

# Bovine Milking Udder

## Curriculum Overview

### Designed for:

- High school students
- Post-secondary students
- Workforce development students

### Length:

This 4-hour curriculum is comprised of four lessons. With supplemental materials, this curriculum can be adapted to a longer block of time.

### Goal:

To help participants learn proper udder care, milk diseases and infection treatment and prevention, proper California Mastitis Test performance and to teach udder anatomy through a variety of activities and use of the Bovine Milking Udder simulator.

### Synopsis:

This simulator and accompanying curriculum provide general information about udder anatomy. It also includes lessons on the proper udder care, milk diseases and infection treatment and prevention. The lessons and activities include objectives, materials required and approximate class time.

### Curriculum Components:

- Teacher's guide
- Student materials
- Assessment tools
- PowerPoint presentation slides

### Learning Objectives:

#### Lesson 1 – Development of the Bovine Udder

- Identify the stages of udder development and what is going on in each stage
- Identify factors that affect mammary gland development, and at which stages they are most susceptible to changes in growth
- Explain why the dry period is necessary for future lactations

#### Lesson 2 – Structure of the Bovine Udder

- List the supporting structures of the bovine mammary gland
- Describe the function of each of the supporting structures of the bovine mammary gland

#### Lesson 3 – Milking Procedure

- Identify the different steps in the milking procedure
- Explain why each of these steps is important in the milking procedure

#### Lesson 4 – Managing Somatic Cell Counts

- Explain what a somatic cell is and what it tells us
- Identify the two main classes of mastitis
- Identify ways to decrease the occurrence of mastitis on the farm
- Explain why monitoring is important in reducing the number of mastitis cases