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BERNIE FABER (CAL-GON) DAIRY – SALEM, OR

SYSTEM DESIGN

Odor from dairy manure is an issue in West Salem, an area characterized by a mixture of agriculture and rural residents. In 2001, Cal-Gon Dairy teamed with Portland General Electric to construct an above ground complete mix digester to reduce odor and greenhouse gas emissions.

Manure is scraped from the barns into a concrete tank and then pumped to the digester. Biogas is collected and used to fuel a generator that produces electricity. Electricity is fed to the power grid and recovered engine heat is used to maintain the digester temperature.

Digester effluent is separated into solid and liquid fractions. Liquids are piped to a lagoon where they are stored and later used to fertilize the cropland. Solids are stockpiled for a few days each week before they are collected by a company that composts them with yard waste.

PROJECT BENEFITS

- Odor Reduction
- Electricity Production
- Reduced phosphorus content in manure applied to the cropland



Photo: Oregon Department of Agriculture

"[The digester] has helped with the challenges we are facing with odor and the land base for manure application. If we weren't able to export the solids from the digester, we would be faced with purchasing at least another 100 acres to accommodate the phosphorus in the manure."

—Bernie Faber
Owner, Cal-Gon Dairy

- **Population Feeding Digester: 350**
- **Baseline System: Storage Lagoon**
- **Digester Type: Complete Mix**
- **System Designer: Portland General Electric**
- **Biogas Use: Cogeneration**
- **Generating Capacity: 100 kW**