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Evaluation of Herbaceous Biomass Crops in the Northern Great Plains

Final Report

**ECONOMIC EVALUATION OF
HERBACEOUS BIOMASS CROPS IN THE
NORTHERN GREAT PLAINS**

1993 Final Report

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Alfalfa as a biomass crop?

- Dr. JoAnn Lamb, Univ. Minnesota
- Yields and energy use estimated for corn grain, corn stover, and alfalfa in 25-mile radius of Madelia, MN
- Estimated ethanol production ranged from
 - corn grain = 175-580 gal/a, 495
 - alfalfa = 100-620 gal/a, 385
 - corn stover = 60-195 gal/a, 165

Alfalfa as a biomass crop?

- Hard to beat corn grain in Midwest for ethanol production
- BUT
- Energy input much higher for corn (N input and drying)
 - Net energy gain (outputs/inputs) was:
 - 25 for alfalfa
 - 8 for corn grain
 - 11 for corn grain + stover
 - N credits to next crop? \$40-\$60/acre + rotation effect