

Lesson B1–1

Analyzing Present and Future Trends in the Animal Science Industry

Unit B. Animal Science and the Industry

Problem Area I. Understanding the Animal Science Industry

Lesson I. Analyzing Present and Future Trends in the Animal Science Industry

New Mexico Content Standard:

Pathway Strand: Problem Solving and Critical Thinking

Standard: IV: Solve problems using critical thinking skills (e.g., analyze, synthesize and evaluate) independently and in teams.

Benchmark: IV-B. Analyze information critically to ascertain its value to whatever discipline it is applied.

Performance Standard: 1. Explain how to analyze, synthesize, and evaluate information and apply its implications to a variety of avenues.

Student Learning Objectives. Instruction in this lesson should result in students achieving the following objectives:

1. Discuss trends in animal production.
2. Discuss trends in animal product consumption.
3. Discuss trends in animal welfare and animal rights.

List of Resources. The following resources may be useful in teaching this lesson:

Recommended Resources. One of the following resources should be selected to accompany the lesson:

Gillespie, James R. *Modern Livestock & Poultry Production, 6th Edition*. Albany, New York: Delmar. 2002 (Units 1 and 4)

Other Resources. The following resources will be useful to students and teachers:

Lee, Jasper S., et. al. *Introduction to Livestock and Companion Animals, 2nd Edition*. Danville, Illinois: Interstate Publishers, Inc. 2000 (Chapter 1)

List of Equipment, Tools, Supplies, and Facilities

Writing surface
Overhead projector
Transparency from attached master

Terms. The following terms are presented in this lesson (shown in bold italics):

Animal liberation
Animal rights
Animal welfare
Factory farm
Soring

Interest Approach. Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Ask students to describe the current popular music. Ask them if today's popular music is the same kind that was popular 10 years ago? 20 years ago? 30 years ago? Why has music style changed? Why does someone in the music industry have to pay attention to the different trends in popular music styles? They must stay aware so they can continue to sell albums and make money. The same is true in the animal science industry. Those involved in the industry must stay aware of what consumers want so that they can produce a product that consumers will buy.

Summary of Content and Teaching Strategies

Objective 1: Discuss trends in animal production.

Anticipated Problem: What are some of the trends in animal production?

- I. The nature of animal production has become larger and more specialized. There are fewer producers today in North America. A half century ago, many people raised animals for food purposes. Many homes had a few chickens and a cow or two for milk. Nearly every farm was diversified and kept a few animals in addition to crops. That is no longer the case. Today, livestock are raised on specialized farms or ranches that are often quite large. New approaches are being used to grow them. Only one kind of animal may be grown. It is becoming unusual to find a large-scale farm that has more than one kind of animal.
 - A. Factory farms are continuing to dot the landscape of today's animal science industry. A **factory farm** is a large-scale operation that efficiently produces animals in carefully controlled environments. The animals are often confined in houses specially designed to provide for their well-being. Hog production has rapidly moved to a factory farm approach. One producer may have a large operation that produces far more hogs than several smaller farms. Many corporations grow for a specific market.
 - B. Another trend in animal production is increasing the emphasis on disease prevention rather than treatment. It is estimated that livestock producers currently lose about 20 percent of their income from disease, parasites, and toxins. Only about 10 percent of all livestock producers currently use effective disease prevention management practices. By placing increased emphasis on disease prevention rather than treatment, livestock producers can increase efficiency and profits.

There are many techniques that can be used to assist students in mastering this material. Students need text material to aid in understanding some of the trends in animal production. Chapter 1 in Introduction to Livestock and Companion Animals is recommended.

Objective 2: Discuss trends in animal product consumption.

Anticipated Problem: What are some of the trends in animal product consumption?

- II. The changes in lifestyle and eating habits of people in the United States and the world will continue to have a significant impact on the production, processing, and marketing of meat, poultry, and dairy products. The trend of eating meals in restaurants and fast food businesses will continue to increase. When food is consumed away from home, more of the consumer's expenditure goes toward marketing costs as compared to marketing costs of food consumed at home.
 - A. The concern over cholesterol levels in food products has had an impact on consumption patterns for animal products. Per capita consumption of red meat and eggs has decreased

in recent years and this trend is expected to continue unless significant changes are made in the saturated fatty acid and cholesterol content of these products. Consumers are demanding leaner meat and less fat in meat and dairy products. The long-term trend of an increase in poultry consumption has resulted in a decrease primarily in beef consumption. It is anticipated that pork consumption will tend to remain fairly constant.

There are many techniques that can be used to assist students in mastering this material. Students need text material to aid in understanding some of the trends in animal product consumption. Chapter 1 in Modern Livestock & Poultry Production is recommended.

Objective 3: Discuss trends in animal welfare and animal rights.

Anticipated Problem: What are some of the trends in animal welfare and animal rights?

- III. The domestication and use of animals for the benefit of humans began many thousands of years ago. Questions about the ethics of animal use date back at least to the time of the ancient Greeks. Livestock producers and others interested in the production and use of animals need to understand that societal concern about the welfare of animals is not going to go away. Decisions about the treatment and use of animals will increasingly be made by society as a whole rather than by individuals. It is important that those people who produce or work with animals do the best possible job of providing humane treatment for their animals. Animals that are well managed are more efficient producers of meat, milk, eggs, wool, and other products. Livestock producers need to do a good job of letting people know that they care about the welfare of the animals they raise. Concern for the welfare of the animal should always be a priority when dealing with animals. There is a significant difference between those people who are concerned about animal welfare and those who believe in animal rights. There are many different groups within these two views, each with their own agendas.
- A. **Animal welfare** emphasizes the humane treatment of animals, both in research and production agriculture. Animal welfare supporters believe that animals can be used to benefit humans. Some animal welfare advocates take the position that there are essential uses of animals such as for food and medical research. They also believe that there are nonessential uses of animals such as for entertainment. These groups support and promote the humane treatment of animals. Their purpose is to promote responsible animal use and to educate the public about the vital distinction between animal welfare and animal rights.
- B. The views of animal rights activists vary. In general **animal rights** supporters believe that animals have the same rights as humans in society. Some advocate the total elimination of all animal use by humans. This is called **animal liberation**. Others recognize that animal use probably is not going to be eliminated and therefore work to eliminate animal suffering to the greatest extent possible. Those who take a more moderate approach try to achieve their goals by influencing legislation and through public education campaigns. Some militant animal rights activists have been willing to break laws by stealing research animals and damaging property to draw attention to their cause. Major targets have in-

cluded biomedical research facilities, food production and food retail facilities, and retail fur facilities. In recent years, animal rights activists have begun distributing their message to school children by providing free materials to schools under the label of educational materials. They also maintain sites on the Internet. Some of the animal production practices and animal uses that animal rights activists object to are:

1. Use of hormones, antibiotics, and additives in animal feeding.
 2. Caging laying hens.
 3. Production of veal calves in crates.
 4. Raising swine in confinements and using farrowing crates for sows.
 5. Management practices such as castration, docking, debeaking, and dehorning.
 6. Having animals as household pets.
 7. Using animals in medical and scientific research.
 8. Consuming animal products for food.
 9. Using animal skin.
 10. Making animals the target of hunting and trapping.
 11. Featuring animals in entertainment activities such as horse and dog racing.
- C. The United States Congress has addressed the concern of animal welfare several times through legislation. The first federal law dealing with the humane treatment of animals was passed in 1873. This legislation mandated that feed and water be provided for farm animals being transported by barge or railroad. Other federal legislation includes:
1. Federal Humane Slaughter Act of 1958—requires federally inspected slaughter plants to comply with humane methods of slaughter.
 2. Animal Welfare Act of 1966—addresses the sale, transportation, and handling of dogs and cats used in research institutions.
 3. Animal Welfare Act amendments of 1970—expand coverage of the animals in zoos and circuses, marine mammals in sea life shows and exhibits, and animals sold in the wholesale pet trade. Retail pet shops, game ranches, livestock shows, rodeos, state and county fairs, and dog and cat shows are not covered by this Act.
 4. Animal Welfare Act amendment of 1976—extends the 1970 Act to include care and treatment while animals are being transported by common carriers and outlaws fighting exhibits unless specifically permitted by state law.
 5. Horse Protection Act of 1970—prohibits the soring of horses; prohibits the transport of sored horses across state lines to compete in shows. **Soring** is the practice of using chemical or mechanical irritants on the forelegs of the horse. A sored horse lifts its front legs more quickly to relieve the pain.
 6. Animal Welfare Act amendment of 1985—provides for the establishment of special committees at all research facilities to oversee animal use; also requires exercise for dogs and provides for the psychological well-being of nonhuman primates at such facilities.

7. Animal Enterprise Protection Act of 1992—adds a section to the federal criminal code to deal with vandalism and theft at animal research facilities and threats to research workers.
8. Animal Welfare Act amendment of 1993—passed to help prevent the use of lost or stolen pets in research. It establishes requirements for more documentation from dealers selling animals to research facilities; it specifies that dogs and cats must be held by pounds and animal shelters for a least five days, including a Saturday, before releasing them to dealers.

There are many techniques that can be used to assist students in mastering this material. Students need text material to aid in understanding some of the trends in animal welfare and animal rights. Chapter 1 in Modern Livestock & Poultry Production is recommended. Use TM: B1–1A to aid in discussion on this topic.

Review/Summary. Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. Questions at the end of the textbook chapters may also be used in the review/summary.

Evaluation. Focus the evaluation of student achievement on mastery of the objectives stated in the lesson. Measure student performance on classroom participation, laboratory assignments, and written tests or quizzes.

Answers to Sample Test:

Part One: Matching

1 = h, 2 = c, 3 = f, 4 = e, 5 = a, 6 = d, 7 = g, 8 = b

Part Two: Completion

1. animal rights
2. Animal welfare
3. Greeks
4. increase
5. leaner, less

Part Three: Short Answer

See Objective 3 for scoring guidelines.

Test

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Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- a. Federal Humane Slaughter Act of 1958
- b. Animal Welfare Act of 1966
- c. Animal Welfare Act amendments of 1970
- d. Animal Welfare Act amendment of 1976
- e. Horse Protection Act of 1970
- f. Animal Welfare Act amendment of 1985
- g. Animal Enterprise Protection Act of 1992
- h. Animal Welfare Act amendment of 1993

- _____ 1. Passed to help prevent the use of lost or stolen pets in research.
- _____ 2. Expand coverage of the animals in zoos and circuses, marine mammals in sea life shows and exhibits, and animals sold in the wholesale pet trade.
- _____ 3. Provides for the establishment of special committees at all research facilities to oversee animal use.
- _____ 4. Prohibits the soring of horses.
- _____ 5. Requires federally inspected slaughter plants to comply with humane methods of slaughter.
- _____ 6. Outlaws fighting exhibits unless specifically permitted by state law.
- _____ 7. Adds a section to the federal criminal code to deal with vandalism and theft at animal research facilities and threats to research workers.
- _____ 8. Addresses the sale, transportation, and handling of dogs and cats used in research institutions.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

- 1. In general _____ supporters believe that animals have the same rights as humans in society.

2. _____ emphasizes the humane treatment of animals, both in research and production agriculture.
3. Questions about the ethics of animal use date back at least to the time of the ancient _____.
4. The trend of eating meals in restaurants and fast food businesses will continue to _____.
5. Consumers are demanding _____ meat and _____ fat in meat and dairy products.

Part Three: Short Answer

Instructions. Provide information to answer the following question.

Compare and contrast the views of animal welfare and animal rights supporters.

IMPORTANT FEDERAL LEGISLATION DEALING WITH ANIMAL WELFARE

- **The first federal law dealing with the humane treatment of animals was passed in 1873.**
- **Federal Humane Slaughter Act of 1958**
- **Animal Welfare Act of 1966**
- **Animal Welfare Act amendments of 1970**
- **Animal Welfare Act amendment of 1976**
- **Horse Protection Act of 1970**
- **Animal Welfare Act amendment of 1985**
- **Animal Enterprise Protection Act of 1992**
- **Animal Welfare Act amendment of 1993**