

# Alfalfa

## DESCRIPTION

Alfalfa is a perennial legume grown mostly in the southern two-thirds of Wisconsin. The plant consists of leaves and stems, each containing protein, carbohydrates and lignocellulosic biomass.

## CLASSIFICATION

Plant-based protein, lignocellulosic biomass, starches & sugars

## SOURCE INDUSTRY

Alfalfa farming, often on dairy farms. See the [Grains & Crops](#) or [Dairy](#) industry roadmaps.

## ANNUAL VOLUME GENERATED IN WISCONSIN

9,365,000 tons<sup>1</sup>

## CURRENT APPLICATIONS

Animal consumption; used in crop rotation as an aid to soil fertility

## PRICE

\$92.70/ton<sup>2</sup>

## APPLICABLE BIOREFINING PROCESSES

[Aerobic digestion/composting](#), [anaerobic digestion](#), [biomass gasification](#), [combustion](#), [fast pyrolysis](#), [fermentation of lignocellulosic biomass](#), [fiber composites manufacturing](#), [thermochemical liquefaction](#)

## 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) (23 April 2004).

<sup>2</sup> Milk-feed ratio jumps to 3.11. April 30, 2004. Dairy Herd Management [www.dairyherd.com/news\\_editorial.asp?pgID=675&ed\\_id=3431](http://www.dairyherd.com/news_editorial.asp?pgID=675&ed_id=3431) (14 May 2004).