

# NORSWISS FARMS – RICE LAKE, WI

## SYSTEM DESIGN

At Norswiss Farms, manure is scraped and collected three times each day and pumped into an above ground complete mix steel tank digester. A limited amount of off-farm food wastes are also systematically pumped into the digester to boost biogas production. The digester has an operating temperature around 125°F and has a hydraulic retention time of approximately 20 days. A screw press solids separator is used to divide digester effluent into liquid and solid fractions. The liquid is pumped into a storage lagoon where it is later used to fertilize crops and all the fibrous solids are used for animal bedding.

Dairyland Power buys the biogas and owns/operates the engine-generator set to generate electricity. Dairyland Power owns the renewable energy attributes from the electricity generation.

As of January 2014, the generator at Norswiss is currently offline. Dairyland Power is evaluating gas cleanup issues and maintenance costs.

## PROJECT BENEFITS

- Revenue from biogas sales
- Cost savings on bedding
- Provides Dairyland Power with a renewable energy source for their members
- Reduces odor significantly



*Photo: Norswiss Farms*

- **Population Feeding Digester:** 1,240
- **Baseline System:** Storage Lagoon
- **Digester Type:** Complete Mix
- **Co-Digestion:** Substrates (high-fat food wastes, such as, greases and oils)
- **Biogas Use:** Electricity
- **Generating Capacity:** 850 kW
- **Receiving Utility:** Dairyland Power Cooperative
- **Project Funding:** USDA