



In the dairy project, 4-H'ers will learn how to ethically care for and show dairy animals including feeding, reproduction, and veterinary care. Members will also study the industry as it relates to marketing, processing, and the consumption of dairy products.



Exploring 4-H Dairy Cattle

Spark Activity: Ice Cream in a Bag

This activity is lots of fun and the ice cream is delicious! In order to have a successful activity you will want to note a few things: The bags get very cold—provide bath towels, gloves or pot holders for the kids to be able to tolerate the cold and to keep shaking the bag. Have them switch often. The churning process is harder than it sounds! Be sure to rinse the salt off the bag, salty ice cream isn't very tasty!

Materials needed for each group:

- 1/4 Cup Sugar
- 1/2 Teaspoon Vanilla Extract
- 1 Cup Whole Milk
- 1 Cup Whipping Cream, Half & Half or Milnot
- Crushed Ice (1 bag of ice will freeze 3-4 bags)
- 1 Cup Rock Salt
- Duct Tape
- Towel, Potholders, or Gloves
- 1 Quart and 1 Gallon size Ziploc freezer bags (Ziploc brand is usually stronger & work the best).

Directions:

1. Pour the milk, whipping cream, sugar and vanilla in a 1 quart freezer bag and seal. For security, fold a piece of duct tape over the seal.
2. Place the bag with the ingredients inside a gallon freezer bag.
3. Pack the larger bag with crushed ice around the smaller bag. Pour 1 cup of salt evenly over the ice and seal the bag.
4. Wrap in a towel and shake for 10 minutes. Open the outer bag and remove the inner bag with the ingredients. Rinse or wipe off the bag to be sure salt water doesn't get in to the ice cream.
5. Cut the top off and spoon into cups or bowls.
6. Makes about 3 cups. (1 bag will serve approximately 3-4 youth).
7. Serve plain or top with nuts, coconut or fruit. ENJOY!



4-H Project Levels and Goals

Beginner

- Identify the 7 Major Dairy Breeds
- Identify parts of the dairy animal
- Learn about feeding, health, daily care and record keeping
- Identify the four compartments of the cow's stomach
- Learn about milk production, dairy products and the classes of milk

Intermediate

- Learn about the flight zone and how to properly move cattle
- Learn how to evaluate dairy heifers and cows
- Explore dairy cattle housing options
- Learn about animal diseases and prevention, as well as vaccinations and treatment options

Advanced

- Understand the bovine reproductive cycle including heat detection, artificial insemination, pregnancy and calving
- Evaluate dairy cattle milk records and pedigrees use information for selecting sires to use for breeding to improve the herd
- Determine different causes of mastitis

Put Your Project Into Action

Show Your Skills

- 4-H club talk or demonstration
- Exhibit cattle at county, state or national shows
- Animal science display at 4-H non-livestock shows
- Public presentations - dairy industry topic

Service and Leadership

- Dairy product promotion at a farm, food pantry, grocery store, restaurant or farmers market
- Donate dairy products to a food pantry or serve dairy samples at a community event
- Volunteer at a dairy show; assist with running and caring for the milk house at a county or state fair
- Teach a county or multi-county workshop about dairy cattle or dairy foods
- Teach younger members how to clip and show their dairy animals
- Participate on a food to table, dairy or farm breakfast committee; volunteer for the event
- Teach younger members how to judge dairy cattle and how to give reasons

Entrepreneurship

- Custom Hire – relief milking, feeding calves, baling hay, etc.
- Custom Fitter – clipping and washing dairy animals
- Dairy Farmer – build a herd; market your product

Technology Connection

- Use of drones for herd management
- Apps for managing herd data
- Precision technology for dairy operations

Connecting with a Mentor

- Contact a local dairy farmer
- Visit with breed organization representatives
- Contact the University of Illinois Department of Animal Science or a local community college
- Connect with dairy associations

Events

- Illinois 4-H Dairy Quiz Bowl; 4-H Dairy Judging Contest; Dairy Superior Young Producers Scholarship Contest
- National 4-H Dairy Conference
- Illinois State Fair Junior Dairy Show
- World Dairy Expo
- Breed Organization Junior Activities and Shows
- YQCA – Youth for the Quality Care of Animals



Careers for People Interested in Dairy

Dairy Cattle Nutritionist	Breed Organization Representative
Milk Quality Consultant	Dairy Farmer
Robotic Milking Technician	Dairy Research
Dairy Calf Specialist	Product Development
Precision Tech Consultant	Dairy Food Scientist
Dairy Communications	Geneticist
Dairy Promotion	

Start a Conversation

What interests you about the dairy industry?

What would you like to improve about your project?

What do you think other people need to know about the dairy industry?

Who is someone you admire in the industry and why do they impress you?

Want to learn more?

go.illinois.edu/4Hdairycattle

Explore more at Illinois 4-H!

4-H.extension.illinois.edu



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