The vegetative identification of weeds requires close examination with the aid of a hand lens. Grass plants are distinguished vegetatively by differences in their ligule, collar, leaf blade, leaf sheath, and auricles. The ligule is located on the inner side of the leaf blade and appears as an extension of the sheath at its intersection with the blade. Ligules are hairlike or membranous and vary in length and shape; some plants lack ligules. The blade is the part of the leaf that we usually think of as the leaf itself. The leaf sheath encloses the shoot (stem) and is connected to the leaf blade at the collar region. Blades and sheaths vary among species in hairiness, texture, and length to width ratio. The auricles are fingerlike projections that extend from the collar. Auricles, which may or may not be present, vary in length. Long auricles may cross one another and clasp the stem, as do quackgrass auricles.

The underground parts can also yield information. Plants emerging from seeds usually retain their seedcoat attached to the root system for some time after germination. You can find it if you carefully dig and remove the soil from the underground parts. Either annual or perennial plants may emerge from seed. However, if the plant is emerging from rhizomes then it is a perennial species.

**BARNYARDGRASS, Echinochloa crus-galli** (annual). Ligule is absent. Collar is broad and divided by a prominent midvein. Leaf blade is hairless and slightly keeled below. Leaf sheath is hairless to slightly hairy and may be flattened and reddish near the base of older plants. **Auricles** are absent.

**GIANT FOXTAIL, Setaria faberi** (annual). Ligule is hairlike. Collar is without a prominent midrib. Leaf blade is densely hairy on the upper surface and sparsely hairy to hairless on the underside. Leaf sheath is hairless to sparsely hairy. **Auricles** are absent.

**GREEN FOXTAIL, Setaria viridis** (annual). Ligule is hairlike. Collar is without a prominent midrib. Leaf blade is hairless. Leaf sheath is hairless to sparsely hairy. A few hairs may line the sheath margin. **Seed** is small and roundish (ovate).

**YELLOW FOXTAIL, Setaria lutescens** (annual). Ligule is hairlike. Collar is narrow and has no prominent midrib. Leaf blade has long hairs (3X the length of the ligule) on the upper surface near the base of the blade only; the rest of the blade is hairless to the tip. Leaf sheath is hairless and may be flattened and reddish near the base of older plants. **Auricles** are absent.

**FALL PANICUM, Panicum dichotomiflorum** (annual). Ligule is hairlike. Collar has a prominent midrib. Leaf blade is hairless with a prominent midrib; blade of first leaf may be hairy but all subsequent leaves are hairless. Leaf sheath is usually hairless and may be flattened and reddish on older plants. **Auricles** are absent. **Seed** is small and narrow (oblong).

**WILD PROSO MILLET, Panicum miliaceum** (annual). Ligule is hairlike. Collar is without a prominent midrib. Leaf blade is densely hairy above and hairless to sparsely hairy beneath, with hairs protruding from the blade margins at a 90-degree angle. Leaf sheath is very hairy; hairs project at a 90-degree angle. **Seed** is large and roundish (ovate).

**LARGE CRABGRASS, Digitaria sanguinalis** (annual). Ligule is membranous. Collar has a fairly prominent midrib. Leaf blade is densely hairy on both surfaces and wider relative to its length than most other grasses. Leaf sheath is densely hairy and may be flattened on older plants. **Auricles** are absent.

**SHATTERCANE, Sorghum bicolor** (annual). Ligule is membranous, long, and jagged. Collar is without a prominent midrib. Leaf blade is hairless and of medium width. Leaf sheath is hairless and may be reddish on older plants. **Auricles** are absent. **Seed** is large and roundish (ovate).

**JOHNSONGRASS, Sorghum halepense** (perennial). Ligule is membranous, long, and jagged. Collar is without a prominent midrib. Leaf blade is hairless and narrow. Leaf sheath is hairless and may be reddish on older plants. **Auricles** are absent. **Seed** is large and narrow (oblong).

**QUACKGRASS, Agropyron repens** (perennial). Ligule is membranous, short, and jagged. Collar is narrow and without a prominent midrib. Leaf blade is hairless and rough-textured on the upper surface and hairless to hairy on the under surface. Leaf sheath may have sparse, short hairs. **Auricles** are long and slender, but they are difficult to find on mature leaves and are not present on plants emerging from seed until several weeks after germination.
FIELD CROP WEEDS

GRASS WEED SEEDLINGS


Yellow Foxtail. Fall Panicum. Wild Proso Millet.