

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE
AGRONOMY - 3

NATURAL RESOURCES CONSERVATION SERVICE
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CEREAL PLANT IDENTIFICATION IN VEGETATIVE STAGE

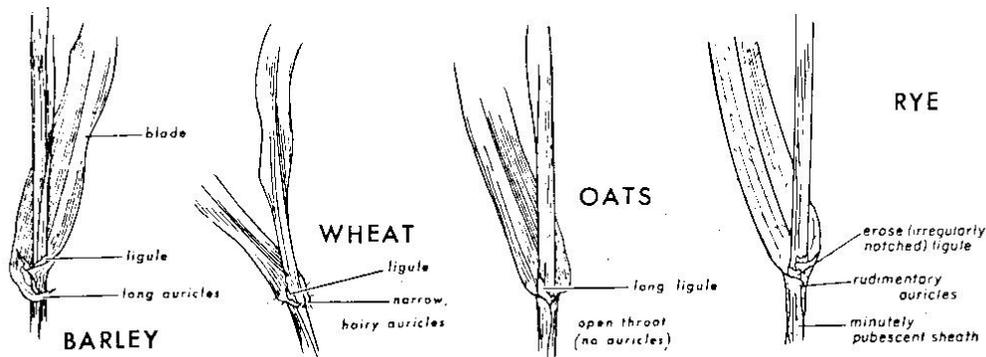
** This is a re-release of information found in the Agronomy section of the Plant Science Handbook from May 1968 and Agronomy Technical Note 16 from May 1979.

It is often desirable to identify cereal plants before they produce seed heads. This is possible with a reasonable degree of accuracy by the examination of certain distinguishing characteristics of the leaves and stems.

Definitions:

Auricles - Ear-like lobes or lateral extensions of the leaf collar, which is the thickened, hinge-like part of the leaf serving as a join between leaf blade and leaf sheath. Auricles occur in pairs and project around the stem.

Ligule - A thin appendage on the upper and inner side of the leaf blade where it joins the leaf sheath.



Distinguishing Characteristics in the Vegetative Stage

Barley has long, smooth, clasping auricles and a small ligule.

Wheat has short, narrow, hairy auricles and a ligule which is prominent but shorter than that of oats.

Oats have no auricles (the sheath has an open throat) and a long ligule.

Rye has rudimentary auricles and a small ligule which is irregularly notched. Sheath and leaf blade are minutely pubescent.

Credit is given to Beecher Crampton, Agronomy Department, University of California, Davis, for line drawings of barley, wheat, and oat plants.