

# Adventures in Dairyland

## MEMBER'S MANUAL



A project for 4-H school clubs and first year 4-H members who may or may not own or be able to own a calf.



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Introduction

Adventures in Dairyland is a non-ownership dairy project. In other words if you are interested in dairying and making milk products, but you and your family do not own a calf or cow, this project is for you. However, the project will also be useful if you plan to own a calf or cow later.

This project is designed to teach you about the production of milk and how it is processed and utilized as the many delicious products that are available to us. The project can be completed in four meetings. Plan to start in October so you will have it completed by Spring. The meeting topics are:

- Lesson I . . . . . The Production and Manufacture of Dairy Products (a slide set)
- Lesson II . . . . . Breeds of Dairy Cattle and Parts of a Cow
- Lesson III . . . . . A Visit to a Dairy Farm
- Lesson IV. . . . . Making Homemade Ice Cream

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Lesson I

The Production and Manufacture of Dairy Products (A slide set)

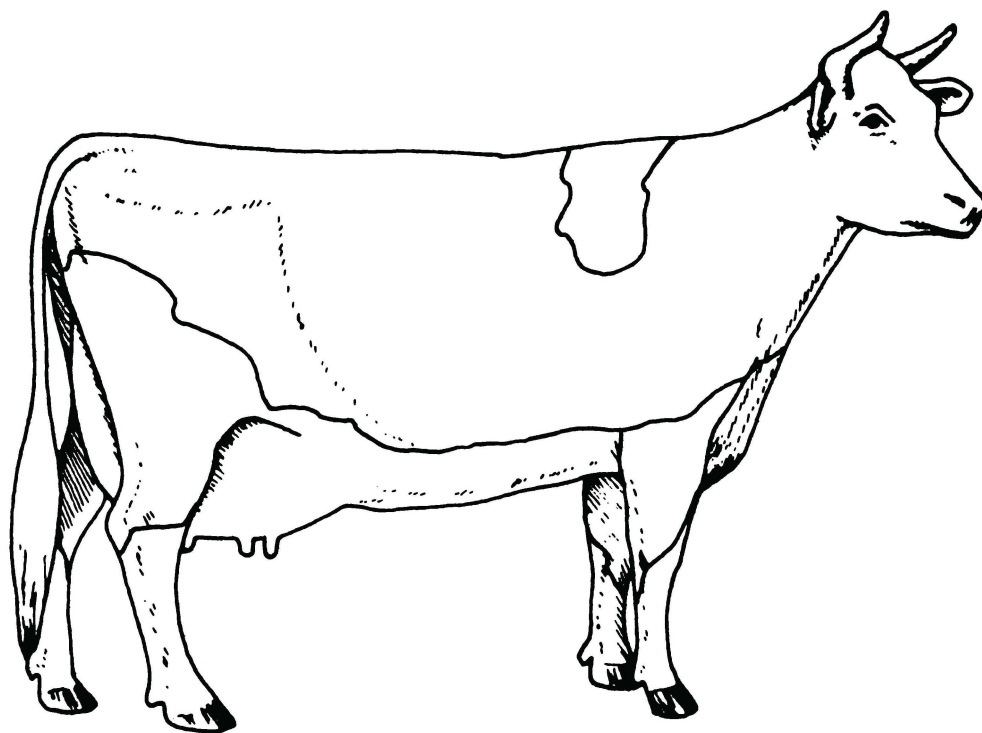
After seeing the slides on the Production and Manufacture of Dairy Products, answer the following questions.

1. What is a newly born dairy animal called? \_\_\_\_\_
2. What is an adult dairy animal called? \_\_\_\_\_
3. In what country did the Holstein cow originate? \_\_\_\_\_
4. What color are Holsteins? \_\_\_\_\_
5. What color are Brown Swiss? \_\_\_\_\_
6. On what island did the Jersey breed originate? \_\_\_\_\_
7. Name a youth organization which teaches boys and girls about cows.  
\_\_\_\_\_
8. Where can boys and girls exhibit their animals and compete with other boys and girls? \_\_\_\_\_
9. What color is corn when it is harvested for grain? \_\_\_\_\_
10. What is the name of the building where the cows are milked? \_\_\_\_\_
11. When the cows are milked, the milk is pumped into a stainless steel tank for storage until it is taken to the plant for processing. Is the storage tank refrigerated? \_\_\_\_\_
12. Name three products that are made from milk. \_\_\_\_\_
13. Is milk examined under a microscope after it is taken to a processing plant?  
\_\_\_\_\_
14. Is milk pasteurized and homogenized before it is sold at the grocery store?  
\_\_\_\_\_
15. What is the newest dairy product available at the grocery store?  
\_\_\_\_\_

Lesson II

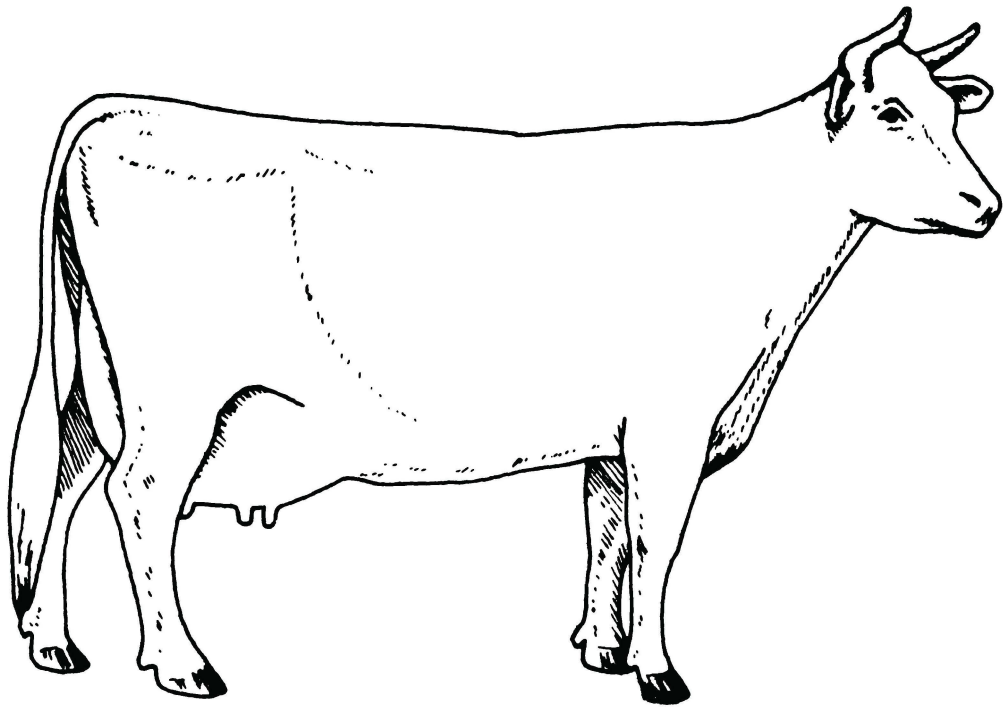
Breeds of Dairy Cattle and Parts of a Cow

You will need to remember the slides you saw at the last meeting. The slides were about calves and cows and producing milk on the farm. Use crayons to color the different breeds of dairy cattle.

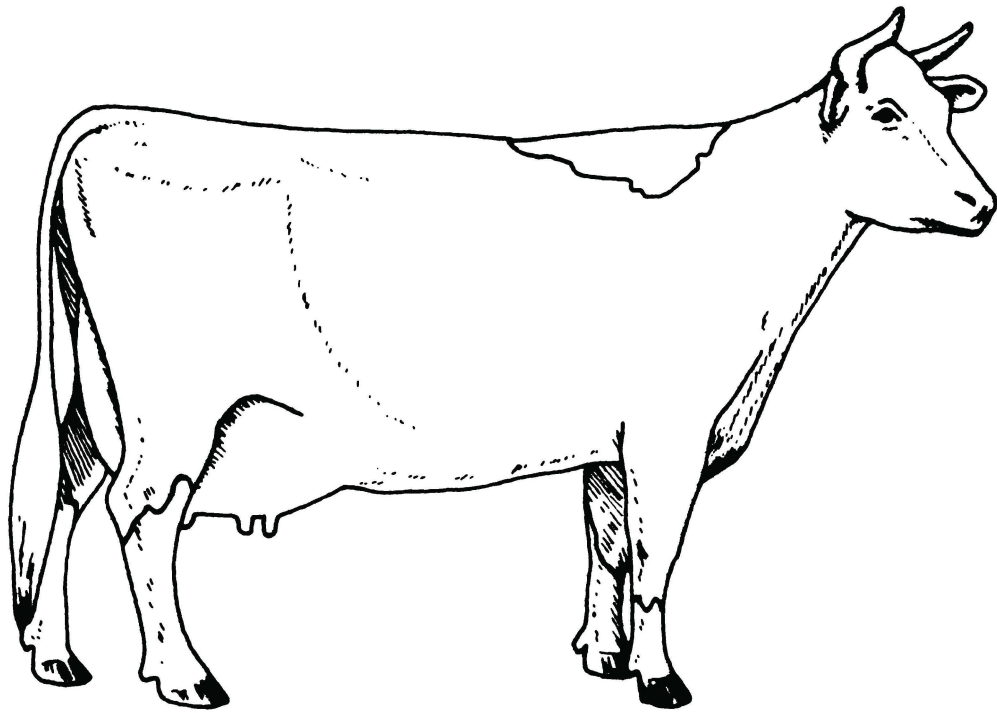


AYRSHIRE

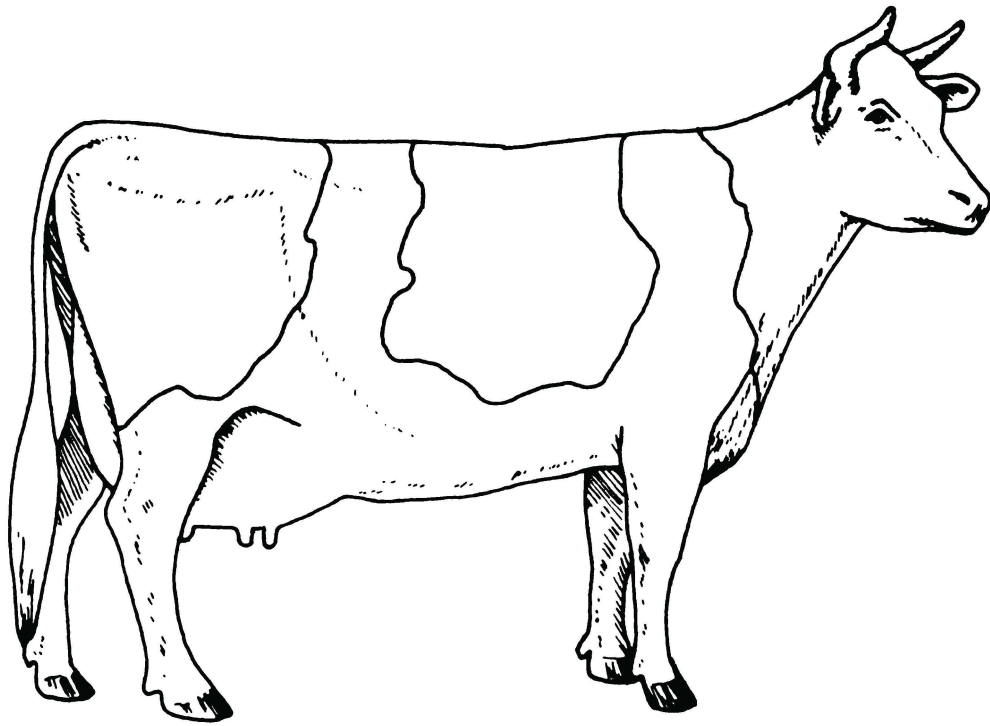




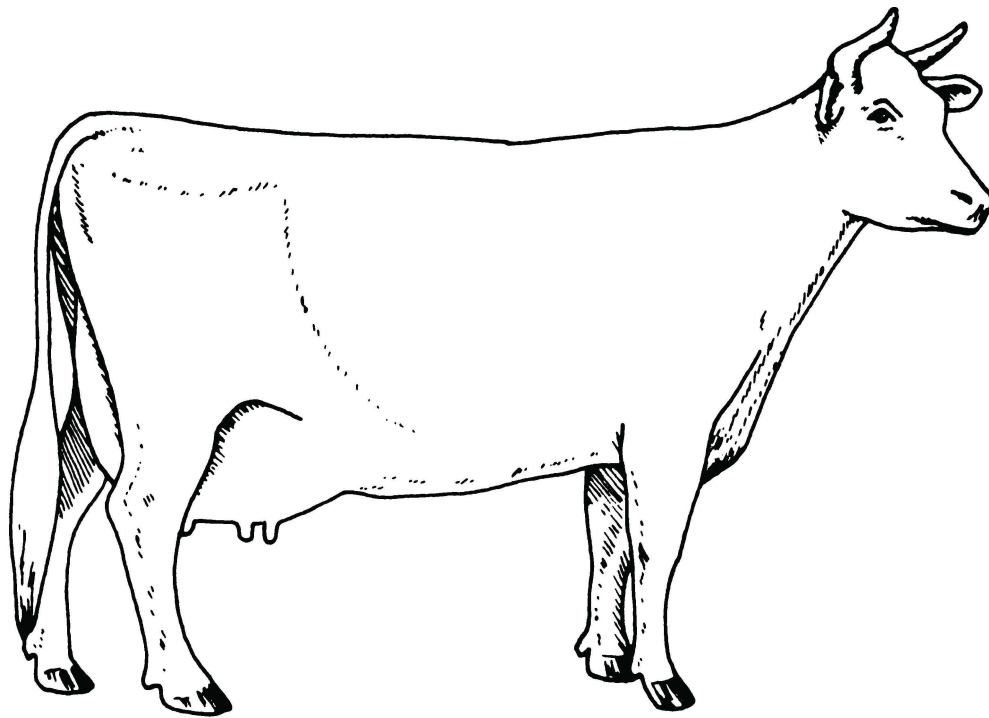
BROWN SWISS



GUERNSEY

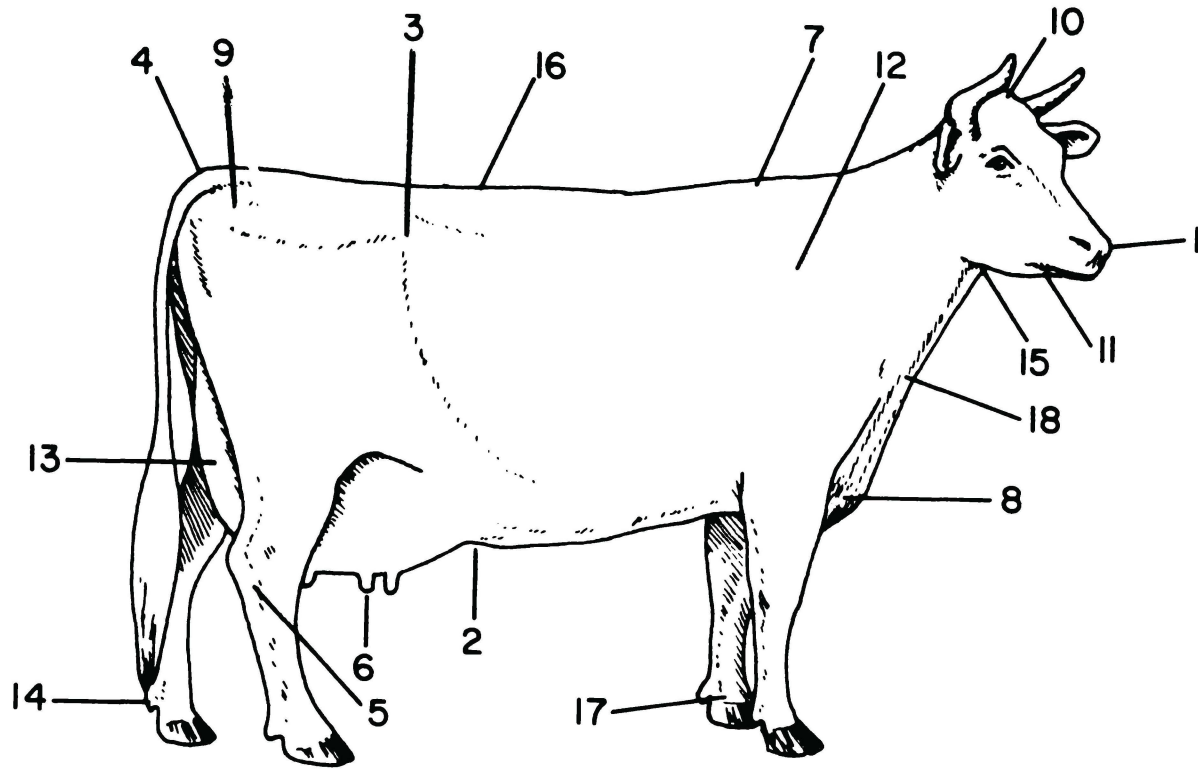


HOLSTEIN



JERSEY

Name the parts of a cow. Match up the correct number with the name of the parts listed.



\_\_\_ muzzle

\_\_\_ pin bone

\_\_\_ jaw

\_\_\_ teat

\_\_\_ fore udder attachment

\_\_\_ shoulder

\_\_\_ loin

\_\_\_ hip or hook

\_\_\_ poll

\_\_\_ tail head

\_\_\_ rear udder

\_\_\_ dewlap

\_\_\_ hock

\_\_\_ dew claw

\_\_\_ withers

\_\_\_ throat

\_\_\_ hoof

\_\_\_ brisket

Lesson III

A Visit to a Dairy Farm

A visit to a dairy farm will help you understand better the slides you saw about producing milk. On the farm you will be able to touch a live cow, pet a baby calf, and pick up a handful of hay and grain. You will be able to smell corn silage that is fed to cows and see the large tank where the milk is stored. If you visit at milking time, you will especially enjoy seeing cows milked. When visiting a farm, obtain answers to the following questions.

1. What was the farmer's name? \_\_\_\_\_
2. What breeds of cow did you see? \_\_\_\_\_
3. How many cows were on the farm? \_\_\_\_\_
4. What were the cows fed? \_\_\_\_\_  
\_\_\_\_\_
5. How much milk was produced daily by the cows being milked? \_\_\_\_\_

After visiting a farm, write a short story about what you saw and learned.

My Visit to a Farm

by

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

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\_\_\_\_\_



## Lesson IV

### Making Homemade Ice Cream

Ice cream is a favorite of most young people. Most everyone enjoys making home made ice cream. After making ice cream in this project, you may want to make some for your family.

A hand crank freezer may be difficult to locate. Most department stores will have electric freezers for sale. Try to involve everyone in the family when making the ice cream.

A recipe, recommended by the American Dairy Association, follows:

#### Country Style Vanilla Ice Cream

Yield: Approximately 3 quarts

3 eggs

1-1/3 cups sugar

3 cups milk

3 cups whipping cream

2 tbsp vanilla extract

1/4 tsp salt

In a large mixing bowl, beat eggs until foamy. Gradually add sugar; beat until thickened. Add milk, cream, vanilla and salt; mix thoroughly. Chill. Churn until frozen.

#### Freezing

About 20 pounds of ice are needed for freezing and packing 3 quarts of ice cream. Use 8 parts of crushed ice and one part rock salt for freezing. Alternate a layer of each as you fill the tub around the can. While the freezer handle is being turned, make sure the hole in the side of the tub remains open, allowing the melted ice to drain out rather than rise above the top of the can and spoil the ice cream.

After the ice cream has been frozen, the can should be removed and the dasher taken out. Empty the ice, salt, and water from the tub then replace the can of ice cream. Pack ice and salt around the can at a ratio of 4 parts of ice to 1 part salt. Allow the ice cream to ripen for two hours.



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