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Turfgrass Identification

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Ligule	Growth Habit			Auricle
 <p>Membranous</p>	 <p>Rhizomes</p>	 <p>Stolons</p>	 <p>Bunch</p>	 <p>Long / Clawlike</p>
 <p>Fringe of Hairs</p>				 <p>Short / Stubby</p>
 <p>Absent Vernation</p>				 <p>Absent Leaf Tip</p>
 <p>Folded</p>				 <p>Boat - Shaped</p>
 <p>Rolled</p>				 <p>Pointed</p>
Sheath				Collar
 <p>Split-Overlap</p>	 <p>Fused Tube</p>	 <p>Continuous</p>	 <p>Divided</p>	 <p>Constricted with twist</p>

Identification Key to Turfgrass Species

Both couplets or triplets should be read before deciding where to proceed. The key includes common turfgrass, plus some lesser-used species that are often misidentified in the field.

- 1. Ligule not a fringe of hairs
 - ↳2. Folded vernation
 - ↳3. Boat shaped leaf tip
 - ↳4. Ligule short or absent
 - ↳5. Rhizomatous, leaf blade with translucent midrib = Kentucky bluegrass (*Poa pratensis*)
 - ↳4. Ligule present
 - ↳5. Ligule prominent, sheaths slightly compressed, bunch type = Annual bluegrass (*Poa annua*)
 - ↳5. Ligule abrupt, sheath strongly compressed = Canada bluegrass (*Poa compressa*)
 - ↳5. Ligule 4 - 6 mm, stoloniferous, fused sheath resembles onion skin = Rough bluegrass (*Poa trivialis*)
 - ↳3. Pointed leaf tip
 - ↳4. Very fine leaves, bunch type = *Festuca spp. fine fescues*
 - ↳4. Very fine leaves, rhizomatous = Creeping red fescue (*Festuca rubra*)
 - ↳4. Leaves shiny on back, bunch type, red pigment at sheath base = Perennial Ryegrass (*Lolium perenne*)
 - ↳2. Rolled vernation
 - ↳3. Auricle present
 - ↳4. Long, claw-like auricle, bunch type = Annual Ryegrass (*Lolium multiflorum*)
 - ↳4. Narrow auricle, leaf blade 2-5 mm, pubescent upper leaf = Fairway Wheatgrass (*Agropyron cristatum*)
 - ↳3. Auricle difficult to detect or absent
 - ↳4. Ligule short or absent
 - ↳5. Distinct collar, bunch type, prominent venation = Tall Fescue (*Festuca arundinacea*)
 - ↳5. Ligule evenly truncate, blades rough along edges, bunch type = Colonial Bentgrass (*Agrostis tenuis*)
 - ↳4. Ligule prominent
 - ↳5. Stoloniferous, light green color = Creeping bentgrass (*Agrostis palustris*)
 - ↳5. Rhizomatous, prominent venation = Redtop Bentgrass (*Agrostis alba*)
 - ↳5. Swollen base (Haplocorm) = Turf Timothy (*Phleum pratense*)
- 1. Ligule a membrane with a fringe of hairs
 - ↳2. Margins ciliate toward base, thick stolons = Bahiagrass (*Paspalum notatum*)
 - ↳2. Fine-textured, less aggressive stolons = Seashore Paspalum (*Paspalum vaginatum*)
- 1. Ligule a fringe of hairs
 - ↳2. Rolled vernation
 - ↳3. Light green leaf, surface pubescent on both sides = Buffalograss (*Buchloe dactyloides*)
 - ↳3. Continuous collar, evenly spaced internodes = Zoysiagrass (*Zoysia japonica*)
 - ↳2. Folded vernation
 - ↳3. Unevenly spaced internodes, vernation may be rolled, thin collar = Bermudagrass (*Cynodon dactylon*)
 - ↳3. Evenly spaced internodes
 - ↳4. Collar constricted with 90 deg. twist = St. Augustinegrass (*Stenotaphrum secundatum*)
 - ↳4. Collar lacks 90 deg. twist
 - ↳5. Hairs on lower 1cm of leaf edge, cottony ligule = Centipedegrass (*Eremochloa ophiuroides*)
 - ↳5. Pubescent sheath, smooth leaf blade = Kikuyugrass (*Pennisetum clandestinum*)

<p>Phytomere: Basic unit of the grass plant (Leaf blade, sheath, internode, axillary bud, adventitious roots, nodal plate)</p> <p>Ligule: Appendage at abaxial junction of blade and sheath</p> <p>Auricle: Appendages that extend from collar and wrap around leaf</p> <p>Collar: Distinct band of tissue at blade/sheath junction</p> <p>Vernation: Leaf arrangement in the bud shoot</p> <p>Sheath: Lower part of leaf attached to node at crown</p> <p>Internode: Stem segment between nodes</p> <p>Node: Joints of stems where leaves are attached</p>	<p>Inflorescence: Terminal reproductive shoot</p> <p>Shoots: Primary - Arise from embryo of germinating seed Lateral - Arise from buds on crown Tiller - Intravaginal lateral shoot (syn. bunch type) Rhizome - Extravaginal sub-surface lateral shoot Stolon - Extravaginal above ground lateral shoot</p> <p>Crown: Area of meristematic tissue between shoot and root</p> <p>Roots: Primary - Arise from embryo of germinating seeds Adventitious - Arise from nodes on crown, rhizomes, or stolons</p>
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Turfgrass Identification Characteristics

Species	Growth Habit	Vernation	Ligule	Auricle	Leaf Blade	Other ID Characteristics
Creeping Bentgrass	Stolons	Rolled	Membranous, 1 - 2 mm	Absent	Pointed tip	Narrow collar. Leaf blade has prominent veination
Colonial Bentgrass	Bunch-type or short rhizomes and stolons	Rolled	Membranous, 0.4 – 1 mm	Absent	Pointed tip	Leaf blade rough along edges. Leaf blade has prominent veination
Tall Fescue	Bunch-type	Rolled	Short to Long	Short, blunt	Rigid, course	Leaf blade has prominent veination. Broad, continuous collar
Creeping Red Fescue	Rhizomes	Folded	Membranous, very small	Absent	Very Narrow	Sheaths wider than blades
Hard Fescue	Bunch-type	Folded	Membranous, very small	Absent	Very Narrow	Sheaths wider than blades
Perennial Ryegrass	Bunch-type	Folded	Short, membranous	Small, or absent	Pointed tip, shiny backside	
Annual Ryegrass	Bunch-type	Rolled	Short, membranous	Claw-like	Pointed tip, shiny backside	Course leaf texture. Prominent veination.
Kentucky Bluegrass	Rhizomes	Folded	Short, membranous	Absent	Boat-shaped tip	Narrow collar. Prominent mid-vein
Rough Bluegrass	Stolons	Folded	4-6 mm, membranous	Absent	Boat-shaped tip	Sheath has onion-skin appearance
Annual Bluegrass	Bunch-type	Folded	Membranous	Absent	Boat-shaped tip	
Buffalograss	Stolons	Rolled	Fringe of hairs	Absent	Light green	Leaf is pubescent on upper and lower surface
Bermudagrass	Rhizomes, stolons	Folded	Fringe of hairs	Absent		Stolons have uneven internodes
Zoysiagrass	Stolons	Rolled	Fringe of hairs	Absent		Broad, continuous collar
Bahiagrass	Thick stolons	Rolled or folded	Membranous	Absent	Margin is ciliate toward base	
Kikuyugrass	Rhizomes, stolons	Folded			Smooth	
St. Augustinegrass	Stolons	Folded	Fringe of hairs	Absent	Blunt tip, constricted collar	Leaves with 90° twist
Centipedegrass	Stolons	Folded	Membranous, with hairs, cottony	Absent	Glabrous underside	Broad collar.

Note: Several characteristics, in conjunction with the ID Key on the following page, should be used. When present, the inflorescence is the most reliable ID characteristic.

Primary ID Characteristic