

# Barley

## DESCRIPTION

Barley is a small grain grown for beverage production (malting) and for cattle feed as grain supplement and forage (seeded with alfalfa). Like many grains, barley has a starchy endosperm, a germ and a hull. The germ holds the oil and protein, the endosperm contains the carbohydrates, and the hull is lignocellulosic. In addition to the grain, there are [crop residues](#).

## CLASSIFICATION

Starch and sugars, plant-based proteins, plant-based oils, lignocellulosic biomass

## SOURCE INDUSTRY

Barley farming. See the [Grains & Crops industry roadmap](#).

## ANNUAL VOLUME GENERATED IN WISCONSIN

43,000 tons (1.8 million bushels)<sup>1</sup>

## CURRENT APPLICATIONS

Food products (flour, bran, malts), animal feed, starch, enzymes, maltodextrins, fructose syrups, maltose syrups<sup>2</sup>

## PRICE

\$2.70-\$3.40/bushel malt, and roughly 20 percent less for feed grain

## APPLICABLE BIOREFINING PROCESSES

[Fermentation of 6-carbon sugars and starches](#)

## REFERENCES

<sup>1</sup> Wisconsin Agricultural Statistics Service. 2003 Wisconsin Agricultural Statistics. [www.nass.usda.gov/wi/annbull/index.htm](http://www.nass.usda.gov/wi/annbull/index.htm) (8 April 2004)

<sup>2</sup> MacGregor, Alexander W. and Rattan. S. Bhatti (eds.) 1993. Barley: Chemistry and Technology. American Association of Cereal Chemists, Inc., St. Paul, MN.

Additional background information provided by Heidi Kaeppler, Professor, Department of Agronomy, University of Wisconsin.

Spectrum Commodities. [www.spectrumcommodities.com/pdf/convfactY2K.pdf](http://www.spectrumcommodities.com/pdf/convfactY2K.pdf) (11 May 2004)