

Identification of Common, Cool-Season, Perennial Pasture Grasses

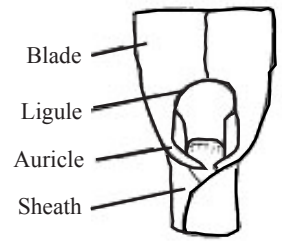
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Correct identification of grasses is important for proper pasture management and maximizing yields and profits. At first glance, most grasses in the vegetative stage look similar, however, each grass is unique and can be distinguished from other species. Most distinguishable characteristics are located in the collar region or area where the leaf blade and stem meet. In the collar region, auricles, ligules and hairs can be found (Figure 1).

Auricles are finger-shaped projections or appendages, can be absent or present, large or small and may have hair. A ligule is a thin appendage on inner surface at junction of the

leaf blade and stem. Ligules can be membranous, hairy or absent. A membranous ligule resembles cellophane (thin and translucent). Other terminology to identify grasses: sheath (lower part of leaf that surrounds or wraps around the stem), glabrous (hairless), pubescent (soft hairs), scabrous (rough surface), blade (expanded portion of leaf) and vernation (arrangement of leaves in an unopened bud or shoot).

Figure 1*. Grass collar.



Species	Life Cycle & Growth Habit	Identifying Characteristics	Collar**	Seed Head**	Other Identifying Characteristics	Agronomic Characteristics
Kentucky Bluegrass (<i>Poa pratensis</i>)	Perennial Sod Forming	Auricles absent; membranous ligule (short); boat shaped leaf tip; sheath split and glabrous.			Spreads by short rhizomes. Panicle seed head. Only vegetative regrowth (will not produce seed heads).	Dense, low, growing grass; winter hardy; somewhat tolerant of continuous grazing; poor heat and drought tolerance; lower yields.
Orchardgrass (<i>Dactylis glomerata</i>)	Perennial Bunch Grass	Auricles absent; membranous ligule (long and pointed); long, folded leaves; glabrous blades.			Prolific, tillering grass. Panicle seed head. Only vegetative regrowth (will not produce seed heads).	Leafy, rapid regrowth; can be competitive with legumes; can have marginal winter hardiness.
Perennial Ryegrass (<i>Lolium perenne</i>)	Perennial Bunch Grass	Auricles present; membranous ligule (short); shiny leaf bottom.			Spike seed head. Only vegetative regrowth (will not produce seed heads).	Rapid regrowth; leafy; can have marginal winter hardiness; limited heat and drought tolerance; can be competitive with other legumes.
Reed Canarygrass (<i>Phalaris arundinacea</i>)	Perennial Sod Forming	Auricles absent; membranous ligule (backside of ligules may be hairy); leaves tend to be wide and relatively short.			Tall stature grass, extensive rhizome (can be pink). Panicle (compact) seed head. Will produce multiple non-flowering stems during growing season.	Tolerant of flooding and poorly drained soils; can be coarse and unpalatable when mature; slow to establish. Plant low- alkaloid varieties.
Smooth Bromegrass (<i>Bromus inermis</i>)	Perennial Sod Forming	Auricles absent; membranous ligule (short); split sheath.			Panicle seed head. Will produce multiple non- flowering stems during growing season.	Winter hardy; persists through heat and drought; can have uneven yield; slow regrowth.
Tall Fescue (<i>Schedonorus phoenix</i>)	Perennial Bunch Grass	Auricles present (short and may have hair); membranous ligule (short); glabrous blades.			Does not have reddish sheaths below ground. Panicle seed head. Only vegetative regrowth (will not produce seed heads).	Adapted to wide range of soil types; can have marginal winter hardiness. Plant endophyte free fescue.
Timothy (<i>Phleum pratense</i>)	Perennial Bunch Grass	Auricles absent; membranous ligule (distinct notches on both sides); sheath edges overlapping.			Has corms (swollen basal portion of stem). Spike seed head. Flowers multiple times during growing season.	Winter hardy; broad window for quality; late maturing; uneven yield; slow regrowth; poor heat and drought tolerance.

*Figure 1 credit: Beverly Durgan, Univ. of Minnesota. **Photograph credits: Sid Bosworth, Univ. of Vermont; Andrew Hollman and Krishona Martinson, Univ. of Minnesota; Univ. of Minnesota Strand Memorial Herbarium; and Richard Old and Ted Bodner, Bugwood.org.