

# The Green Thumb

Lawn and Garden News You Can Use

November 2009

## Protecting Landscape Plants From Deer Damage

Duane Friend, natural resources management educator

This time of year, deer can cause major damage to landscape plants. During the fall, “antler rubbing” is the main damage. During the winter, “browsing” is a concern.

Antler rubbing is done by males during the mating season. They typically select saplings approximately five years of age and older, often rubbing the entire circumference of the tree and causing early death of the plant.

“Browsing” refers to deer feeding on plants. The damage can be especially severe in winters with long-lasting snow cover. Damage can be more than 6 feet above ground level. Deer browsing is one of the primary plant damage concerns in both natural and residential areas. Since the average deer eats 6 to 8 pounds of plant material per day, landscape plants can sustain substantial injury or even death.



There are several options to lessen the potential plant damage.

Deer like woodland edges. So, one way to lessen the damage is to have as much open area as possible between woodland edges and your landscape plants.

Another option is to include in your landscape some plants that deer don't like to eat. Plants such as boxwood, barberry, and Colorado blue spruce are some options. Other plants that are seldom severely damaged include honey locust, red osier dogwood, and Norway spruce.

Repellents may help in small areas. They will not eliminate damage, but may reduce it. A contact repellent works as a “taste” deterrent. Area repellents are “odor” deterrents. Repellents should be applied by mid-fall to early winter. Most repellents also need to be re-applied to extend their effectiveness.

Fencing is another method of protection. Wire or plastic mesh, electrified fence (vertical or slanted), and polywire options are available, based on deer pressure and the amount of protection desired.

For more information on deer damage control, visit our *Living with Wildlife* website at <http://web.extension.uiuc.edu/wildlife>.

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# Winter Mulch Protects Strawberries

Tony Bratsch, horticulture educator



If you have a strawberry bed, you'll want to take steps to protect the plants this winter. Although applying a layer of straw seems like a simple task, timing and the amount of straw used are important.

Depending on variety, strawberries have varying tolerance to cold. Lack of acclimation or "hardening" in the fall, as well as wide temperature swings, can decrease cold tolerance and increase winter injury to crowns. Mulching helps insulate plants from low temperatures and quick changes. Temperatures in the low teens can kill a high percentage of uncovered or poorly hardened plants.

Mulching also protects plants from winter winds, which desiccate or dry out the plants, especially when soil moisture becomes low and/or less available in frozen soils. In addition, strawberries are shallow and somewhat brittle-rooted. Alternate freezing and thawing (frost heaving) of the soil in winter and early spring can damage roots. A layer of straw on the surface helps moderate this soil movement.

Strawberries grow and develop late into the fall months, and should not be covered too early. They respond to low temperatures and moderate frost by gradually becoming more hardy and tolerant of cold. Signs of this acclimation include a "flattened" appearance, lack of any new leaves, and red coloration of older leaves.

Apply mulch after plants have had time to acclimate and develop hardiness. Based on various studies, data indicates that straw should be applied when soil temperatures at a 4-inch depth have reached and stay at 40 degrees F. Soil temperatures can be checked with a simple thermometer.

Another rule of thumb is to apply straw after several 20-degree freezes have occurred. For most of Illinois, this usually happens between mid-November and mid-December, depending on location.

About any type of loose organic material can be applied as a mulch, but straw is the most readily accessible, and it has good insulation ability. Avoid materials such as hay that will likely contain weed seeds; also avoid sawdust or chips that are too heavy and dense. Apply a 2- to 3-inch straw layer, and for raised beds with greater exposure, apply several more inches. As the winter progresses, snow helps add even greater insulation—so don't shovel it off the plants.

Plants resume growth early in the spring and should be uncovered in a timely manner. Typically, straw is removed when plants show signs of growth and new leaves begin to emerge under the mulch.

Timing of mulch removal can help delay or advance early spring growth and flowering. Earlier removal will allow the soil to warm more quickly, advancing growth and bloom; but, early removal increases the risk of spring frost injury to new blossoms. A delay in removal will keep soils cooler and delay growth and flowering, which can be an advantage in sites where spring frosts are a concern. Just don't leave the straw on for an extended period of time.

A leaf rake works well to remove straw. Rake the straw into walkways, along the row edge, and between rows to help keep weeds down and provide a clean surface for berries to rest on. Some straw should be left on top of plants to filter down and provide a cushion for berries forming in the row middle.

More information on growing and caring for strawberries can be found in the *Small Fruit in the Home Garden* publication, C-1343. The book is available through your local U of I Extension office.

# Question Corner

Answer provided by Tony Bratsch, horticulture educator

**Q.** I assume that trees need to be fertilized just like any other plant. When is the best time to fertilize the trees in my lawn?

**A.** The ideal time to fertilize trees is in the late fall, soon after leaves have dropped. This includes evergreen species as well. At this time, roots are still actively growing, absorbing and storing nutrients, and priming the plant for vigorous growth in the spring.

Although trees can grow adequately with no applied fertilizers, a fertilizer can stimulate natural growth and help trees that are struggling in growth. A good gauge of whether trees need fertilizer is new shoot vigor and length. Depending on species, trees less than 10 to 15 years of age may grow 8 to 12 inches or more a year; for older trees, adequate growth may be only a few inches at best.

Nitrogen in fertilizers, when broadcast on the soil surface, will move downward (leach) to tree roots over a short period of time. But if turfgrass is present, it will always intercept a portion of the nitrogen, resulting in over-fertilized turf and poorly fertilized trees. Alternatively, nitrogen applied for turfgrass will often leach down to tree roots. Phosphorus and potassium tend to tie up in the top soil layer when broadcast, especially in heavy clay soils. Thus, these nutrients should be applied deeper using injection or holes in the soil. In general, phosphorus and potassium do not need to be applied as often as nitrogen, perhaps every three to five years at best.

A soil test will help determine the need for these two nutrients. Young trees tend to respond to annual nitrogen application better than older trees. Older trees have a better ability to extract natural soil nitrogen and mobilize stored nitrogen from woody tissue as needed. If your lawn is regularly fertilized, often there is adequate leached nitrogen for large trees in the landscape.

In general, 2 to 6 pounds of nitrogen per 1,000 square feet is recommended for tree fertilization. This rate is too high for turfgrass. Thus, fertilizer for trees is often best applied by liquid injection or drilling holes in the surrounding soil and filling with dry fertilizer. Urea (45%N) or ammonium sulfate (21%N) are cost effective, “single-grade” nitrogen-only dry fertilizers that require less per area than a “complete” 12-12-12 fertilizer.

Starting several feet from the trunk, make holes in the soil with a rod or drill auger 12 to 18 inches deep. Use a grid pattern, and place holes about 2 to 3 feet apart, extending around the tree and half the radius of the tree canopy beyond the drip line. For example, for a tree with a 10-foot radius in spread from the trunk, make holes 5 feet beyond the drip line. The holes should be filled partially to within 4 to 6 inches of the top with fertilizer to reduce turfgrass access.

While the hole method is not as easy to calculate as broadcasting, square footage can be estimated, and needed fertilizer split evenly between the holes made. Nitrogen can also be injected in the soil using liquid formulations, and this is a common method used by tree care companies. The pattern of injection is similar to dry application. In general, tree spikes are expensive and difficult to insert below the turf root zone, though they can be useful for new trees. As an added benefit, the holes that are made have been shown to aerify clay soils and improve growth, even without fertilizer.

While fertilization is inexpensive for small trees, it can be expensive, time consuming, and possibly unneeded for larger trees. For larger, established trees, consider a hole-punch application of a complete analysis fertilizer, such as 12-12-12 every three to five years. This will provide all three nutrients and meet the lesser nitrogen requirements of an older tree.



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Send your lawn and garden questions to

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# Come Grow with Us!



If you love gardening and enjoy working with people, give some thought to becoming a Master Gardener!

Lawn and garden enthusiasts get intensive horticulture training in exchange for volunteer hours through the U of I Extension Master Gardener program. The training program consists of weekly classes that run from January through April.

Participants get more than 60 hours of in-depth instruction on such topics as soils; botany; insect and disease control; flowers, trees, shrubs and other ornamentals; fruit and vegetable production; houseplants; and basic landscaping.

In exchange for this intensive training, Master Gardeners donate 60 hours of volunteer horticulture-related service back to U of I Extension.

How are these service hours spent?

Some Master Gardeners answer lawn and garden questions from homeowners.

Others help design and operate displays and demonstrations at home shows. And, some make presentations to local schools and civic groups within their community.

The Master Gardener training will be held on Thursdays in Vienna, January 21 through April 9. On Wednesdays, the training is offered in Effingham, from January 20 through April 7. For the southwest area, the training is on Tuesdays, January 5 through April 20, and rotates between Edwardsville, Belleville, and Waterloo. At all locations, classes run from 9 a.m. to 3:30 p.m.

To find out more, contact your local U of I Extension office.



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