Cutting Carbon through Water Efficiency

Corporate Water Footprinting
December 3, 2008

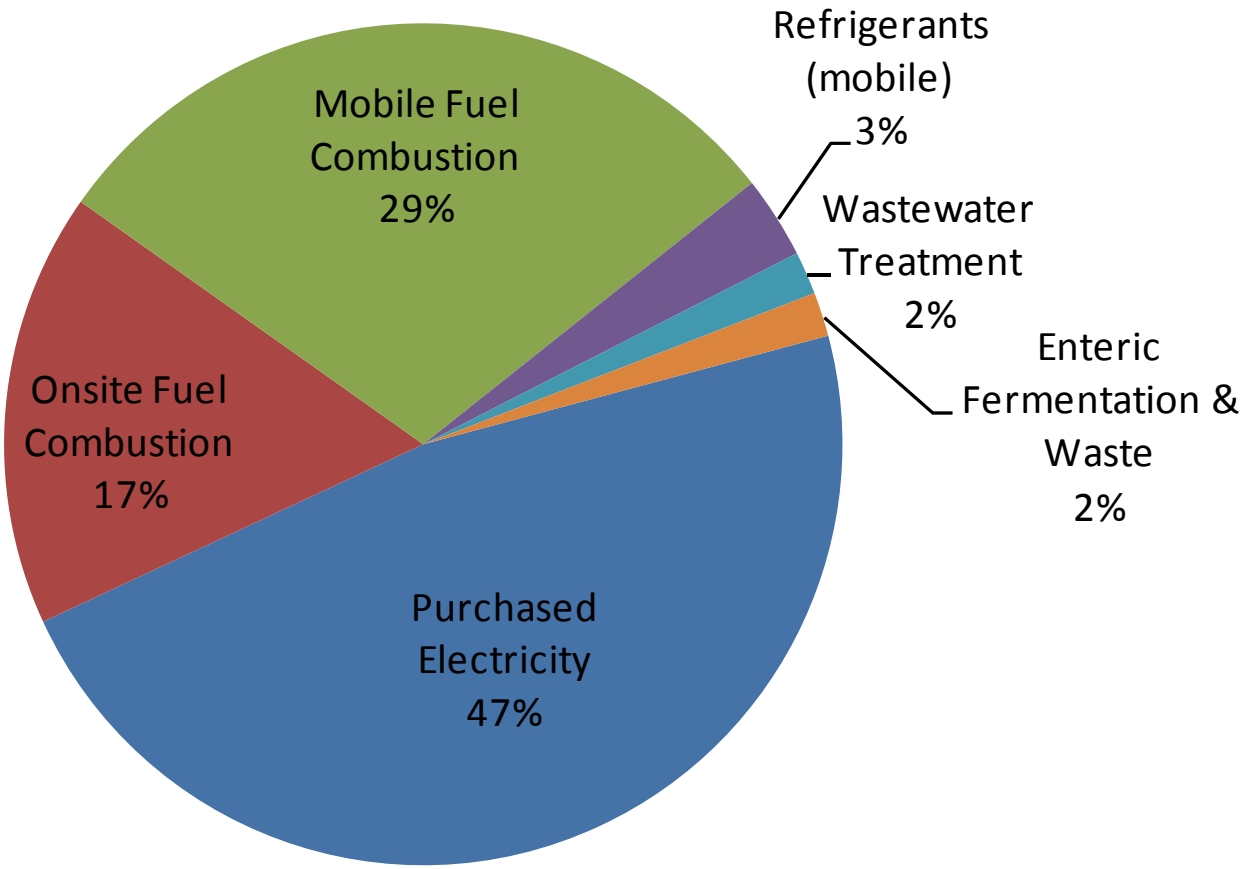
Brett Basel
Dean Foods Company

Overview of Dean Foods Company

National Brands

- **$12 billion in annual sales**
- **Over 100 plants across the US**
- **25,500 employees**
- **Over 6,000 refrigerated direct store delivery (DSD) routes**
- **Serving over 150,000 customers**
- **Combined total of approximately 13,300 refrigerated trucks, tractors and refrigerated trailers**

Carbon Footprint



2013 Environmental Roadmap

20% 30% 30%

Focus Area	Strategic Approach	2013 Target
Greenhouse Gas Emissions	➤ Communicate to our employees the limits of carbon-based energy ➤ Reinforce the need across the organization to reduce energy costs and create an enduring business model ➤ Identify opportunities to use clean and renewable sources of energy	20% Reduction
Water Conservation	➤ Reduce water consumption with training and investment in use of precision water applications ➤ Reuse water whenever possible without compromising product quality or plant sanitation	30% Reduction
Solid Waste Disposal	➤ Reduce plastic and paper waste by encouraging development of local and regional recycling opportunities ➤ Reduce waste of all kinds with the development of specific recycling policies and procedures ➤ Work with vendors to redesign packaging to reduce the environmental impacts	30% Reduction

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Dean's Action

Corporate Level

- DMI Initiatives
  - Gallon of Milk Footprint
  - Packaging LCA
  - Cow Nutrition & Enteric Fermentation
  - Carbon & Water Reduction
- Capital Investment
- Real Time Measurement
- Product Scorecards

Plant Level

- Audits – Water, Electricity
- Key Performance Indicators
- Continuous Improvement Initiatives
- Sustainability Action Teams
- Newsletter and Classes
- LCD Displays
- Sustainable Events
- Awards

Dairy Processing Facilities

LESS WATER

LESS GHG's & POLLUTION

AND

LOWER COSTS/ EXPENSES

Midwest Plant

- 10% Water *Reduction*
- 7% Waste Water *Reduction*
- .5% Natural Gas *Reduction*
- 6% Electricity *Reduction*

Average Monthly Water Usage
5,500,000 Gallons -OR- 20,819,765 Liters

Southeast Plant

- 18.5% Water *Reduction*
- 15% Waste Water *Reduction*
- 3% Natural Gas *Reduction*
- 8% Electricity *Reduction*

Average Monthly Water Usage
4,400,000 Gallons -OR- 16,655,812 Liters

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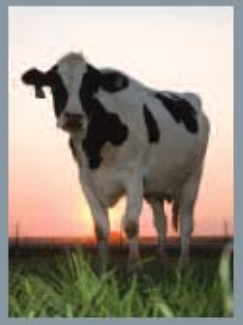
Sustainable Farms

CASE STUDY

Greening the Maryland Farm



The Maryland dairy has been certified organic since 1998 with a history of conserving natural resources and land preservation. The farm is located in the ecologically sensitive Chesapeake Bay area and uses a variety of environmental practices to help build the soil and care for its cows while protecting this watershed and the diversity of the ecosystem.

A berm and dam structure was put in place along the creek to minimize erosion and capture rainwater as part of the ongoing efforts to improve biodiversity and riparian areas. The dam, which is 15 feet deep at its deepest point, can hold up to six million gallons of rainwater runoff. Cattails (Typha) were planted in the wetland area to create a habitat for local wildlife, and to capture and filter runoff water from the compost area. All manure produced on the farm is composted to use as a soil amendment.

This farm is an active grazing operation, using Holistic Management International as a guide for land management and grazing principles. In addition, the Maryland dairy worked with the state's Conservation Reserve Enhancement Program to create a buffer area to increase wildlife habitat.

Other environmentally sound improvements to the dairy include the addition of solar panels which were installed on the farm's shop building to heat the water used in the shop, as well as radiant heating of the floor.

- Rainwater Collection
- Minimizing Erosion
- Building Healthy Soil
- Methane Digesters
- Solar Water Heating

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Thank You

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