

# Goin' Round and Round

## Key Vocabulary

**Environment:** The surroundings in which a person, plant or animal lives.

**Recycle:** To use something again.

**Cow Manure:** The waste that cows, just like every other living being, produces from their body.

**Nutrients:** A substance that provides nourishment.

**Soil:** The top layer of the earth's surface where the farmer plants his crops to grow into food and feed for the animals.

**Field:** A particle of land where a farmer plants a crop.

**Crops:** What a farmer plants in a field, cultivates and grows into food for people and feed for the animals.

**Methane:** A main component of natural gas released during the breakdown of plants and other organic material.

**Fertilizer:** Any substance such as manure or a mixture of synthetic materials used to make soil more fertile.

**Biogas:** A gaseous fuel produced by the fermentation of organic waste.

**Methane Digester:** A vessel in which substances are softened and decomposed for further processing.

**Environmental Protection Agency:** An independent federal agency established to coordinate programs aimed at reducing pollution and protecting the environment.



# Goin' Round and Round

## Guided Reading Pamphlet



Discover Dairy is an initiative of the American Dairy Association North East, Center for Dairy Excellence, Midwest Dairy Council and the Pennsylvania Dairy Promotion Program, and, funded in part by the Center for Dairy Excellence Foundation of Pennsylvania.

# Full-Time Dairymen, Full-Time Stewards of the Land



Protecting the environment is very important to all of us. Our food, water and air supply are all dependent on the environment. We need a clean healthy environment so we have clean water to drink, clean air to breathe and enough food to eat.

**Why is protecting the environment important?**



That water is given to the cows to drink or is used to clean the barn alleys where the cows live. In some cases, it is also used to irrigate nearby crop fields to help the crops grow.

**How is water recycled on the farm?**



Water is also recycled on a dairy farm. Some dairy farms use water to quickly cool the milk by running cold water through a series of pipes beside the warm milk pipes. This reduces the electricity needed to cool the milk. The warm water from the pipes is then recycled for other uses on the farm.



Dairy farms play a very important role in protecting our environment. Farmers take good care of the land where they live and work. They use environmentally friendly practices on their farms to ensure that the air and water are kept clean and healthy.

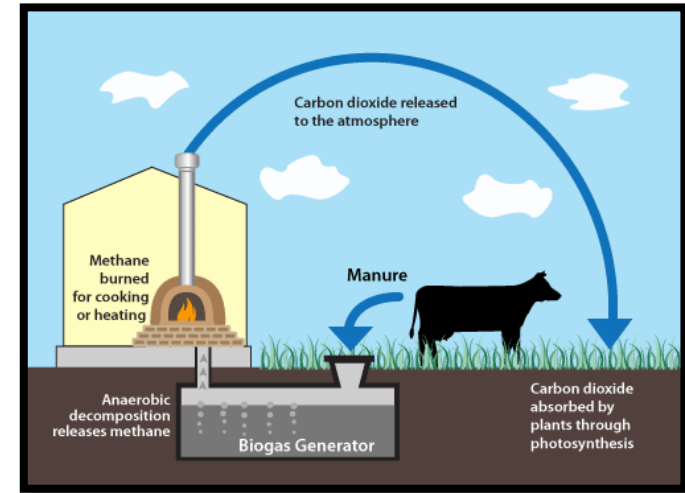
**What role do dairy farms play in protecting the environment?**





Cows are just like any other living being. They drink lots of water and eats lots of feed and, in addition to producing milk, their bodies produce waste or cow manure. This waste must be properly handled to protect the environment.

The manure is rich in nutrients. Farmers recycle it by spreading it on crop fields to replenish the nutrients in the soil. This helps the crops to



On some farms, manure is also recycled into electricity by a “methane digester.” The digester converts the manure into methane, which is an energy-producing gas. Using this process, farmers can produce enough electricity for their farms and, in some case, the local community.

**What are two ways cow waste or manure is recycled on a dairy farm?**