

Manure (Dairy)

DESCRIPTION

Digested food matter rich in nitrogen, phosphorous and potassium. Moisture content, solids size and the presence of bedding influence the equipment needed for handling, treating and transporting. *Liquid* manure contains up to 4 percent solids, *slurry* has 4-10 percent solids, *semi-solid* has 10-20 percent solids and *solid* manure has greater than 20 percent solids. Nutrient values are related to solids concentrations. In general, the higher the solids concentration, the higher the nutrient concentration. Dairy manure has a lower nutrient concentration than pig manure but a higher nutrient concentration than poultry manure.

CLASSIFICATION

Manures

SOURCE INDUSTRY

Milk production. See the [Dairy industry roadmap](#).

ANNUAL VOLUME GENERATED IN WISCONSIN

24.59 million wet tons

CURRENT APPLICATIONS

Land spread, anaerobic digestion, aerobic digestion/composting, solids separation

PRICE

\$4/wet ton (based on \$0.22, \$0.22, and \$0.14 price per pound for N, P₂O₅, K₂O respectively)¹

HAULING COST

\$0.01/gallon, plus a charge of \$0.00013/gallon/mile for distances greater than 1 mile²

APPLICABLE BIOREFINING PROCESSES

[Aerobic digestion/composting](#), [anaerobic digestion](#), [biomass gasification](#), [combustion](#), [thermochemical liquefaction](#), [vitrification](#)

REFERENCES

¹ Reetz, H. F. Jr. and G. D. Schnitkey. 2002. "Economics of Nutrient Systems and Sources," Better Crops, 86(2): 10-13. [www.ppi-far.org/ppiweb/bcrops.nsf/\\$webindex/4144C1CDD13C0C8B85256BDB00487280/\\$file/02-2p10.pdf](http://www.ppi-far.org/ppiweb/bcrops.nsf/$webindex/4144C1CDD13C0C8B85256BDB00487280/$file/02-2p10.pdf) (14 May 2004).

² Brenneman, Greg. 1995. "You Can't Afford Not to Haul Manure," Livestock Industry Facilities & Environment (LIFE), February. Iowa State University, University Extension, Ames, IA. www.extension.iastate.edu/Publications/PM1609.pdf (14 May 2004).

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