

# AURI Biogas Projects

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SW CERT Meeting  
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*Agricultural Utilization Research Institute*

# Mission

- Identification and expansion of markets for new or existing commodities, ingredients and products;
- The development of new uses or value improvements for Minnesota agricultural commodities

# What is value-added ag?

- Further processing raw commodities into higher-value products.

For producers involved, it means capturing more of the consumer dollar.

# Overview

- Great Lakes Biogas Casebook
- Riverview Dairy
- Waseca Co-products Lab Testing

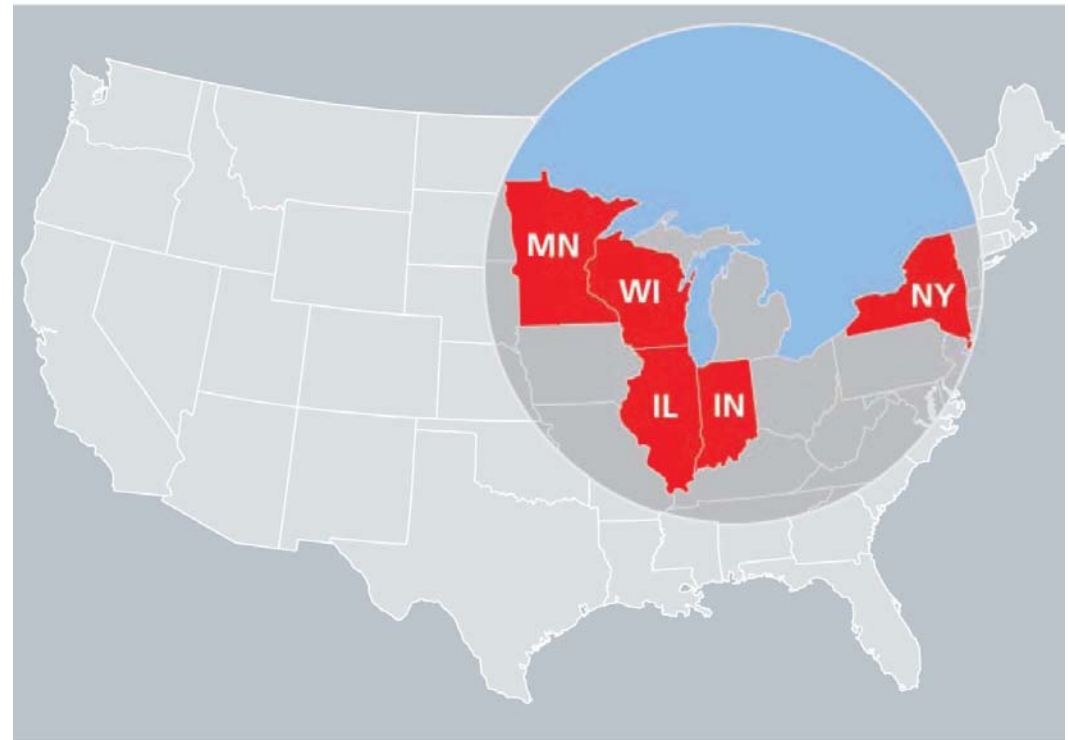
# Great Lakes Biogas Casebook

- Funded in part/supported with in-kind connections by AURI.
- Survey of industrial/food digesters in 5 state area.
- Put together by Joe Kramer, Senior Project Manager, Energy Center of Wisconsin.
- Can be downloaded at [www.auri.org](http://www.auri.org).

PREPARED BY  
Energy Center of Wisconsin

## Great Lakes Region Food Industry Biogas Casebook

March 2011



**AMERICAN CRYSTAL SUGAR COMPANY EAST GRAND FORKS FACILITY,  
EAST GRAND FORKS, MINNESOTA****SUMMARY TABLE**

Facility Name:	East Grand Forks Facility	Location:	East Grand Forks, Minnesota
Food Products:	Sugar	Site Employees:	303 in season, 228 all year
Digester Type:	Anaerobic contact process	Year Installed:	1979
Digester Role:	Primary COD removal prior to aerobic activated sludge treatment and discharge		
Digester Design:	AB Sorigona, Sweden		
Biogas Use:	Direct fired drum dryers for beet pulp and flared		
Make and capacity	Old NG fired dryers converted from coal, Stearns Roger dryers		
PM Provider:	Stearns Roger		
Ownership Model:	Company owns the digester as part of overall wastewater treatment system		



Figure 6 - American Crystal Sugar Company East Grand Forks Facility. Photo courtesy of American Crystal Sugar Company.

**FACILITY BACKGROUND**

The American Crystal Sugar Company's East Grand Forks facility, shown in Figure 6, processes sugar

# Riverview Dairy



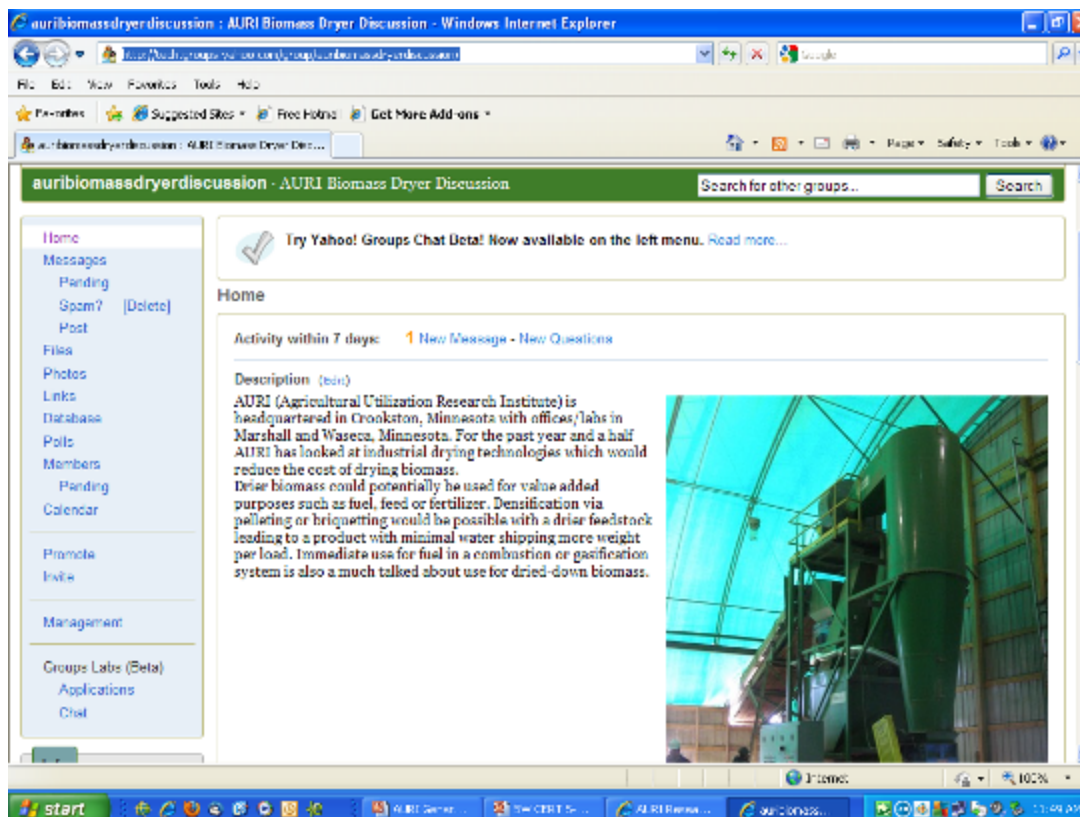
# Riverview Dairy

- Pellet for energy feasibility
- Solids as soil amendment
- Solids as gasification feedstock (AURI Initiative)
- Investigating Drying Technologies for Post-Digester Solids (Initiative)



# AURI Biomass Dryer Discussion

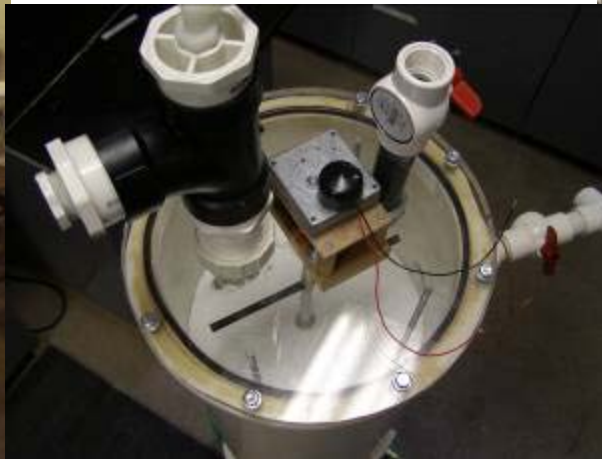
- <http://tech.groups.yahoo.com/group/auribiomassdryerdiscussion/>



The screenshot shows a web browser window displaying the Yahoo! Groups page for 'auribiomassdryerdiscussion'. The page features a navigation menu on the left with options like Home, Messages, Files, and Photos. The main content area includes a 'Home' section with a 'Description (beta)' and a photograph of a large industrial biomass dryer. The description text reads: 'AURI (Agricultural Utilization Research Institute) is headquartered in Crookston, Minnesota with offices/labs in Marshall and Waseca, Minnesota. For the past year and a half AURI has looked at industrial drying technologies which would reduce the cost of drying biomass. Dried biomass could potentially be used for value added purposes such as fuel, feed or fertilizer. Densification via palleting or briquetting would be possible with a drier feedstock leading to a product with minimal water shipping more weight per load. Immediate use for fuel in a combustion or gasification system is also a much talked about use for dried-down biomass.'

# Pilot Lab Testing

- Two small scale continuous digesters – 15 gallon and 4 liter capacity.
- Basic testing of substrate additives



# Thank you!

- And let's hope I got that done in 10 minutes . . .