

Sustainable Dairy Activity:

Materials Included:

- Decorated sheet (included)
- A set of dairy environmental cards (included)

How to play:

1. Place the sheet on the ground and have a group of participants stand around the perimeter of the sheet.
2. Give each participant 1 card (or more if small group).
3. Introduce the activity by stating something like, "Today we will learn how dairy farmers care for the land that they farm. We are going to do an activity to see what conservation methods and equipment they use on their farm! Starting with the barn, we are going to build a sustainable dairy farm here on our sheet. Each of you have a card with a farming method or items dairy farmers use on their farm. As we go over each of these items, place the card where you think they should be located. Are there any questions?"
4. First, ask, "Who has the barn card?" Have the participant read the sentence (if able) on the back of the card and place it on the sheet. Ask them why they placed the barn where they did.
5. Next, ask, "Who has a dairy cow?" Have them read the back of the card then place it on the sheet. Ask them why they placed it in that location. Feel free to give them some ideas if they are unsure. Also, be sure to explain that not all of the cows need to be in the same location.
6. Go through each of the items (manure pit, silo, no-till farming, cover crops, etc.) in this same way until they are all on the sheet.
7. Wrap up the activity by reviewing the location of each card and asking if there are any questions. You can end with the key message: "Dairy farmers have a commitment for caring for the land that they farm. They keep this commitment by utilizing technologies and conservation practices to remain sustainable!"

Info Sheet for Presenter:

Dairy farms use **barns** as shelter for their cows. Barns have fans, clean bedding, and other items that make them the perfect habitats for cows to live. They are usually located in the center of the farm, so they are accessible by all areas of the farm.

Farmers plant grasses around bodies of water, like streams and ponds, to form **buffer zones**. The buffer zone plants act as filters and keep the manure or fertilizer runoff from fields from going into the bodies of water. They plant roots hold soil in place and reduce erosion.

Contour farming is planting plant crops in rows that go around a hill or slope instead of up and down the slope. This reduces erosion as it slows the speed of water as it runs down the hill during rainstorms.

Corn is a crop that is grown as feed for cows. It is high in nutrients and a good source of energy for cows. (Can tie in that cows receive a perfectly balanced diet, called a Total Mixed Ration (TMR))

After fall harvest, many farms plant wheat, clover, and alfalfa as **cover crops** on their fields. These crops start to grow before winter arrives. The plants convert carbon dioxide in the atmosphere into oxygen and their roots reduce soil erosion and. Some cover crops are harvested in the spring and used as food for their cows.

Crop rotation is when farmers change the type of crops they plant in a certain area from year to year. Since different crops use different nutrients from the ground, rotating the crops prevents the loss of nutrients and maintains the quality of the soil.

Dairy cows produce milk and are the center of the dairy industry. Dairy farmers take excellent care of their cows while being environmentally conscious! On the farm, you can find cows inside the barn or outside in the pasture.

Fences are important on a dairy farm. Fences protect water sources by keeping cows out of streams and ponds. This eliminates water pollution and reduces erosion. Fences also protect animals by keeping them away from manure pits and off roadways.

Grasses can have several uses on the farm. Some kinds of grasses are grown for pastures, while others are harvested and used as hay to feed the cows. Sometimes they are planted around waterways as buffers.

Manure pits are used on dairy farms to hold and keep the cow manure from being washed into local waterways. They store it until an appropriate time when it can be used as a natural fertilizer on their fields.

No-Till farming is when farmers do not plow or till their fields before spring planting. The stalks and plant matter from the previous year are left to act as mulch to protect the new seeds. This common practice decreases soil erosion and reduces the amount of carbon dioxide released from overturned soil.

Silos are usually found near the barn. They are used to store food, like grains or silage, to feed the cows.

Dairy cows drink lots of water (around 50 gallons!). Farmers place designated containers **or water troughs** in their barns and pastures to provide clean, fresh water for their cows.

Wheat is a nutrient-rich feed for cows. It is also used as a cover crop when it is planted in the fall after harvest.

Soybeans are a crop that is high in protein and a good source of energy for cows. Soybeans put nitrogen back into the soil, so it is often planted in rotation with corn which uses a lot of nitrogen.

