

Dairy Cattle Learning Activities

Need ideas for your dairy cattle project? There are hundreds of things you can do! You are being asked to complete at least **at least five** activities each year. Use this list, the 4-H *Dairy Resource Handbook*, and your imagination, then write your ideas in your *Dairy Cattle Project and Record Book*. Have fun!

Beginner

1. Locate and identify the parts of a dairy cow. Show an illustration.
2. Create a poster with pictures of at least three breeds of dairy cattle. Present the poster to your club and tell about two characteristics of each breed.
3. Explain some characteristics to look for when selecting a dairy animal for a 4-H project.
4. Describe the nutrient content of milk. Include a picture or diagram.
5. Define pasteurization and explain why milk is pasteurized.
6. Describe the symptoms of a sick calf or cow.
7. Make a chart describing the signs and symptoms associated with each of the following diseases: navel ill, scours, pneumonia, milk fever, acidosis, displaced abomasum, and mastitis.
8. Define the term ruminant and give at least three examples of animals that are classified as ruminants.
9. Demonstrate how to mix milk replacer properly.
10. Name and describe the six classes of nutrients. Why is each one important in the diet?
11. Compare colostrum milk and milk produced by a cow two weeks after calving. Describe how the two types of milk are different.
12. Collect five samples of feed ingredients commonly fed to dairy heifers or cows. Tell the major use each serves in the ration as a source of protein, vitamins, minerals, energy, or water.
13. Using a tag from a feed you provide to your animal(s), demonstrate that you can identify the various parts of the feed tag.
14. Define the following terms related to dairy cattle genetics: dam, sire, and inheritance.
15. Draw a family tree for your cow or heifer. Identify the dam, sire, granddams, and grandsires.
16. Define the terms: calf, heifer, cow, dry cow, weaning, dehorning, lactation, and udder.
17. Describe or demonstrate three ways you can identify your project animal.
18. Make a chart that lists the top 15 dairy producing states in terms of total milk production.
19. Identify all parts of the medication insert in the quality assurance section of this book.
20. Complete the growth record in the animal records section of this book.
21. Send a thank you note to award donors and anyone who helped you with your project (advisors, older members, parents, etc.).

Intermediate

1. Help a new member learn to identify and spell 15 to 20 parts of a dairy cow.
2. Describe how the six breeds of dairy cattle differ in size. Pick your favorite breed and tell about that breed's history.
3. Describe the process of homogenization and tell why the process is used.
4. Define the following types of milk: whole milk, buttermilk, ultra-pasteurized milk, 2% milk, fat free milk, and low-fat milk.
5. Demonstrate that you can complete a treatment record.
6. Describe two symptoms and one treatment for each of the following health problems: pneumonia, scours, navel ill, pinkeye, ringworm, lice, and shipping fever.
7. Explain and describe the steps that should be taken to ensure that a newborn calf is healthy.
8. Develop a vaccination program for your heifer from birth to freshening. Compare your program with the one recommended by your veterinarian and decide if you need to make any changes to your program.
9. Compare the costs of feeding calves milk replacer vs. whole milk up to weaning. Use current milk and milk replacer prices.
10. Explain why it is important that a newborn calf receive colostrum within the first few hours of birth.
11. What is the feed ration for your cow? Keep a daily record of the amount consumed.
12. Keep a daily record of the amount of grain consumed by a calf from birth to eight weeks of age. Use this record to determine when to wean the calf.
13. Select and compare feed tags from two types of milk replacer. Describe how they are different.
14. Demonstrate that you can identify the four compartments of the ruminant stomach and describe the function of each.
15. Demonstrate to younger members how to read a feed tag.
16. Describe how you could reduce the stress that a calf experiences during weaning.
17. Demonstrate that you can identify the parts of the female reproductive system.
18. Demonstrate that you can identify the parts of the male reproductive system.
19. Observe your cow or heifer (if appropriate) for heats and keep a daily record of activity for at least two months. Record any attempts to breed your cow or heifer.
20. Using a model or a live animal, demonstrate at least two methods that could be used to measure the growth of a heifer.
21. Discuss the various records that someone who raises dairy cattle should keep and tell why each is useful.
22. Help a new 4-H member update his or her project records.
23. Send a thank you note to award donors and anyone who helped you with your project (advisors, older members, parents, etc.).

Advanced

1. Learn to identify at least four types of grasses or legumes commonly used in pastures for dairy cows or heifers in your area.
2. Demonstrate how to determine forage quality.
3. Describe how poor nutrition can influence the growth, health, and reproductive performance of a calf, heifer, or cow.
4. Describe housing requirements for a heifer at birth, weaning, one year of age, and two weeks prior to calving.
5. Describe the difference between contagious and non-contagious mastitis pathogens. Which type can be more damaging to the cow's mammary gland?
6. Research metabolic diseases in fresh cows. Pick one to learn more about and elaborate on how it can be prevented and/or treated.
7. Explain or demonstrate to a younger member how to take an animal's temperature and what a normal temperature reading should be.
8. Give a presentation to your club about careers in the dairy industry.
9. Research the types of different milking facilities and present your findings at a club meeting.
10. Demonstrate that you can identify the parts of the mammary gland and their role in milk production/letdown.
11. Identify the essential vitamins in a dairy cow's diet and describe the functions of each.
12. Research 3 to 5 different types of bedding used in a dairy facility. Rank them from most to least desirable and state your reasons why.
13. Using a model or live animal, demonstrate how to artificially inseminate a cow.
14. Define the following terms: Federal Milk Marketing Order, Class I Milk, Class II Milk, Class III Milk, Class IV Milk, Grade A Milk and Manufacturing Grade Milk.
15. Collect labels from two types of teat dips. Compare the labels and the effectiveness of the active ingredients. Effectiveness of teat dips can be obtained from the National Mastitis Council at nmconline.org.
16. Describe an ideal milking procedure protocol and why it is important for milk letdown.
17. Send a thank you note to award donors and anyone who helped you with your project (advisors, older members, parents, etc.).
18. List five characteristics that you would look for when selecting a bull to breed to your heifer or cow.
19. Explain to a younger member how to read a pedigree
20. Describe how you currently maintain or would like to maintain milking equipment on your farm.
21. Explain to your club using a diagram and/or pictures how the four different stomach compartments process feed.
22. Research the price per hundredweight paid to dairy farmers for milk over the past year. Graph the changes and share.