

# TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE    STATE OF COLORADO    NATURAL RESOURCES CONSERVATION SERVICE

**Agronomy Technical Note No. 46 (Revised)**

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**To:** All offices

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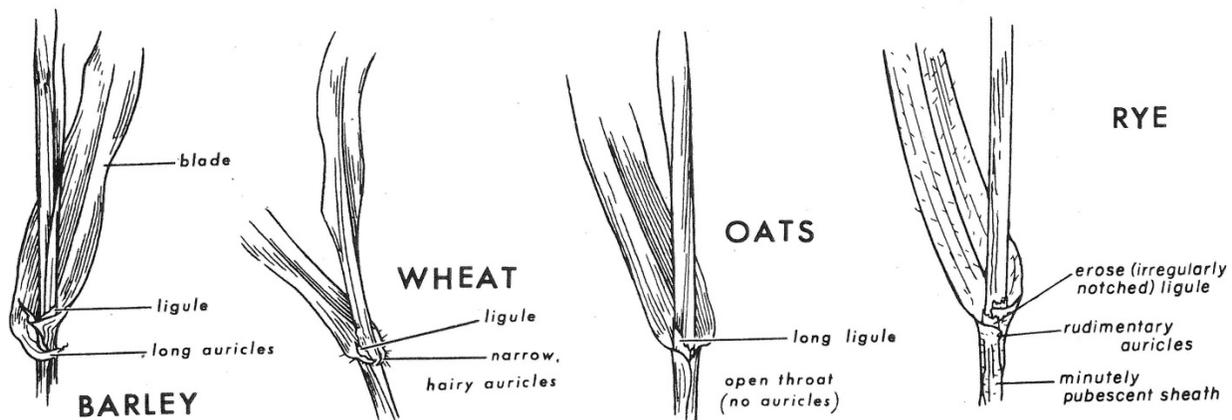
## IDENTIFICATION OF CEREAL PLANTS IN THE VEGETATIVE STAGE

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 vegetative characteristics.

### Definitions

**Auricles** - An ear-shaped lobe or appendage, or a lateral extension of the leaf collar, which is the thickened hinge-like part of the leaf serving as a joint 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 the blade joins the leaf sheath.



### Distinguishing Characteristics in the Vegetative Stage

Barley has long, smooth, clasp-like auricles and a small ligule.

Wheat has short, narrow, hairy, clasp-like auricles, a prominent ligule, and hairy leaf blade and sheath.

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

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

Triticale (wheat x rye hybrid) has short, narrow, hairy, clasp-like auricles, a prominent ligule, and hairy leaf blade and sheath. It is difficult to differentiate triticale from wheat in the vegetative stage. Removal of the seedling from the soil and observation of the seed kernel may be a means of distinguishing wheat from triticale. Wheat kernels are oval; triticale kernels are oblong.

## References

USDA, NRCS Plant Materials Technical Note 5, Plant Identification, 2010, Spokane, WA.

[http://www.nrcs.usda.gov/Internet/FSE\\_PLANTMATERIALS/publications/wapmstn9835.pdf](http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/wapmstn9835.pdf)

Dept. of Environment and Primary Industries, 2012, Note AG0102 - Identification of cereal seedlings, Melbourne, Victoria, Australia. <http://www.dpi.vic.gov.au/agriculture/grain-crops/crop-production/identifying-cereal-seedlings>