

# Turfgrass Selection for Tennessee Landscapes

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Tennessee sits in what's known as the transition zone, one of the most challenging regions in the country for growing turf. Our climate supports both warm-season and cool-season grasses, but neither type thrives year-round without some seasonal stress. Choosing the right grass for your lawn means matching a species' strengths to your site's conditions, your aesthetic goals and the amount of time and resources you want to invest in care. Selecting the right turfgrass is an investment that pays off in a lawn that looks good, feels good underfoot and fits your lifestyle. This guide will help you understand the major grass types grown in Tennessee, their seasonal strengths and weaknesses and the key factors to consider before making your choice.

## Warm- vs. Cool-Season Turfgrasses

Turfgrasses grown in Tennessee fall into two main groups based on their growth cycle and temperature preferences. Understanding these patterns will help you predict when your lawn will look its best and when it might need extra care. In Tennessee's transition zone, you can grow either type successfully, but there is always a seasonal trade-off. It is also common to see different grasses in different parts of the same property, such as cool-season grasses in shaded areas and warm-season grasses thriving in full-sun spaces.

| Attribute         | Warm-Season Grasses   | Cool-Season Grasses   |
|-------------------|---|---|
| Examples          | Bermudagrass ( <i>Cynodon spp.</i> ), zoysiagrass ( <i>Zoysia spp.</i> ), centipedegrass ( <i>Eremochloa ophiuroides</i> )  | Tall fescue ( <i>Schedonorus arundinaceus</i> ), Kentucky bluegrass ( <i>Poa pratensis</i> ), perennial ryegrass ( <i>Lolium perenne</i> ), fine fescue ( <i>Festuca spp.</i> ) |
| Optimal Growth    | Late spring–summer (-80–95 F)   | Spring & fall (-60–75 F)  |
| Winter Appearance | Dormant and brown when soil temps drop below -50–55 F   | Often green in many parts of Tennessee  |
| Summer Appearance | Generally, stays active and durable   | May thin or brown without irrigation  |
| Strengths         | Generally have excellent heat & drought tolerance; spread by stolons and/or rhizomes for recovery & fill-in; can have reduced mowing requirements as a function of shorter growing season | Quick establishment from seed in some species (e.g., tall fescue); broad seasonal green color in much of TN   |
| Limitations       | Winter injury risk in colder areas; slow spring green-up, may have a short growing season in some regions; thatch management may be required, particularly for zoysiagrass                | Higher summer water needs; disease-prone in heat/humidity (e.g., brown patch); generally require periodic overseeding <sup>1</sup> to maintain density                          |

<sup>1</sup>**Interseeding** is the practice of adding seed to an existing turfgrass stand of the same species to improve density and ground cover (i.e., fescue into fescue), most commonly used in tall fescue lawns that thin due to heat, drought or disease and lack the ability to spread. Conversely, **overseeding** more often refers to seeding a different turfgrass species into an established stand, typically as a temporary, seasonal practice (i.e., ryegrass into bermudagrass) to maintain green color and function during warm-season turfgrass dormancy. Although often used interchangeably, these terms represent distinct practices with different objectives and outcomes.

## How to Use These Tables

The tables below compare key traits of common turfgrass species grown in Tennessee. Understanding these traits will help you select a grass that matches your lawn’s sunlight, soil and maintenance level. No single species is perfect for every situation. By comparing characteristics like shade tolerance, mowing height, water needs and nutrient requirements, you can choose a grass that will thrive in your specific conditions and fit your desired level of care. Additional information on key traits can be found later in this publication.

### Cool-Season Turfgrasses for Tennessee Lawns

| Common Name                                  | Scientific Name                 | Planting Method | Growth Habit                        | Description  | Varieties  |
|--|---------------------------------|-----------------|-------------------------------------|--|--|
| <b>Tall Fescue</b>                           | <i>Schedonorus arundinaceus</i> | Seed, sod       | Bunch-type (some rhizomatous types) | <ul style="list-style-type: none"> <li>• Coarse to medium texture; newer turf-types finer than KY-31</li> <li>• Good drought and heat tolerance</li> <li>• Susceptible to brown patch (<i>Rhizoctonia solani</i>) in summer</li> </ul>   | <p>2nd Millennium, Amity, Aquavita, Avenger II, Avenger III, Bonfire, Bonsai 2X, Bullseye LTZ, Cochise IV, DaVinci, Dragster, Dundee, Dynamite GLS, Expanse, Falcon IV, Fayette, Firebird 2, Firecracker GLS, Firewall, Foxhound, GLX Aced, GLX Star, Grande 3, GTO, Hemi, Hot Rod, Hounddog 8, Jaguar 4G, Leonardo, Lifeguard, Maestro, Masterpiece, Matisse, Michelangelo, Monet, Nightcrawler, No-Net Brand, Paramount, Providence, RaceWay, Raindance, Raptor III, Rebounder, Reflection, Regenerate, Relentless, Renegade DT, Rhizing Moon, RK-4, Rockwell, Rover, Rowdy, Saltillo, Screamer, Spyder 2, Summer, Sun Fire, Supersonic, Thunderstruck, Titanium GLS, Trinity, Turbo RZ, Van Gogh, Valkyrie, Winning Colors Blend, Xanadu, Zion, Zigzag</p> <p><b>...and many others</b> — use varietal blends for improved performance.</p> |
| <b>Hard Fescue</b><br>( <i>fine fescue</i> ) | <i>Festuca brevipila</i>        | Seed            | Bunch-type                          | <ul style="list-style-type: none"> <li>• Fine-textured, shade-tolerant grasses</li> <li>• Low fertility and water needs</li> <li>• Poor heat tolerance; perform best in cooler, shaded microclimates</li> <li>• Limited tolerance of poorly drained soils</li> <li>• Suitable for erosion control on shaded slopes with minimal mowing</li> <li>• Most often included in cool-season blends</li> </ul> | <p>4HES Hard, Beacon, Beacon II, Bighorn GT, Clarinet, DLFPS-FL-3104, EcoStarPlus, Eureka II, Gladiator, Jetty, Leonidas, Minimus, Nanook, Reliant IV, Resolute, Spartan II, SR 3150, Sword, Viking H2O, many others.</p>  |

| Common Name  | Scientific Name                     | Planting Method | Growth Habit | Description  | Varieties  |
|--|-------------------------------------|-----------------|--------------|--|--|
| <b>Sheep Fescue</b><br><i>(fine fescue)</i>        | <i>Festuca ovina</i>                | Seed            | Bunch-type   | <ul style="list-style-type: none"> <li>Fine-textured, shade-tolerant grasses</li> <li>Low fertility and water needs</li> <li>Poor heat tolerance; perform best in cooler, shaded microclimates</li> <li>Limited tolerance of poorly drained soils</li> <li>Suitable for erosion control on shaded slopes with minimal mowing</li> <li>Most often included in cool-season blends</li> </ul> | Blue Hornet, BlueRay, Dall, Marco Polo, Quatro.<br><br><b>Many others.</b>   |
| <b>Chewings Fescue</b><br><i>(fine fescue)</i>     | <i>Festuca rubra ssp. commutata</i> | Seed            | Bunch-type   |  | Ambrose, Compass II, Conductor, J-5, Lee-ward, Longfellow 3, PPG-FRC 130, Radar, SR 5130, Windward, Woodall, Zodiac.<br><br><b>Many others.</b>  |
| <b>Creeping Red Fescue</b><br><i>(fine fescue)</i> | <i>Festuca rubra ssp. rubra</i>     | Seed            | Bunch-type   |  | Ambrose, Compass II, Conductor, J-5, Lee-ward, Longfellow 3, PPG-FRC 130, Radar, SR 5130, Windward, Woodall, Zodiac.<br><br><b>Many others.</b>  |
| <b>Annual Ryegrass</b>                             | <i>Lolium multiflorum Lam.</i>      | Seed            | Bunch-type   | <ul style="list-style-type: none"> <li>Coarse-textured, bunch-type grass with rapid germination</li> <li>Establishes quickly for short-term cover</li> <li>Not heat tolerant; declines in summer</li> <li>Often used for temporary erosion control or seasonal color</li> <li><b>Not suitable as a permanent lawn cover.</b></li> </ul>  | <b>Many.</b> Look to local suppliers. Annual ryegrass is often used in blends labeled for “contractors”  |
| <b>Perennial Ryegrass</b>                          | <i>Lolium perenne L.</i>            | Seed            | Bunch-type   | <ul style="list-style-type: none"> <li>Fine- to medium-textured, bunch-type grass</li> <li>Rapid germination and establishment from seed</li> <li>Attractive, dark green color</li> <li>Susceptible to heat and drought stress in Tennessee summers</li> <li>Often included in cool-season blends or used for seasonal overseeding</li> </ul>  | All Star Fore, Apple 3GL, Aspire, Bandalore, Banfield, Benchmark, CSI Rye, Deschutes, Diligent, Double Time GLS, Esquire, Expedite, Fastball 3GL, Furlong, Gator 3, GLY-Rye, GrandSlam GLD, Gray Hawk, Infusion, Intense, Keystone 2, LineDrive GLS, Man O War, Manhattan 5, Manhattan 7, Mighty, Molalla, Pacifico, Palmer 3, Palmer 4, Palmer 5, Panther GLS, Pharaoh, Portfolio, Prelude 3, Prelude 4, Prelude GLS, Rainwater PR, Reservoir, Revenge 2 GLX, Seabiscut, Sideways, Slugger 3GL, SR 4600, SR 4650, SR 4660ST, SR 4700, Stamina, Stellar 4GL, Sun Hawk, Thrive, Zoom<br><br><b>Many others.</b> |

| Common Name | Scientific Name  | Planting Method | Growth Habit | Description   | Varieties  |
|-------------|--|-----------------|--------------|---|--|
| Bluegrasses | <i>Poa pratensis</i> L.,<br><i>P. arachnifera</i> ×<br><i>P. pratensis</i> | Seed, sod       | Rhizomatous  | <ul style="list-style-type: none"> <li>Fine-textured, rhizomatous grass with attractive dark green color</li> <li>Spreads by rhizomes for good recovery from injury</li> <li>Slow to germinate and establish compared to tall fescue or ryegrass</li> <li>Variable tolerance to heat, drought, and shade depending on cultivar</li> </ul> | <p>Acoustic, After Midnight, Alexa II, Artesia, Award, Babe, Barrister, Barserati, Barvette, Bedazzled, Beyond, Blue Note, Bluebank, Bolt, Bordeaux, Champagne, Desert Dream, Diva, Everest, EverGlade, Full Moon, Granite, Hampton, Impact, Jackrabbit, Jackpot, Keeneland, Krypton, Legend, Martha, Mercury, Merit, Midnight, NuGlade, NuRush, NuRush Plus, Prosperity, Rhapsody, Rhythm, Rugby II, Skye, Starr, Sudden Impact, Super Moon, Syrah, Tirem, Vault, Volt, Washington, Water Steward, WaterWorks, Yellowstone, Zinfandel</p> <p><b>Many others</b> – consider also blends such as HGT bluegrass and 365SS, among others.</p> |

#### Additional Management Considerations (cool-season)

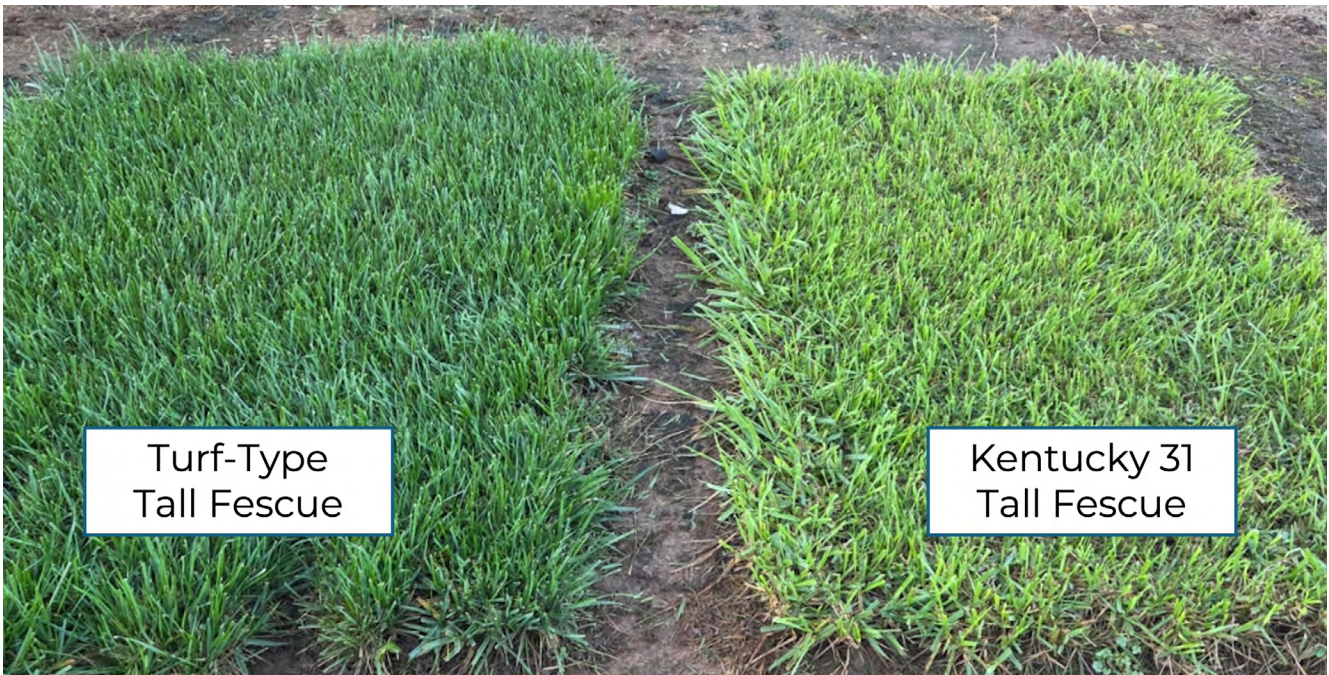
| Common Name                                   | Shade Tolerance            | Mowing Height (in) | Watering Requirement | N Inputs        | Best Used In   |
|---|----------------------------|--------------------|----------------------|-----------------|--|
| Tall Fescue                                   | Full sun to moderate shade | 2.5 – 5            | Low to moderate      | Low to Moderate | ...most home lawns in East and Middle Tennessee; adaptable to partial shade; tolerates moderate traffic; preferred where a longer green season in spring and fall is desired with moderate maintenance inputs.                                       |
| Hard Fescue<br>( <i>fine fescue</i> )         | Moderate to high           | 1.5 – 3            | Low to moderate      | Low             | ...cool, low-maintenance lawns in shaded or partially shaded areas; ideal where drought tolerance and reduced mowing are priorities; effective on steep slopes for erosion control; not well-suited for high heat, full sun or poorly drained soils. |
| Sheep Fescue<br>( <i>fine fescue</i> )        | Moderate to high           | 1.5 – 3            | Low                  | Low             |  |
| Chewings Fescue<br>( <i>fine fescue</i> )     | High                       | 1.5 – 3            | Low                  | Low             |  |
| Creeping Red Fescue<br>( <i>fine fescue</i> ) | High                       | 1.5 – 3            | Low                  | Low             |  |

| Common Name               | Shade Tolerance | Mowing Height (in) | Watering Requirement | N Inputs        | Best Used In  |
|---------------------------|-----------------|--------------------|----------------------|-----------------|---|
| <b>Annual Ryegrass</b>    | Low             | 1.5-3              | Moderate             | Low to Moderate | ...temporary groundcover, erosion control or short-term overseeding situations where rapid establishment is needed; <b>not suitable for permanent or long-term lawn cover.</b>  |
| <b>Perennial Ryegrass</b> | Low to moderate | 1.5 - 3            | Moderate             | Low to Moderate | ...quick-establishing turfgrass for overseeding warm-season grasses, athletic fields, and lawns; often included in cool-season blends to improve establishment speed; best suited for high-maintenance, irrigated sites; not well-adapted to prolonged summer heat or drought in Tennessee. |
| <b>Bluegrasses</b>        | Low to moderate | 1 - 3              | Moderate to high     | Low to Moderate | ...cool-season blends for improved density, recovery and color; particularly effective in partially shaded microclimates or cooler parts of Tennessee; most tall fescue sod in the state contains about 10-15% Kentucky bluegrass to enhance sod strength and handling.                     |

## What about KY-31?

First recognized by farmers in 1931 and released in 1943, Kentucky 31 (KY-31) has long been the tall fescue many people are most familiar with, used historically in both lawns and pastures. Beginning with the release of 'Rebel' in 1979, tall fescue breeding shifted toward turf-type tall fescues (TTTFs) selected for finer leaf texture, darker green color and a more compact growth habit. Continued breeding has resulted in varieties with improved heat and drought tolerance, disease resistance and overall performance.

Turf-type tall fescues are generally recommended for high-value, high-visibility lawn and landscape areas, such as front lawns, where appearance is a priority. Kentucky 31 still has its place in Tennessee landscapes, but it is often better suited for more utilitarian, low-input areas where durability and affordability are more important than aesthetics.



## Warm-Season Turfgrasses for Tennessee Lawns

| Common Name                | Scientific Name   | Planting Method   | Growth Habit                  | Description  | Varieties   |
|----------------------------|---|---|-------------------------------|--|---|
| <b>Common Bermudagrass</b> | <i>Cynodon dactylon</i>   | Seed, sod, sprigs, plugs  | Rhizomatous and stoloniferous | <ul style="list-style-type: none"> <li>• Warm-season perennial grass with aggressive stolons and rhizomes</li> <li>• Excellent heat and drought tolerance; poor shade tolerance</li> <li>• Rapid establishment and wear recovery, widely used for lawns, sports fields, and pastures</li> <li>• Produces seed (unlike sterile hybrids); may show more genetic variability</li> </ul>   | <b>Seeded:</b> Common, Arden 15, Blackjack, Casino Royale, Jubilee Blend, Hollywood, La Prima Blend, Maya, Mirage 2, Monaco, Princess 77, Rio, Royal Bengal, Sahara II Sunbird, Transcontinental, Yukon,<br><b>Others</b> |
| <b>Hybrid bermudagrass</b> | <i>Cynodon dactylon</i> × <i>Cynodon transvaalensis</i>           | Sod, plugs, sprigs.<br><br>Note: Hybrid bermudagrass cannot be planted from seed. | Rhizomatous and stoloniferous | <ul style="list-style-type: none"> <li>• Warm-season perennial grass; sterile interspecific hybrid (no viable seed)</li> <li>• Finer texture, darker green color, and denser growth than common bermudagrass</li> <li>• Excellent wear tolerance and recovery, widely used on golf courses, athletic fields, and high-quality turfgrass areas</li> <li>• Requires vegetative propagation (sprigs, sod, or plugs) for establishment</li> </ul>  | <b>Vegetative Hybrids:</b> IronCutter, Latitude 36, Northbridge, Patriot, Tahoma 31, TifTuf, Tifway 419, Tifway II,<br><b>Others</b>  |
| <b>Centipedegrass</b>      | <i>Eremochloa ophiuroides</i>                                     | Seed, sod   | Stoloniferous                 | <ul style="list-style-type: none"> <li>• Light-green, medium-coarse texture with slow growth and low fertility needs.</li> <li>• Tolerates acidic soils and moderate drought</li> <li>• Very limited cold tolerance, likely to experience winter injury and stand loss in Tennessee climates</li> <li>• Limited wear tolerance and slow recovery from damage.</li> <li>• Much less common in Tennessee and may be harder to source locally, but occasionally used in residential lawns.</li> <li>• Performs best in low-maintenance sites with minimal traffic.</li> </ul> | TifBlair. Limited options well-suited for Tennessee; future breeding efforts may yield future choices. Sod will be hard to source locally.  |
| <b>Zoysiagrass</b>         | <i>Zoysia japonica</i> , <i>Zoysia matrella</i> , <i>others</i> . | Sod, sprigs, plugs (limited seeded options available)                             | Rhizomatous and stoloniferous | <ul style="list-style-type: none"> <li>• Dense, fine- to coarse-textured turfgrass (depending on species/cultivar) with good drought and moderate shade tolerance.</li> <li>• Forms a very dense sod; slower to establish than bermudagrass.</li> <li>• Spreads via stolons and rhizomes, but recuperative speed is slower than bermudagrass</li> <li>• Prefers well-drained soils; moderate maintenance needs including regular thatch management</li> </ul>  | <b>Seeded (limited):</b> Compadre, Zenith<br><b>Vegetative:</b> Cavalier, El Toro, Gateway Zoysia, Innovation, Lobo, Meyer, Palisades, Royal, Stadium, Zeon, Zorro, <b>Others</b>   |

### Additional Management Considerations (warm-season)

| Common Name                | Scientific Name   | Shade Tolerance | Mowing Height (in) | Watering Requirement | N Inputs         | Best Used In...  |
|----------------------------|---|-----------------|--------------------|----------------------|------------------|--|
| <b>Common Bermudagrass</b> | <i>Cynodon dactylon</i>                                   | Low             | 1.5 – 3            | Very Low to Moderate | Low to High      | ...full-sun lawns, sports fields, and utility turfgrass in Tennessee; excellent heat and drought tolerance; good traffic recovery; best suited for low- to moderate-maintenance sites; not well-adapted to shaded areas.                                     |
| <b>Hybrid bermudagrass</b> | <i>Cynodon dactylon</i> × <i>Cynodon transvaalensis</i>   | Low             | 1 – 2              | Low to Moderate      | Moderate to High | ...high-quality lawns, golf courses, and athletic fields in full sun; provides dense, fine-textured turfgrass with excellent wear tolerance and rapid recovery; requires vegetative (sod, plugs, sprigs) establishment and higher management inputs.         |
| <b>Centipedegrass</b>      | <i>Eremochloa ophiuroides</i>                             | Low to Moderate | 1 – 2              | Low to Moderate      | Low              | ...low-input lawns on acidic, sandy soils in the southeastern U.S.; best suited for areas with minimal traffic and low fertility; not widely recommended in Tennessee due to poor winter survival and slow recovery.   |
| <b>Zoysiagrass</b>         | <i>Zoysia japonica</i> , <i>Zoysia matrella</i> , others. | Moderate        | 1–2.5              | Low to Moderate      | Low to Moderate  | ...home lawns and landscapes where dense, fine-textured turfgrass is desired; tolerates moderate shade and traffic; offers good drought tolerance but slow establishment and recovery; performs best with moderate irrigation and cultivation (dethatching). |

## Key Turfgrass Traits: A Closer Look

This section provides additional context and explanation for the key turfgrass traits summarized in the tables on the previous pages, including growth habit, planting method, shade tolerance, mowing height range, water requirements and annual nitrogen requirements.

1. **Growth Habit:** Indicates how the grass spreads:



Bunch-type

Rhizomatous

Stoloniferous

- **Bunch-type:** Spreads only by tillers; needs additional seeding to repair thin areas.
- **Rhizomatous:** Spreads by underground stems, filling gaps more easily.
- **Stoloniferous:** (most relevant for warm-season lawns): Spreads by above-ground stems, called stolons but colloquially referred to as “runners.”
- **Some grasses, like bermudagrass and zoysiagrass, are both rhizomatous and stoloniferous, allowing them to spread laterally above and below ground.**

Why it matters: Growth habit influences recovery from wear, ability to fill in bare spots and potential for encroachment into garden beds.







Image from PB1845-J

2. **Planting Method:** The way turfgrass is established on a site, whether by seed or through vegetative materials such as sod, plugs or sprigs. Each method differs in cost, labor, establishment speed and grass variety availability.

Why it matters: Some varieties of grass, such as hybrid bermudagrasses or most zoysiagrasses, are only available vegetatively (sod, plugs, sprigs) while other grasses, like many cool-season turfgrasses, have a wide range of seed options. These differences affect cost as well as planting and establishment. Generally, sodding turfgrass will be more expensive initially than seeding or sprigging turf. However, sodding can often be worthwhile if there is a desire to establish a usable cover more quickly, often with less weed pressure than seeded or sprigged areas that have more soil exposure and opportunity

for weeds to compete. Further, many vegetative (sod or sprig-only) cultivars (i.e., ‘TifTuf’ or ‘Tahoma 31’) offer improved traits such as improved drought or cold performance that seeded varieties may not offer.

| Method  | Definition   | Pros   | Cons   |
|---|--|--|--|
|  <p data-bbox="250 573 311 604"><b>Seed</b></p>                    | <p data-bbox="443 386 764 443">Grass seed spread over prepared soil to establish a lawn.</p>                                       | <ul data-bbox="786 359 1065 470" style="list-style-type: none"> <li>• Lowest cost (typically)</li> <li>• Easy to install</li> <li>• Many species and varieties available</li> </ul>  | <ul data-bbox="1123 275 1471 554" style="list-style-type: none"> <li>• Longest establishment time</li> <li>• Requires consistent, balanced moisture</li> <li>• Higher weed competition</li> <li>• May not be ideal for steep slopes or erosion-prone sites</li> <li>• May not be suitable for high-traffic areas that cannot be closed during establishment</li> </ul> |
|  <p data-bbox="180 1020 383 1052"><b>Sod (Vegetative)</b></p>      | <p data-bbox="443 821 748 898">Mature turfgrass grown on a farm and transplanted as rolls or slabs.</p>                            | <ul data-bbox="786 747 1089 974" style="list-style-type: none"> <li>• Immediate cover</li> <li>• Rapid erosion control</li> <li>• Usable sooner</li> <li>• Some turfgrass varieties (hybrid bermudagrasses, most zoysiagrasses) are only available as sod, plugs, or sprigs</li> </ul> | <ul data-bbox="1123 789 1455 926" style="list-style-type: none"> <li>• Highest cost (typically)</li> <li>• Labor-intensive</li> <li>• Requires good grading and strong soil-to-sod contact for success</li> </ul>  |
|  <p data-bbox="180 1467 383 1499"><b>Plug (Vegetative)</b></p>   | <p data-bbox="443 1268 760 1346">Small, rooted pieces of turfgrass (approximately 2- to 4- inch squares) planted in a pattern.</p> | <ul data-bbox="786 1251 1081 1362" style="list-style-type: none"> <li>• Less expensive than sod</li> <li>• Good for spreading warm-season species</li> <li>• Fills in over time</li> </ul>   | <ul data-bbox="1123 1194 1479 1421" style="list-style-type: none"> <li>• Slower establishment than sod</li> <li>• Visible gaps early on</li> <li>• Only suitable for spreading grasses (bermudagrass, zoysiagrass, Kentucky bluegrass)</li> <li>• Weed pressure between plugs</li> <li>• Uneven surface can make mowing challenging</li> </ul>                         |
|  <p data-bbox="168 1915 399 1946"><b>Sprigs (Vegetative)</b></p> | <p data-bbox="443 1709 753 1787">Stems or stolons/rhizomes planted loose or in rows that root and spread.</p>                      | <ul data-bbox="786 1692 1101 1803" style="list-style-type: none"> <li>• Cost-effective for large areas</li> <li>• Well suited for species like bermudagrass and zoysiagrass</li> </ul>   | <ul data-bbox="1123 1656 1479 1850" style="list-style-type: none"> <li>• Slowest establishment</li> <li>• Requires careful watering</li> <li>• Higher risk of erosion or weed invasion early</li> <li>• Generally most successful when installed with specialized equipment.</li> </ul>  |

**3. Shade Tolerance:** Describes the ability to grow with less than full sun.

Shade tolerance in turfgrasses is influenced by much more than the number of sunlight hours an area receives. In research settings, shade is often evaluated by light intensity, light quality and light consistency. Light that filters through a tree canopy is very different from the solid shade cast by a building, and even among trees, species vary widely in how much light they allow through because of differences in canopy density and structure. These variations, combined with added stresses such as root competition and reduced air flow, make shade tolerance difficult to measure and compare. This document provides some guidance, but end-users are encouraged to assess what makes sense on a per-site basis. In some cases, it may not be suitable to grow turfgrass in shaded areas; alternatives, including expanded mulch areas, may make more sense.

Why it matters: Many lawns have variable light due to trees, structures, or seasonal changes in canopy cover.

- **Low Shade Tolerance (six or more hours of direct sun)**  
Requires nearly full sun to maintain acceptable quality. Performs poorly with sustained shade or heavy canopy cover.
- **Low to Moderate Shade Tolerance (four to six hours of direct sun)**  
Tolerates some partial shade, especially with morning light, but performance declines in dense or prolonged shade.
- **Moderate to High Shade Tolerance (two to four hours of direct sun or a full day of filtered light)**  
Performs well in partial shade and maintains reasonable density with reduced light, though thinning may occur in significant canopy shade.
- **High Shade Tolerance (less than two hours of direct sun with consistent filtered light)\***  
Maintains good density in substantial shade where light quantity and quality are reduced but still requires some usable light.

\*Even turfgrass varieties that are considered highly shade tolerant in other regions may not perform the same way in Tennessee's transition zone. Additional stressors such as heat, humidity, poor drainage and disease pressure can limit performance in shaded environments.

## Tips for Managing Turfgrass in Shade

- **Mow slightly higher** to increase leaf surface area and help turfgrass capture more available light.
- **Reduce nitrogen inputs to prevent excessively weak growth and prevent disease.**
- **Irrigate deeply and infrequently** to benefit both turfgrass and trees when turfgrass is growing under a canopy. Shaded turfgrass areas dry out more slowly and are easy to overwater, so monitor them closely.
- **Limit traffic.** Turfgrass stressed by foot traffic does not recover as easily in shade, and practices normally used to relieve compaction (such as mechanical aerification) can damage desirable tree roots.
- **Monitor for disease,** as shaded areas under trees tend to stay wetter and more humid, which can increase the likelihood of turfgrass diseases.
- **Prune trees selectively** (not excessively) to allow more filtered light and air movement while protecting tree structure and health.
- **Choose trees with upright growth habits** (e.g., pines) rather than wide-spreading trees (e.g., maples) to reduce shade intensity and improve air movement over turf.

**4. Mowing Height Range:** The suggested height range for regular mowing.

Many of the species featured in this publication can tolerate lower mowing heights in specialty-use scenarios (sports fields, golf course); however, the ranges defined in this publication are most appropriate for resilient lawns maintained with standard lawn care equipment.

Why it matters: Mowing too short can stress turf, increase weeds and reduce rooting depth; mowing too tall can encourage disease and risk scalping. Matching the species to your preferred mowing height range can reduce maintenance stress.

**5. Water Requirement:** Describes how much supplemental irrigation a turfgrass species typically needs during a normal Tennessee growing season. Needs vary with soil, sun exposure, rainfall, and management. It's common to think about lawn watering in terms of time, such as how many hours or days per week to run the sprinkler. In reality, every irrigation system applies water at a different rate. The **precipitation rate**, or the amount of water applied in inches over time, is the best starting point for smart watering. Once you know how much water your system puts out, it becomes easier to decide how long to run it to meet your lawn's needs. For example, one system may apply 1 inch of water in 30 minutes, while another may apply only 0.25 inches in that same timeframe. You can learn more about your system's precipitation rate through a simple catch-can audit, which involves placing small containers in the lawn to measure water collected during a set run time or by using a single rain gauge to capture water in a known amount of time.

#### **Lawn Watering Guidance for Consumers**

- Most Tennessee lawns will not need more than 1 inch of water per week in hot summer months, including rainfall. Many lawns, especially bermudagrass and zoysiagrass, can perform well with about 0.5 inches per week.
- Reduce irrigation in spring and fall as water needs decline. Generally, lawns require no irrigation in winter.
- Water deeply and infrequently by dividing your weekly amount into 1 to 3 irrigation events.
- Turn irrigation off during periods of heavy rainfall since too much water can be as harmful as too little.
- Turfgrasses will require less water when their roots are deep and healthy. Maintaining slightly higher mowing heights in summer and encouraging deep root growth year-round by managing traffic and compaction are important.

Why it matters: Turfgrass species differ in drought tolerance, rooting depth and recovery. Choosing a species with water needs that match your site and watering capacity can reduce irrigation costs, improve lawn resilience and support more sustainable lawn care in Tennessee.

#### **Water requirement categories:**

- **Low:** Survives with very little supplemental irrigation once established. A hose-end sprinkler used occasionally during long dry spells is usually enough. Turfgrass may brown temporarily in drought but recovers well after rainfall.
- **Low to Moderate:** Needs occasional irrigation during extended dry periods, especially in sunny or sloped areas. A hose-end sprinkler used once every week or two in summer is typically sufficient. Turfgrass may slow growth or brown lightly but rebounds quickly.
- **Moderate:** Performs best with routine summer irrigation. A permanent sprinkler system is helpful but not required if you are willing to water consistently with a hose-end sprinkler. Without regular watering, turfgrass can show stress or thinning, particularly in full sun or shallow soils.
- **Moderate to High:** Requires regular watering in summer to maintain quality. A built-in sprinkler system is often the most practical option, as frequent and even irrigation is needed. Turfgrass declines quickly under drought stress and recovers more slowly, especially during hot (and windy) weather.

**6. Annual Nitrogen (N) Requirement:** Relative range of nitrogen (N) fertilizer needed for healthy turf. Lawns that are older, not irrigated and/or are less trafficked will generally require less nitrogen overall.

- **Low** =  $\leq 1$  lb N/1000 sq ft/year.
- **Low to Moderate** = 1-3 lbs N/1000 sq ft/year.
- **Moderate** = 2-4 lbs N/1000 sq ft/year.
- **Moderate to High** = 3-5 lbs N/1000 sq ft/year.

Why it matters: Higher nitrogen needs increase annual maintenance cost and time; matching your desired maintenance level with the grass's nutrient needs improves success.

## Soil Testing

While nitrogen amounts are generally based on species, environment, management and use, other nutrients (phosphorus, potassium, iron, etc.) are applied based on soil test recommendations. Soil pH is also important for nutrient availability, with optimum pH for turfgrass growth generally falling between 6 and 7, with some flexibility on either side depending on species. Annual soil testing is the best way to ensure fertilizer and lime programs are appropriate for your unique lawn. Visit your local county Extension office for more information.

**Soil, Plant and Pest Center:** [soillab.tennessee.edu/](http://soillab.tennessee.edu/)

### Additional Resources for Turfgrass Selection

If you'd like to explore turfgrass varieties in more detail, these national programs can help you compare options and find grasses suited to your climate and maintenance goals:

- **National Turfgrass Evaluation Program (NTEP)**  
Tests turfgrass varieties across the U.S. for traits like color, disease resistance, drought tolerance and wear tolerance. Their online database allows you to filter results by location and conditions to see how varieties perform in climates similar to yours.  
Website: [ntep.org](http://ntep.org)
- **Alliance for Low Input Sustainable Turfgrass (A-LIST)**  
Identifies and certifies turfgrass varieties that perform well with less water, fertilizer and pesticides. A-LIST grasses are a great option if you want a lower-maintenance lawn without sacrificing quality.  
Website: [a-listturf.org](http://a-listturf.org)
- **Turfgrass Water Conservation Alliance (TWCA)**  
Focuses on grasses that maintain quality under reduced irrigation. If you want a lawn that can handle dry periods with less watering, TWCA-approved varieties are worth considering.  
Website: [tgwca.org](http://tgwca.org)

## Notes

## Notes



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