

AGRICULTURE SUCCESS STORY

Biogas Agro-Energy Cooperative for Family Farming

Ajuricaba, Brazil

ITAIPU Binacional

OVERVIEW OF AGRICULTURE PROJECT:

This is a demonstration project developed by the ITAIPU Binacional Renewable Energy Platform in operation at the Technological Park of Itaipu – Foz do Iguaçu Brasil. The project is installed in the Watershed of the River Ajuricaba, in Paraná, Brazil. It consists of a cooperative of 33 small family dairy farms that produce 16 thousand tons per year of animal manure. A series of small biodigesters collect and process the manure. The produced biogas is piped to a thermoelectric power plant owned by the cooperative. Produced biogas is used to generate heat and electricity, including the operation of biogas grain dryers.

PROJECT START DATE: 2009

ACTUAL ANNUAL EMISSION REDUCTIONS: 2,650 MTCO₂E

PROJECT DETAILS

- **Site name:** Agro-Energy Cooperative for Family Farming
- **Geographic location:** 33 small farms in the Ajuricaba watershed in Parana state in Brazil
- **Type of feed stock(s):** Cow manure
- **System type and components:** Biodigesters, gas pipelines, gas filtration system, thermoelectric plant, biogas grain dryer



Biogas Furnace to Dry Grains



Dried Grains

DISCLAIMER: The information and predictions contained within this poster are based on the data provided by the site owners and operators. The Global Methane Initiative cannot take responsibility for the accuracy of this data.

COST & REVENUE INFORMATION

Installed Cost: US\$1.5 million

Estimated revenue (US\$/year): \$132,300

PROJECT HIGHLIGHTS

- The project generates 438 MW hours/year of energy.
- Farmers in the cooperative receive financial gains from the production of energy and heat.
- The biogas grain dryer replaces electric or gas powered grain dryers.
- The project reduces almost 70% of the potential organic pollution (chemical oxygen demand, COD), which represents a significant reduction in water pollution.
- The digestate is used as fertilizer on agricultural and grassland areas.
- The thermoelectric plant's gas filtration system increases the value of the biogas.
- The project is used as a demonstration project to share its success with other small farmers.



The Biogas Filter



Small Farmer Capacity Building

FOR MORE INFORMATION

Cícero Bley
ITAIPU Binacional
Av. Tancredo Neves, 6.731
85856-970
Foz do Iguaçu, Paraná
Brazil
+55-45-3520-6508
cbley@itaipu.gov.br

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