

# BO YARD SMART

# A Guide to Environmental Gardening

Special Insert to the UNL Cooperative Extension *The NEBLINE*



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## Turfgrass During Drought

The primary turfgrasses grown in home lawns are cool season grasses. The most common species of cool season grasses used in residential lawns include Kentucky bluegrass, perennial ryegrass, fine fescue and tall fescue. Cool season grasses perform best when daytime temperatures are in the range of 60–75°F along with 1–1.5 inches of water per week. These lawns possess the best color and quality attributes during the spring and fall seasons. Being cool season grasses, good to excellent winter hardiness allows established lawns to survive even the harshest winters.

The most stressful time of the year for cool season grass is typically in the summer (i.e., June through August). This period is often characterized by hot, sunny days with daytime temperatures routinely in the mid 80's to low 90's (°F). In addition to high temperatures, moderate to severe moisture stress is often imposed on the turfgrasses. The combination of high temperatures and dry soils will lead to significant declines in turfgrass quality unless proper management practices are implemented.

Turfgrass plants need soil moisture to sustain normal growth and development. The water use rates of cool season

turfgrasses during the summer period will often exceed the rate which natural rainfall returns water back into the soil. Once the soil moisture reserves are nearly depleted, the turfgrass will begin to wilt and turn from green to either bluish-green or gray-green. Wilt is a sign of water stress and is usually most evident during mid to late afternoon. The continual water stress that limits or prevents the growth of plants is termed drought. Once drought conditions develop, the lawn will stop all growth and development and proceed into dormancy.

Dormancy is characterized by the development of brown turfgrass. The turfgrass is not dead but in a condition which preserves the vital parts of the plant. Turfgrass dormancy reduces water usage and can concentrate the limited amount of available moisture into the crown, rhizomes and roots. This dormant condition will allow the turfgrass plant to survive adverse conditions for extended periods until soil moisture reserves are replenished.

The length of time lawn grasses can survive in a dormant condition is dependent on a number of factors including soil moisture levels, daytime temperatures, condition of the turfgrass at the onset of dormancy, etc. In general,

turfgrasses can be expected to survive in a dormant condition for up to 4 to 5 weeks with limited damage if temperatures are at or below normal. If daytime temperatures are high (mid-80's or higher) consistently through the stress period, only three to four weeks of survival can be expected. Dormant grass is lost once the crowns, rhizomes and roots begin to dehydrate. The areas of the lawn along sidewalks, curbs, driveways, south facing slopes, etc., will encounter the most stress and will be the first areas to die during extended periods of drought.

Homeowners have little control over the daytime temperatures in the lawn. However, they can improve the survivability of the turfgrass in their lawn through proper management. This management includes proper cultural practices and/or irrigation.

### Proper Summer Cultural Practices

The ability of lawn turfgrasses to survive drought conditions is improved if proper cultural practices are followed. The practices should start in early June and continued until late August. The most important

cultural recommendations include:

#### Proper Mowing

The mowing height should be a minimum of 3.0–3.5 inches prior to, and during, drought periods. Taller cut grass will have deeper, more extensive root systems than short cut grass which will help enable the turfgrass plants to withstand summer stresses. Taller cut turfgrass will provide more shading of the soil thereby keeping soil temperatures cooler and reducing evaporation of soil moisture.

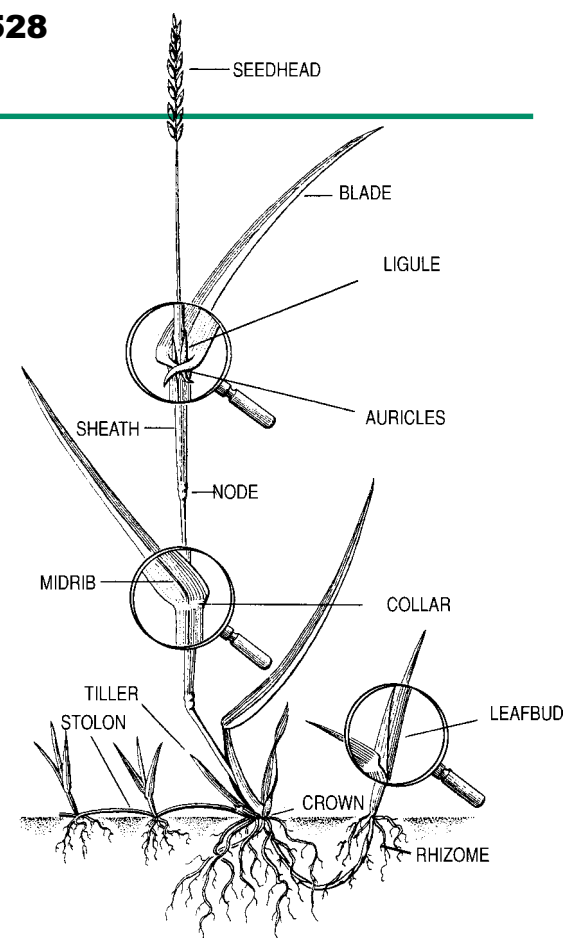
When mowing the lawn never remove more than one-third of the total leaf area at any one time. A lawn mowed at a height of 3 inches should be cut when it reaches a height of 4.5 inches. Removing more than one-third of the leaf area weakens the turfgrass and reduces its capacity to withstand additional environmental stresses. Weakened turf is also more likely to be invaded by weeds.

If possible mow in the

cool of the morning or evening. Mowing during high temperatures of midday places additional stress on the turf. Also make sure the mower blade is sharp. Dull blades tear and bruise the leaf tips.

#### Lawn Irrigation

Homeowners following the recommended summer management practices need to irrigate to prevent lawns from becoming  
*see DROUGHT on page ii*



*During drought conditions, turfgrass goes into dormancy in which the turfgrass goes brown and concentrates moisture into the crown, rhizomes and roots.*

## Garden Compost

Compost is a mixture of partially decomposed plant material and other organic wastes. It is used in the garden to amend soil and fertilize plants.

The chief advantage of compost is its ability to improve soil structure. Good garden soil is loose and has a high water-holding capacity with adequate drainage. Adding compost to heavy clay soil improves drainage by improving soil structure. Compost also absorbs water and improves the water-holding capacity of sandy soils. To conserve moisture it is essential to have soil with good water-retention.

In addition to improving soil structure, decomposing compost will slowly release plant nutrients. Compost will not provide all the nitrogen that highly productive crops require. Organic gardeners can supplement compost applications with manure to produce good yields without the addition of other

fertilizers.

And last but not least, making and using compost allows the gardener to recycle garden wastes and reduce the burdens of organic trash on our landfills.

### Composting Materials

Almost all organic materials will decompose, but not all organic materials belong in the compost pile. Yard wastes, such as leaves, grass clippings, straw and non-woody plant trimmings can be composted. The predominant organic waste in most backyard compost piles is leaves. Grass clippings can be composted; however, with proper lawn management, clippings do not need to be removed from the lawn. If clippings are used for compost, it is advisable to mix them with other yard wastes. Branches, logs and twigs greater than 1/4 inch in diameter should be put through a shredder/chipper or



*Research Technologist Darren Binder leads many of Extension's Composting Workshops.*

cut up prior to placement in the compost pile. Kitchen wastes such as vegetable scraps, coffee grounds and eggshells may also  
*see COMPOST on page iii*

## Composting Workshops and Demonstrations

Learn how to turn yard waste into a reusable organic matter which can be used to improve soil structure. Attend any of the composting workshops sponsored by the Lincoln Recycling Office and Lancaster County Extension and receive a FREE COMPOST BIN. For more information call 441-7180.

### Workshops (7–8 p.m.)

Location	Sept.
Air Park Recreation Ctr, 3720 NW 46	17
Easterday Recreation Ctr, 6130 Adams	18
Belmont Recreation Ctr, 1234 Judson	19
Calvert Recreation Ctr, 4500 Stockwell	24
Irving Recreation Ctr, 2010 Van Dorn	26

### Workshops with Hands-On Demonstrations (begin at 8:30 a.m.)

Backyard Composting Demonstration site at University Place Park, 50th & Colby — Third Saturday of each month through October.