

ENVIRONMENTAL IMPACTS AND ECONOMIC COMPARISON OF ALTERNATIVE DAIRY SYSTEMS

About this Project:

Environmental Impacts and Economic Comparison of Alternative Dairy Systems

THIS PROJECT WAS MADE POSSIBLE THROUGH FUNDING BY the Natural Resources Conservation Service (NRCS) through their Environmental Quality Incentives Program (EQIP). The multi-year project (2000-2004) was designed to gather and distribute critical information needed by dairy producers throughout Minnesota on the environmental impacts and economic viability of various manure handling systems.

A series of workshops and field days were conducted to educate farmers about these issues. The following fact sheets have been developed to summarize the project results. Longer versions of the fact sheets and full reports from this project are available for download at www.mnproject.org

The project was split into three main areas:

1. Manure/soil/crop interactions

This project gathered and disseminated comparison information on the soil quality, crop growth and yield response, and nutrient update when three nutrient sources are used:

- Commercial fertilizer;
- Undigested liquid dairy manure;
- Anaerobically digested dairy manure;

Field trials were conducted at the Haubenschild Family dairy farm beginning in 2002 and concluded in 2004.

2. Economic evaluation of alternative manure management systems on dairy profitability

In order to help farmers make decisions about choosing a manure management system this project:

- Gathered definitive information on the economic value of manure nutrients of undigested dairy manure and anaerobically digested manure.

3. Weed seed survival as affected by manure handling

The type and quality of viable weed seeds in anaerobically digested manure was compared to stored liquid manure. The current body of knowledge and additional analysis is summarized in the fact sheet. Additional analysis is available at www.mnproject.org. Both field and laboratory characterizations were conducted of the demonstration project manure impact on weed seeds.

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