

Horticultural Weed Barrier Mats From Dairy Manure

Final Report for FNE02-412

Project Type: Farmer

Funds awarded in 2002: \$8,800.00

Projected End Date: 12/31/2003

Region: Northeast

State: Connecticut

Project Leader:

[Matthew Freund](#)

Freunds' Farm, Inc.

Project Information

Summary:

Note to readers, attached is the complete final report for FNE02-412

The goal of this project was to develop environmentally responsible, biodegradable manure- fiber-based paper that would substitute for polyethylene ground cover.

Freund's Farm is a 230-cow. Rotationally grazed dairy with 650 acres of crops and pastures and a managed 200 acre woodlot. The dairy operates under the guidance of a Comprehensive Nutrient Management Plan. All manure is process through a methane digester and separated. The liquid is stored while the solids are further processed through a vessel composter. The solids are used for bedding or sold off-farm. Liquids are draglined onto appropriate fields twice a year.

The project leader was Matthew Freund. Perry Gardner served as the local engineer. North Carolina State University was hired to refine and process the manure. USDA at Beltsville, Maryland volunteered research space to test the paper. The University of Connecticut has collaborated with USDA and also set up some of its own tests.

The project began with a search of possible manufacturers to produce the paper. We selected North Carolina State University to produce a single sheet of paper. Upon their success, we contract with them to run a 1000-foot roll of paper one foot wide. Meanwhile, we contracted with UConn and USDA to find interest in carrying the project to the next meaningful stage. We received enthusiastic support. Matthew Freund and Perry Gardner traveled to Beltsville to assemble the paper with Tom Morris of UConn and a UConn graduate student into 4 X 20 sheets.

In field testing, the paper held up well to rain, but was punctured by deer. Any tears proved fairly easy to repair, and deer management (fragrant soap, electric fencing) were set for the future. In general, the field trials show positive results, and the project manager is very encouraged with the potential—both UConn and USDA are excited about the potential to replace plastic with manure on a huge potential base of 73 million acres. The cost to start up a paper operation are substantial, but both groups are talking about finding more funds to continue this project on a larger scale.

- [FNE02-412 Final Report](#)

Cooperators

- [Kathleen Johnson](#)

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Research

Participation Summary

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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