

Course	Agricultural Science I
Unit	Introduction to Dairy Production
Lesson	Industry Issues
Estimated Time	180 minutes (class and debate)

Student Outcome

Evaluate issues concerning the dairy industry.

Learning Objectives


1. Discuss some concerns consumers have about the dairy industry.
2. Explain how the dairy industry is addressing consumer concerns.
3. Explain how the consumer knows that he or she has a safe food product.

Grade Level Expectations

SC/ST/1/B/09-11/a SC/ST/1/C/09-11/a SC/ST/3/B/09-11/a
SC/ST/3/D/09-11/a

Resources, Supplies & Equipment, and Supplemental Information

Resources

1. Activity Sheet
 -  AS 1 – Debate – Animal Welfare
2. *Introduction to Animal Nutrition (Student Reference)*. University of Missouri-Columbia: Instructional Materials Laboratory, 1996.
3. *Introduction to Animal Nutrition Curriculum Enhancement*. University of Missouri-Columbia: Instructional Materials Laboratory, 2003.

Supplies & Equipment

- ☐ Store-bought milk sample

Supplemental Information


1. Internet Sites
 - ☐ Bennett, R., and L. J. Butler. *Western Dairying: Environmentally Responsible Agriculture?* University of California. Accessed August 31, 2007, from <http://www.sarep.ucdavis.edu/newsltr/components/v1n4/sa-9.htm>.
 - ☐ Dairy Publications. MU Extension. University of Missouri-Columbia. Accessed April 12, 2007, from <http://extension.missouri.edu/explore/agguides/dairy/>.
 - ☐ Milk and Dairy Beef Quality Assurance Center. Accessed August 31, 2007, from <http://www.dqacenter.org/>.
2. Print
 - ☐ Brouwer, F., and D. E. Ervin, eds. *Public Concerns, Environmental Standards and Agricultural Trade*. New York: CABI Publishing, 2002.


Interest Approach

Bring in a store-bought milk sample. Ask the students whether they think the milk is safe. Discuss the possibility of medications ending up in the fluid milk supply.

Communicate the Learning Objectives

1. Discuss some concerns consumers have about the dairy industry.
2. Explain how the dairy industry is addressing consumer concerns.
3. Explain how the consumer knows that he or she has a safe food product.

Instructor Directions	Content Outline
Objective 1 <i>Ask students what concerns consumers have about dairy production. Discuss why consumers might be concerned about these things.</i>	Discuss some concerns consumers have about the dairy industry. <ol style="list-style-type: none">1. Waste management – contamination of ground and surface water by improperly handled, untreated waste2. Drug usage in lactating cows – presence of drugs given to lactating cows in fluid milk, which may be harmful to humans3. Animal welfare – how management practices affect animal comfort and well-being; for example, that cows and calves do not have sufficient freedom to move around and that they may not always be adequately supplied with shade and shelter
Objective 2 <i>Ask the class what dairy producers are doing to address consumer concerns. Have students carry out the debate outlined in AS 1. Divide the class into two groups and allow the groups to research the subject to prepare for the debate. Moderate the debate for the class.</i>  AS 1 - Debate – Animal Welfare	Explain how the dairy industry is addressing consumer concerns. Waste management – education by the industry concerning waste storage, management, and land application Drug usage – Milk and Dairy Beef Quality Assurance programs <ol style="list-style-type: none">1. Programs educating producers about management practices that can help them produce high quality milk and pure beef products2. Focus on several points that can help producers improve their milk, including proper herd health management, sanitation, feeding, and record keeping Animal welfare – information by dairy-related agencies to educate producers about management practices that will ensure animal welfare

Instructor Directions	Content Outline
<p>Objective 3</p> <p><i>Ask the class how they know that the food supply, especially dairy products, is safe.</i></p>	<p>Explain how the consumer knows that he or she has a safe food product.</p> <p>Consumers can be sure that dairy products are safe because of inspections by the USDA and state regulatory agencies.</p> <ol style="list-style-type: none"> 1. State inspections are carried out to look at factors such as drug usage and sanitation in the milking parlor. 2. Milk samples are tested for contaminants at both the farm and the processing plant to confirm that the milk is safe. 3. Milk unfit for human use is added to animal feeds or dumped.
<p>Application:</p> <p> AS 1 - Debate – Animal Welfare</p>	<p>Answers to AS 1</p> <p>Students should be graded on their participation and the quality of the research for the debate.</p>
<p>Closure/Summary</p>	<p>Dairy producers must be aware of the public's perception of current dairy practices. Producers should educate themselves and consumers about the safety of dairy products and the management practices used in American dairy production.</p>
<p>Evaluation: Quiz</p>	<p>Answers:</p> <ol style="list-style-type: none"> 1. d 2. c 3. Milk that is unfit for human consumption is used in animal feeds or dumped. 4. They are designed to educate producers about management practices that can help them produce high quality milk and pure beef products. 5. Consumers worry that cows and calves do not have sufficient freedom to move around and that they may not always be adequately supplied with shade and shelter.