteristics from one generation to the next. Open pollinated seeds are produced by allowing wind or insects to transfer pollen between different plants of the same variety. Vegetables that are capable of cross-pollination, such as corn and vine crops, must be isolated from different varieties so they produce seed that is “true to type.” If no cross-pollination occurs, home gardeners can save the seeds from open-pollinated vegetables year after year.

**Some vegetable seeds are pink or green in color. Why?**

Many seed companies treat their seeds with a fungicide to prevent the seeds from rotting in cold, wet soils. Seeds that have been treated with a fungicide are labeled as such and are often pink or green in color. Be sure to wash your hands thoroughly after handling treated seeds.

Some seed companies provide their customers with seed treatment options. Gardeners can purchase treated seeds or untreated seeds (whichever they prefer).

**What are some good sources of flower and vegetable seeds?**

Flower and vegetable seeds can be purchased at local garden centers. They’re also available from mail-order companies. Mail-order sources include Stokes Seeds, Box 548, Buffalo, NY 14240 ([www.stokeseeds.com](http://www.stokeseeds.com)); Park Seed Company, One Parkton Avenue, Greenwood, SC 29647 ([www.parkseed.com](http://www.parkseed.com)); W. Atlee Burpee, 300 Park Avenue, Warminster, PA 18974 ([www.burpee.com](http://www.burpee.com)); Johnny’s Selected Seeds, 955 Benton Avenue, Winslow, ME 04901

([www.johnnyseeds.com](http://www.johnnyseeds.com)); Harris Seeds, Box 24966, Rochester, NY 14624 ([www.harriseseeds.com](http://www.harriseseeds.com)); Seed Savers Exchange, 3094 North Winn Road, Decorah, IA 52101 ([www.seedsavers.org](http://www.seedsavers.org)); and many others.

# FEBRUARY GARDENING TO DO LIST



## Are sweet cherries hardy in Iowa?

'Gold,' BlackGold™ and WhiteGold™ are sweet cherry varieties (cultivars) that can be successfully grown in the southern half of Iowa. 'Gold' has golden yellow skin. It is self-unfruitful. Another late blooming sweet cherry variety must be planted for pollination and fruit set. BlackGold™ and WhiteGold™ are self-fruitful, mid to late blooming cultivars from Cornell University in New York. BlackGold™ has dark red skin, while WhiteGold™ is light yellow with a reddish blush. Other possibilities for southeastern Iowa include 'Hedelfingen' (self-unfruitful, red fruit), 'Kristin' (self-unfruitful, purplish black fruit), 'Sam' (self-unfruitful, dark red fruit) and 'Van' (self-unfruitful, reddish black fruit).

## What is a good planting site for cherry trees?

Cherries perform best in moist, well-drained, fertile soils. Avoid wet, poorly drained sites. Cherries are susceptible to root rots in wet, poorly drained soils. Trees also should receive full sun. Sites must receive at least six hours of direct sun each day. Sweet cherries bloom earlier than sour cherries. As a result, the flowers on sweet cherries are more susceptible to damage from late spring frosts. When selecting a planting site for sweet cherries, avoid planting in low spots where cold air settles on calm nights. Also, avoid southern and western exposures that encourage early bloom.

## Do I need to plant more than one cherry tree for pollination and fruit set?

Sour or tart cherries are self-fruitful. Self-pollination occurs when pollen is transferred from the anther to the stigma on the same flower, from another flower on the same plant or from a flower on another plant of the same variety. Only one sour cherry tree needs to be planted for pollination and fruit set. Many sweet cherry varieties cannot produce fruit from their own pollen and are considered self-unfruitful. These plants require cross-pollination for fruit set. Cross-pollination is the transfer of pollen from one plant to the flower of a different variety. When planting self-unfruitful cultivars, at least two different sweet cherry varieties must be planted for fruit production. While most sweet cherry varieties are self-unfruitful, BlackGold™ and WhiteGold™ are self-fruitful.



- Repair and prepare lawn and garden tools for the upcoming season.
- Do not use softened water on houseplants as the salts are damaging to them.
- February is one of the best months to prune woody plants. Fruit trees, shade trees, raspberries, grapevines, and many shrubs can be pruned successfully while they are dormant. Dormant pruning is easier too, since you can see the branch structure because there are no leaves.
- Late this month start seeds of broccoli, cauliflower, and cabbage for planting outdoors in April. Some of the flowers to start include geranium, petunia, snapdragon, pansy, impatiens, and salvia.
- Keep monitoring stored fruits and vegetables. Remove any that have rotted.
- Keep bird feeders filled. Remember to periodically clean feeders and water containers.

## 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](http://www.extension.iastate.edu/mills/yardgarden.htm)

## Iowa State University Publications

PM 874	Starting Garden Transplants at Home (free)
PM 814	Where to Put Your Vegetable Garden (free)
RG 318	Early Spring Blooming Perennials
RG 214	Choosing an Arborist
SUL 5	Pruning Trees and Shrubs
PM 1943	Deciduous Shrubs
PM 1383	Identification of Conifer Trees in Iowa

Horticulture Publications on-line  
<https://www.extension.iastate.edu/store/ListCategories>