

Lesson B5–2

Managing Animal Health

Unit B. Animal Science and the Industry

Problem Area 5. Maintaining Animal Health

Lesson 2. Managing Animal Health

New Mexico Content Standard:

Pathway Strand: Animal Systems

Standard: V: Identify environmental factors that affect an animal's performance.

Benchmark: V-D. Develop efficient procedures to produce consistently high- quality animals, well-suited for their intended purposes.

Performance Standard: 1. Identify a given species' desirable production numbers (e.g., birth weight, rate of gain, age of maturity, age of sexual maturity). 2. Evaluate desired traits (e.g., production) of animals. 3. Evaluate the role that economics plays in animal production. 4. Design facilities appropriate for the production of a given species of animal. 5. Make decisions on using new techniques and methods in the production facility so that both profit and animal safety are maximized.

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

1. Identify good animal health management practices.
2. Discuss beneficial record keeping programs for dairy.
3. Explain common maintenance needs to promote animal health.
4. Describe identification methods for various animals.

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

Ensminger, M. E., *The Stockman's Handbook*. Danville, Illinois: Interstate Publishers, Inc. 1992

Lee, Jasper S. *Introduction to Livestock and Companion Animals 2nd Edition*. Danville, Illinois: Interstate Publishers, Inc. 2000 (Textbook and Activity Manual Chapter 4)

Ensminger, M. E., *Animal Science*. Danville, Illinois: Interstate Publishers, Inc. 1991

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

Cooper, Elmer L., Burton, DeVere L., *Agriscience Fundamentals and Applications*. Albany, New York: Delmar. 2002

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

Internet keywords: Animal nutrition, animal environment, animal health management, and animal housing.

List of Equipment, Tools, Supplies, and Facilities

Writing surface
Overhead projector
Transparencies from attached masters
Copies of student lab sheet

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

Branding
Castrating
Dehorning
Docking
Earmarks
Heat
Mastitis
Tattooing

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.

Bring in a set of DHI records to show students how detailed record keeping can be. Be sure to white out the owner's name if they don't want anyone to see it.

Summary of Content and Teaching Strategies

Objective I: Identify good animal health management practices.

Anticipated Problem: What are good health management practices?

- I. Every type of animal needs specific management practices for good health. There are some broad similarities between all breeds.
 - A. Always make sure that you purchase your animal from a reputable person. If you start out with healthy animals it will be less expensive and less stressful. If you start out with infected animals, you may deal with the problem for a very long time before it is totally gone.
 - B. Only obtain animals after you have a specific use for them in mind. If you are not committed to large amounts of paperwork, don't buy animals that will require it for proper health.
 - C. Clean and disinfect all areas before bringing animals into them.
 - D. Make sure all animals are fed properly. You can avoid many diseases with proper nutrition.
 - E. Keep animals out of weather elements that they don't tolerate well in order to avoid certain illnesses and discomfort.
 - F. Keep track of sexual maturity of animals so they don't have babies before you or they are ready.
 - G. Monitor animals daily so you are aware of what is normal and will notice when something is other than normal.
 - H. Dispose of all animals properly to avoid further infection.
 - I. Separate sick animals from healthy until you are positive the disease or parasite is not contagious to other animals.
 - J. Call your veterinarian for any situation you don't know how to handle as soon as you can.

Use TM: B5–2A to discuss proper health management practices.

Objective 2: Discuss beneficial record keeping programs for dairy.

Anticipated Problem: How do you keep records to encourage good animal health with dairy animals?

- II. All animals have specific record keeping needs to encourage good health. Dairy animals require more paperwork than most because the breeding program is essential to the success of the business.
 - A. Records of dairy animals is done on an individual basis. Each cow is monitored for pregnancy, production, and milk quality. In order to maintain health, dairy cows are milked 2–3 times each day at consistent times. Studies show milking more frequently decreases mastitis and seems to improve general udder health. **Mastitis** is an infection of the milk secreting glands.
 - B. Records of breeding programs should also be done. Heat detection should be done daily. **Heat** describes the time in a cow’s estrus cycle when she can get pregnant. Breeding records will help to determine if there are any reproductive problems with your animals.
 - C. Good animal health also requires keeping track of growth and mortality rates. By logging this information, you may notice patterns that can be addressed.
 - D. Keeping records of genetic information is beneficial because there might be a hereditary disease or trait that keeps getting passed on. Another reason genetic information should be recorded is to prove that an animal has quality offspring.
 - E. Pregnancy records also need to be maintained so you are prepared for calving. If you are not aware that an animal is calving, you could lose the calf, the cow, or both of them.
 - F. Common ailments in dairy cattle can be avoided with proper record keeping of herd health.

Use LS: B5–2A to practice record keeping.

Objective 3: Explain common maintenance needs to promote animal health.

Anticipated Problem: Simple maintenance can help to promote animal health.

- III. Proper management of simple maintenance can save you time and money in your animal business. You can do many of these practices on your own or with the help of a veterinarian. Proper timing is the key to successful maintenance.
 - A. Dehorning of animals is common to ensure that the animals do not hurt each other, themselves, or humans. **Dehorning** is the removal of horns by use of chemicals, hot irons, saws, or other means. There are several methods to dehorning. Always make sure you have the proper knowledge and equipment before doing so.
 - B. **Castrating** is removing the testicles from male animals so they can’t breed. Often males are less aggressive and easier to handle after being castrated.

- C. Docking of tails is a common practice for piglets and lambs. **Docking** is the term used to describe removing the animal's tail.
- D. Bedding animals is a very important health management practice. Animals that have clean and dry bedding are less likely to be sick from parasites and diseases. Using the proper kind and amount of bedding is also essential for proper health.
- E. Removal of manure and urine is necessary to do often. Since many diseases are passed through feces, you will decrease the occurrence of contamination.

Use TM: B5–2B to discuss docking, dehorning, and castrating.

Objective 4: Describe identification methods for various animals.

Anticipated Problem: How do I identify my animals?

- IV. It is important to be able to tell your animals apart, especially in a large business. If you don't know what animal to watch, treat, or breed you could be doing damage to your enterprise. There are different methods used for various types of animals. Use the method that is right for your animal and your purposes.
 - A. Cattle can be branded to establish ownership. **Branding** is burning or freezing a mark onto an animal to determine ownership or pedigree. Some owners brand the horns of their animals. There are four methods used:
 1. Hot iron
 2. Freeze branding
 3. Branding fluids
 4. Laser branding
 - B. Plastic or metal ear tags are also used to identify cattle. They are useful because they are inexpensive, can be done anytime, and are numbered. Plastic tags are easier to read than metal ones because they are brightly colored and have large numbers on them.
 - C. Marking the skin with ink on needle points is called **tattooing**. This is a permanent marking but can be hard to read. Tattooing is most commonly used with swine because animals with dense hair must be confined on order to be able to read the tattoos.
 - D. **Earmarks** are permanent notches cut into ears of animals. This method can be done with a knife or ear notching tool.
 - E. Neck chains are sometimes used but can get lost. The animal on rare occasion could also hang itself.
 - F. Another way to identify cattle is to have them swallow a transmitter which gets stuck in their stomach. The transmitter gives off a signal to identify the animal when activated by a receiving unit. This method is costly, but the transmitters can be retrieved and reused after slaughter.

Use TM: B5–2C as an overhead to discuss identifying cattle.

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 to determine which objectives need to be reviewed or taught over using a different approach. Questions provided in recommended textbooks may also be used to help review.

Application. Application can involve student activity with the provided labs.

Evaluation. Evaluation should focus on student achievement of the objectives for each lesson. Various techniques can be used, such as performance on the application activities. A sample written test is attached.

Answers to Sample Test:

Part One: Matching

1 = f, 2 = d, 3 = c, 4 = a, 5 = b, 6 = e

Part Two: Completion

1. bedding
2. Castrating
3. Dehorning
4. disease, parasite

Part Three: Short Answer

1. Hot iron
2. Freeze branding
3. Branding fluids
4. Laser branding

Test

Lesson B5–2: Managing Animal Health

Part One: Matching

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

- | | | |
|-------------|-------------|--------------|
| a. Branding | c. Docking | e. Earmarks |
| b. Heat | d. Mastitis | f. Tattooing |

- _____ 1. Marking the skin with ink on needle points.
- _____ 2. An infection of the milk secreting glands.
- _____ 3. The term used to describe removing the animal's tail.
- _____ 4. Burning or freezing a mark onto an animal to determine ownership or pedigree.
- _____ 5. The time in a cow's estrus cycle when she can get pregnant.
- _____ 6. Permanent notches cut into ears of animals.

Part Two: Completion

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

1. Animals that have clean and dry _____ are less likely to be sick from parasites and diseases.
2. _____ is removing the testicles from male animals so they can't breed.
3. _____ is the removal of horns by use of chemicals, hot irons, saws or other means.
4. Separate sick animals from healthy ones until you are positive the _____ or _____ is not contagious to other animals.

Part Three: Short Answer

Instructions. Provide information to answer the following question.

What are four methods of branding animals?

1.

2.

3.

4.

MANAGEMENT PRACTICES FOR GOOD ANIMAL HEALTH

- **Always make sure that you purchase your animal from a reputable person. If you start out with healthy animals it will be less expensive and less stressful. If you start out with infected animals, you may deal with the problem for a very long time before it is totally gone.**
- **Only obtain animals after you have a specific use for them in mind. If you are not committed to large amounts of paperwork, don't buy animals that will require it for proper health.**
- **Clean and disinfect all areas before bringing animals into them.**
- **Make sure all animals are fed properly. You can avoid many diseases with proper nutrition.**
- **Keep animals out of weather elements that they don't tolerate well to avoid certain illness and discomfort.**
- **Keep track of sexual maturity of animals so they don't have babies before you or they are ready.**
- **Monitor animals daily so you are aware of what is normal and will notice when something is other than normal.**
- **Dispose of all animals properly to avoid further infection.**
- **Separate sick animals from healthy until you are positive the disease or parasite is not contagious to other animals.**
- **Call you veterinarian for any situation you don't know how to handle as soon asyou can.**

DEHORNING, CASTRATING, AND DOCKING

- **Dehorning—Removing an animal’s horns by use of chemicals, hot irons, saws, or other means; common to ensure that animals do not hurt each other, themselves, or humans.**
- **Castrating—Removing the testicles from male animals so they can’t breed; often males are less aggressive and easier to handle after being castrated.**
- **Docking—Removing an animal’s tail; common practice for piglets and lambs.**

METHODS OF IDENTIFYING BEEF AND DAIRY CATTLE

- **Branding**
 - Hot iron
 - Freeze branding
 - Branding fluids
 - Laser branding
- **Plastic or metal ear tags**
- **Tattooing**
- **Earmarks (Notches)**
- **Neck chains**
- **Transmitters**

Lab Sheet

Basic Record Keeping

Purpose:

To practice keeping records.

Procedure:

Pick something to keep track of and monitor it for an entire week. It could be what you eat, where you go, your homework or your exercise routine. Each day, write down what happened, how long your event took, and anything unique about it to get a brief idea of the commitment record keeping takes.

What I am going to keep track of _____

Day 1

Day 2

Day 3

Day 4

Day 5

Day 6

Day 7