Introduction to plant identification

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Guide to Identification Tips
call the National Association of Conservation Districts, 1.800.825.5547, for information on costs and ordering.

Stem characteristics

- Orchard grass
- KY, CA, & Ann. bluegrass
- Perennial ryegrass **
- Little blue stem
- Big bluestem
- Broomsedge
- Fine fescues

Note: yellow foxtail and barnyard grass have rolled leaves in flattened stems

Annual rye grass **
- Tall fescue
- Most other grasses
Leaf Blade

The non clasping part of the leaf above the collar and ligule

Blade surfaces may be smooth, rough or hairy (downy brome, witchgrass, large crabgrass),
Veins may be prominent on surface or beneath forming ridges (johnson grass) or keels (bluegrasses)
The sheath is the tubular basal portion of the leaf surrounding the stem.
Ligule Types

The ligule is the upward-pointing growth found on the inside of the leaf at the Junction of the blade and sheath.

Absent in Barnyardgrass

Membranous

Fringe of hairs

Fringe of hairs fused at base

Long hairs near base of blade Yellow foxtail, switchgrass

Foxtails, fall panicum, witchgrass
Ligule Shapes

Acuminate

Acute

Rounded

Truncate
Ligule Margins

Timothy has notched margin

Phragmites
The collar is a band, generally much lighter in color, marking the Division between the sheath and the blade.

This region is pronounced in **tall fescue** presenting itself as a band of Yellow green this same color is seen to follow up the leaf blade in striations.
Auricles are claw-like appendages which project from the collar one from each side.

Quackgrass, Perennial ryegrass small, Annual ryegrass variable.
Flat stem, folded vs rounded, rolled

membranous, white
Legule

Blue green color

*Dactylis glomerata* L. ORCHARD GRASS
Closed sheath margin

*Bromus inermis* Leyss. SMOOTH BROMEGRASS

Rhizamatous
Auricles absent
No sheath or auricle

*Echinochloa crusgalli* (L.) Beauv. BARNYARD GRASS
SWITCHGRASS  
(Panicum virgatum)

Sod forming, grows 3 to 6 feet tall

IDENTIFICATION TIPS:
Sheath: Round, open, white to purplish tinged below.
Blade: Rolled in the bud shoot, flat up to 1/2-inch wide.
Ligule: Fringe of hairs with a dense mat of hairs extending onto the upper leaf surface.
Inflorescence: Open panicle.
INDIANGRASS
(Sorghastrum nutans)

Spreads by short rhizomes, somewhat bunchy, grows 3 to 6 feet tall

IDENTIFICATION TIPS:
Sheath: Round, open, may be hairy at the base.
Blade: Rolled in the bud shoot, flat, narrowed at base.
Ligule: Prominent, the sides of which seem to be projections of the sheath margins.
Inflorescence: Shiny golden yellow with long grayish hairs with twisted awns.
LITTLE BLUESTEM
(Schizachyrium scoparium)

Strong bunch grass, grows 2 to 3 feet tall

IDENTIFICATION TIPS:
Sheath: Flattened, open, often purplish at the base.
Blade: Folded in the bud shoot, folded along the midrib, narrow.
Ligule: Small membranous.
Inflorescence: Dense hairy seed head.
Bunch grass with short rhizomes
Grows 6 to 9 feet tall

**IDENTIFICATION TIPS:**

*Sheath*: Round to somewhat flattened, open purplish at the base, usually hairy.

*Blade*: Rolled in the basal shoot, silky hairs widely dispersed on the upper leaf surface.

*Ligule*: Small membranous.

*Inflorescence*: Turkey foot shaped seed head.
Plant characters to look for

• Life cycle- annual, perennial, biennial

• Growth habit- erect, prostrate, rosette, viney, woody

• Seedlings- Cotyledon, seed itself

• Roots- bunch, fibrous, taproot, rhizomatous, stoloniferous

• Leaf- size, shape, orientation, margins, veins, hairs, glands Petioles, bracts/acre (smartweed)

• Flowers- color, morphology, fruit or seedheads
Red Clover

About this plant:
Biennial or short lived perennial legume
Growth is from crows; tufted appearance
Grows 18 to 30 inches tall

Identification Tips:
Leaf: Three leaflets all equal distance from petiole, light colored V marks present on upper leaf surface, not shiny underneath, oval leaves
Flower: Rose red color
Other: Vegetative parts usually covered with many hairs, does not have stolons
White Clover

About this plant:
Perennial legume
Spreads by stolons
Grows 6 to 12 inches tall

Identification Tips:
Leaf: Three leaflets all equal distance from petiole, long petioles
light colored V marks present on upper leaf surface, shiny underneath
Flower: White to pinkish white
Other: No hairs on vegetative plant parts, stoloniferous roots at nodes
About this plant:
Perennial short lived legume
Growth from a crown with multiple stems
Grows 12 to 24 inches tall

Identification Tips:
Leaf: Three leaflets all equal distance from petiole, no light marks present on upper leaf surface, not shiny underneath
Flower: White to rose
Other: No hairs on vegetative parts, more upright than white
Sweet clover

About this plant:
Biennial legume (some annual forms also)
Growth occurs from a crown with one main stem
Grows 2 to 5 feet tall

Identification Tips:
Leaf: Usually three leaflets with terminal leaflet on small stem; entire leaflet is toothed
Flower: Yellow/White
Other: White sweet clover is more coarse, taller and flowers 10 to 20 days later than yellow. Sweet clover sweet clovers are taller and coarser than other legumes
Alfalfa

**About this plant:**
Perennial Legume
Growth occurs from crowns, grows 2 to 3 feet tall

**Identification Tips:**
- **Leaf:** Usually three leaflets with terminal leaflet on small stem; 1/3 of leaflet is toothed
- **Flower:** Purple
Black Medic

Yellow flower, trifoliate leaves, terminal leaf stalk is present
Lower growing compared to alfalfa
Birdsfoot Trefoil

**About this plant:**
Perennial legume
Growth occurs from crowns but roots can also produce new growth
Grows 12 to 18 inches tall

**Identification Tips:**
- **Leaf:** 5 leaflets, 3 above and 2 below
- **Flower:** Yellow to deep orange, tinged with red
- **Other:** Inch-long seed pods resemble several toes of a bird's foot, thus plant's name
Hairy Vetch

About this plant:
Winter annual legume
Usually planted in late summer for major growth the following year
Grows 3 to 4 feet and attaches to other plants by tendrils

Identification Tips:
Leaf: Multiple leaflets arranged along the sides of a common stem ending in a tendril
Flower: Blue violet – reddish purple
Other: Vegetative parts are covered by small hairs
Crown vetch

About this plant:
Perennial legume
Spreads to underground rootstocks
Creeping stems grow to 3 to 5 feet tall

Identification Tips:
Leaf: 12 to 14 pairs of leaflets arranged along a common stem, no tendrils
Flower: Variegated white to purple in color
Illinois bundleflower

Distinguishing Characteristics
Numerous, tiny paired leaflets appearing fern-like
Height To 4 feet
Blooms June to August

Description
Plants are smooth and bushy finely pinnately compound and produce small, round flower clusters. Each flower has fine, long stamens that provide a fuzzy appearance. Leaves and seeds are a source of protein for wildlife and livestock.
Common lambsquarters: Cotyledons/ Seed leaves are narrow, with nearly parallel sides. The seed leaves and early true leaves are dull bluish green above and often purple below. Common lambsquarters may be up to 6 feet (180 cm) tall, depending on moisture and soil fertility. Tiny flowers are packed in dense clusters at the tips of the main stem and branches. **Leaves of common lambsquarters are coated with tiny white scales.**
Seedling: Opposite first leaves with petioles
Leaves: nearly smooth, deeply cut into many lobes most alternate, Some opposite below
Plant: upright, coarse stemmed
Primary cause of hay fever.
Smooth or Redroot Pigweed

Smooth: no to few hairs on leaves no white vein midvein ending with bristle tip
Redroot: very hairy on the veins (white) on the underside and reddish root

Both have hairy stems
Broadleaf Plantain

Basal rosette, oval leaves, parallel venation, buckhorn plantain have narrower leaves
Bull thistle

Biennial rosette, prominent spines, taproot, coarse hairs on upper surface and softer whitish hairs below.

Canada thistle – perennial, rhizamotous occurs in clumps leaves smooth above, smooth or hairy below
Chickory

Basal rosette, dandelion like leaves but rougher to the touch
And produces sparsely leaved branching stems later in season, milky sap
Dandelions have yellow flowers during early spring
Rhizomatous perennial, The foliage of common yarrow is finely dissected and covered with soft hairs, giving it a fern-like appearance. The foliage has a pungent odor. White flat topped flower.
Dewberry

Key characteristics: leaves are compound with serrated margins; stems have prickles and may have a reddish color, woody raspberry like
Common Milkweed

Key characters: Opposite leathery thick leaves with prominent white veins milky sap
Eastern nightshade

Key characteristics: hypocotyl has hairs; often, the underside of the leaves and petioles will have maroon-colored markings; leaves are alternate. Flowers star shaped white with purple tinge, fruit are glossy black berries. Tomato family