

Cow Power and Innovation at Worldwide Food Expo 2009

By Diane Toops, News & Trends Editor | 11/23/2009

Sustainability was one of the hot topics at Worldwide Food Expo, in Chicago Oct. 28-31, and the Innovation Center for U.S. Dairy, working closely with Bruce Mau Design, a Toronto-based design studio specializing in sustainability, put its money where its mouth is by creating Dairy2020, an interactive booth using minimal resources and as little impact as possible on the environment.

All materials in the booth were made from clean, odorless, manure-based fiberboard and papers. And all the technology in the booth was powered by electricity derived from manure through the purchase of renewable energy credits, donated to the Innovation Center by Fair Oaks Dairy Farm, Fair Oaks, Ind.

Handouts and booth materials were made from manure-based fiberboard and papers manufactured by Forest Products Laboratory, Madison, Wis., using a technology currently unavailable commercially. With no odor, no hygienic issues and no residue, the bovine material is a viable alternative to paper and lightweight temporary construction and is comparable to particleboard. In fact, the board is quite sturdy and was painted in different colors to attract attendees.

The fiber is a byproduct of anaerobic digestion. Farmers use the digesters to extract methane from manure, producing biogas for use in energy production. Two byproducts of this process are effluent – a liquid used for fertilizer— and the digester solids, the main ingredient of the fiberboard. The reusable graphic in the booth was printed on corn-based, biodegradable material, and all inks used were UV-cured, non-solvent with no off gassing.

Also impressive was the fact that for each megawatt hour (MWh) of electricity used in connection with the booths, a Renewable Energy Credit (REC), generated from energy created from the burning of biogas, was donated. RECs are the currency of renewable electricity and can be bought and sold, allowing owners to claim that renewable energy was produced to meet their electricity needs. It took about 15 RECs to power the booth during the show, all generously donated by Fair Oaks Dairy Farm.

An estimated 20 tons of greenhouse gas was emitted: including the transportation of people, materials, promotional articles, printing, and T-shirts worn by the staff to operate the booths. Greenhouse Gas Services, a GE AES venture, donated 20 Carbon Offset Credits. Each COC represents 1 ton of CO₂e reduction in greenhouse gas from a clean form of energy production.

All of this incredible effort to demonstrate sustainability, and hear firsthand accounts of sustainability success stories from industry leaders, was part of the U.S. Dairy Industry Sustainability Commitment in action, which aims to reduce GHG emissions for fluid milk by 25 percent by 2020.

Several members of the Sustainability Council, the group helping to manage the U.S. Dairy Sustainability Commitment, shared their success stories. They include Oakhurst Dairy, Portland, Maine; HP Hood LLC, Lynnfield, Mass.; Grupo Lala, La Laguna, Mexico; and Dannon Co.

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