

Irrigating Summer Turf

The rule of thumb for watering an established lawn is, "water as deeply and as infrequently as possible." Deep and infrequent irrigation stimulates root growth, resulting in healthy, drought tolerant and pest resistant turf. While it's true that a deep, healthy root system produces vigorous turf, rooting depth is determined primarily by genetics and soil condition — not irrigation. Maximum rooting depth occurs when soil conditions allow the roots of a particular species (or variety) to reach their full potential. This is not achieved by proper irrigation alone; a combination of proper irrigation, proper fertility and regular core aeration (once in spring and/or once in fall) maximizes rooting depth and overall turf vigor.

Apply 1 to 1.5 inches of water per irrigation. Determine how long this takes by setting several shallow containers (such as baking pans) in different areas of the lawn for thirty minutes while irrigating. Measure in inches the depth

of water in the containers. The average depth of water in these containers multiplied by two is the inches of water per hour emitted by the sprinkler system.

Clay soils have a much lower penetration rate than sandy soils; therefore, clay needs to be watered at a slower rate in order to avoid runoff and puddling. To avoid runoff from very heavy clay soil and/or a sloped lawn you can water for a short period, then stop and start back up again until 1 to 1.5 inches of water has accumulated. Most irrigation clocks permit this type of cycling feature.

Irrigate when the turf indicates water is needed. Look for signs of wilt, which often show up in the same location on the lawn time after time. Footprints or lawn mower tracks that remain at least one half hour after traffic has passed indicates irrigation is needed. Turf will also turn a shade of blue-gray when it is water stressed and in need of irrigation.

Do not irrigate

again until you see signs of wilt. It's important that the soil profile dries somewhat between irrigation applications. Continually water-logged soils are deprived of oxygen which is required for proper root growth.

On very hot days turf may appear stressed even if the soil is wet. This is caused by heat stress and can be remedied by cooling off the turf by wetting it for 15 seconds or less. This technique is called syringing and is not the same as watering.

The best time to irrigate your lawn is between 4 and 10 a.m. During this period it is generally cooler, less windy and the humidity is higher so evaporation losses are less.

Irrigating also overlaps with the turf's natural dew period. Most diseases of turf occur when grass blades are wet for longer than 6 consecutive hours. Water applied between 4 and 10 a.m. replaces or dilutes the dew thus reducing the growth of turf disease organisms.

In Hot Weather, Raise Mower Height for Cool-Season Grasses

Cool-season grasses, such as Kentucky bluegrass, perform best in the spring and fall months. Hot, dry weather is tough on cool-season grasses. Kentucky bluegrass, for example, responds to hot, dry conditions by going dormant. High temperature stress of cool-season grasses can be reduced by simply raising the mowing height. The additional leaf area shades and cools the crowns of the plants. The higher mowing height also promotes the development of a deeper root system. Deep-rooted plants are better able to withstand drought stress. Finally, the additional leaf area increases the rate of photosynthesis or food production.

Mow Kentucky bluegrass lawns at a height of 2–2½ inches during the spring and fall months. The recommended mowing height during the summer months is 3 inches.

An important key to proper mowing is a sharp blade. This is especially true during the summer. Dull blades tear and bruise the leaf tips. The hot summer sun bleaches the damaged leaf tissue, giving the turf surface a whitish appearance. The damaged leaf tissue also increases water loss and the potential for disease infection.

Renovating a Thin Lawn

Hot weather, insects and diseases can cause lawns to decline and become thin. Thin turf areas can be renovated by following the steps outlined below.

1. Determine and correct the problem(s) causing the lawn decline. Possible causes include hot weather, insects, diseases, unsuitable turfgrass species and improper care. If the problem(s) is not corrected, the lawn will likely decline again.

2. Select the best grass for the site. For example, seed mixes containing fine-leaved fescues are the best choice for shaded or partially shaded sites.

3. Mow the lawn as short as possible.

4. If renovating small areas, prepare the area by raking the thin spots. Large areas can be prepared by using a core aerifier or power rake. Go over the lawn 3 or 4 times with the

core aerifier. Rake and remove all debris after power raking the turf area.

For best results, aeration and power raking should be done when the soil is moist, not wet or dry.

5. Small areas can be seeded by hand. Use a drop-type seeder when overseeding large areas. After seeding, work the seed into the soil by lightly dragging or raking the areas. Large areas can also be overseeded by using a slit seeder. A slit seeder makes a small groove in the soil and deposits the grass seed into the slit. (A slit seeder effectively combines steps 4 and 5 in the above procedure.)

6. Apply a starter lawn fertilizer containing the pre-

emergence herbicide Tupersan (siduron). Crabgrass is often a problem when overseeding. Tupersan is the only preemergence that will control crabgrass without affecting the germination of the turfgrass seed.

7. Keep the soil moist with frequent light applications of water.

Late summer (mid-August through September) is the best time to overseed a thin lawn. Spring (mid-April through early May) is the second best time. Core aerifiers, power rakes and slit seeders can be rented at some garden centers and rental agencies.



Pellet-like cores of soil produced by a core aerifier.

Buffalograss — The Other Green Grass

Don Janssen
Extension Educator

After turf becomes well established (up to 4 months for plugged areas; 4-8 weeks for sodded areas), a reduction in management inputs can be realized.

The mowing requirement for vegetatively established buffalograss ranges from approximately every 2 weeks to once per year, depending on management level and aesthetic requirement. The recommended mowing height, when mowing is practiced, is 1½–4 inches. Shorter mowing heights will require a greater mowing frequency. Avoid removing more

than one-third of the turf height (i.e., for a 2" mowing height, mow when the turf reaches 3") at any mowing. Removing clippings is optional and normally not required or recommended.

Excessive nitrogen fertilization promotes weed populations in buffalograss. Exceeding the following recommendation defeats the low management concept of buffalograss and promotes weed invasion. Apply 1 to 3 lbs N/1000 ft²/yr in two applications (mid to late May and late July). On sandy or low-fertility soils, and/or in high rainfall areas, use the upper end of the recommended rates. Use a slow release N carrier such as sulfur-coated urea (SCU), ureaformaldehyde or a

natural organic fertilizer. For phosphorous, potassium and pH adjustments, test the soil every 3-5 years.

The water requirements of established buffalograss are considerably lower than the commonly used turfgrasses. Excessive irrigation, much like overfertilization, promotes weed invasion. Irrigating buffalograss in many areas is not required. If natural precipitation is inadequate or untimely, supplemental irrigation may be required.

Once established and properly managed, weed pressure in buffalograss is minimal. If herbicides are required, follow label directions explicitly to maximize weed control.

Upcoming Acreage Insights Clinics

"Acreage Insights — Rural Living Clinics" are designed to help acreage owners manage their rural living environment. This series of seminars are presented by University of Nebraska-Lincoln Extension at various locations in the state.

Pre-registration is \$10 per person and must be received three working-days before the program. Late registration is \$15 per person. For more information or to register, contact extension at 441-7180 or go to the Acreage & Small Farm Insights Web site at

The following seminars will be held in Lincoln at the Lancaster Extension Education Center, 444 Cherrycreek Road on Thursdays from 7–9 p.m.

Large Farm Ponds • Aug. 11

If you've got a body of water larger than a backyard pool, you'll want to attend the upcoming workshop on pond maintenance. Tadd Barrow, Water Resources Specialist with the School of Natural Resources, will explain the ins and outs of keeping it clean, healthy and a real asset to your acreage.

Septic Systems • Sept. 15

Have you ever wondered what happens to that wastewater when you take a shower or flush the toilet? Maybe not—unless it's backed up into your house or surfaced in your yard. Presented by Sharon Skipton, Extension Educator and Jan Hygnstrom, Project Manager, Biological Systems Engineering, this seminar will cover 1) what happens to wastewater when it goes down the drain and 2) how your actions (operation and maintenance, O and M) affect your system's performance. The clinic will cover septic and lagoon system O and M. NebGuides will be available on design and installation, but these topics will not be addressed in the clinic.

Grapes • Oct. 13

"How to Get Started in Grape Growing" will be the topic of October's seminar. Steve Gamet, University of Nebraska Viticulture Technician, will be discussing such topics as variety selection, the types of fencing and equipment needed for grapes, the economics of grape production, insect, disease and wildlife control for grapes and the marketing of grapes to wineries.

Woody Florals • Nov. 10

Any woody plant with colorful or unusually shaped stems, buds, flowers, fruits, bark or leaves has potential to be sold as a woody decorative floral. Researchers at the University of Nebraska have worked extensively with woody decorative florals and their research indicates that producing woody decorative florals is a viable third crop enterprise. In this seminar, learn what it takes to grow and market high quality woody florals.

