

Unit C: Animal Health

Lesson 2: Managing Animal Health

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

1. Identify good animal health management practices.
2. Explain common maintenance needs to promote animal health.
3. Describe identification methods for various animals.

Recommended Teaching Time: 3 hours

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

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

Searching the internet for information on the following keywords: Animal nutrition, animal environment, animal health management, and animal housing.

List of Equipment, Tools, Supplies, and Facilities:

Writing surface	Ear Tagger
PowerPoint Projector	Elastrator
PowerPoint Slides	Animal Tattoo Gun
Transparency Masters	Dehorner
Copies of student lab sheet	Branding Equipment
Animal Identification Tools	Tail Docker
ID Tags	

Terms: The following terms are presented in this lesson (shown in bold italics): **PowerPoint Slide 2.**

Branding
Castrating
Dehorning
Docking
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.

Ask students to explain how they stay healthy. Make a list of things that humans do to stay healthy. The list may include things like fresh water, food, medicine, vitamins, etc. Then, have students create a list of things that animals need to stay healthy. As animal owners, we need to know how to keep our animals healthy.

Summary of Content and Teaching Strategies

Objective 1: 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. **PowerPoint Slide 3.**
 - 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. **PowerPoint Slide 4.**
 - 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. **PowerPoint Slide 5.**
 - 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. **Discuss the weather in your area. What type of tolerance will animals need to survive?**
 - F. Keep track of sexual maturity of animals so they don't have babies before you or they are ready. **PowerPoint Slide 6.**
 - G. Monitor animals daily so you are aware of what is normal and will notice when something is other than normal. **Refer to the previous lesson for signs that animals are not feeling well. Have students name a few things to look for.**
 - 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. Contact the veterinarian for any situation you don't know how to handle as soon as you can. **PowerPoint Slide 7.**

Use TM: 2-1 and PowerPoint Slides 8 and 9 to discuss proper health management practices. Also, have students show what they know by listing as many animal health practices as possible.

Objective 2: Explain common maintenance needs to promote animal health.

Anticipated Problem: How does simple maintenance help promote animal health?

II. 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. **PowerPoint Slide 10.**

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. **PowerPoint Slide 11. To have students learn more about dehorning, have them visit a farm where this is taking place. If that is not available, have them visit this website.**

http://www.fastonline.org/CD3WD_40/LSTOCK/001/SA_InfoPaks/docs/Beef-dehorn.pdf

Also, be sure to discuss common dehorning practices for your area.

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. This includes castrating cattle, sheep and goats. There are 3 methods to discuss. **PowerPoint Slide 12.**

1. **Emasculatome (Burdizzo).** The burdizzo can be utilized as a bloodless method of castration. This method shuts off the blood supply to the testicle and causes the testicle to be reabsorbed if properly done. The clamping procedure is completed the best when the bull calf is standing and restrained with a tail hold. Prior to starting, make sure the burdizzo closes or clamps down properly. Then use the instrument to crush each cord individually. As the animal is restrained place a cord to the outside of the scrotum wall and clamp about midway between the testicle and the scrotum- belly wall junction. Hold the burdizzo with one hand on the far handle and the other handle against ones knee. With the free hand check to see that the cord has not slipped out and be sure not to clamp part of the inner quarter of the animal or the tail. Close the burdizzo and hold for a few seconds. Then clamp the other cord using a gap of uncrushed scrotum and prevent it from falling off. **DISADVANTAGES** of this method is that the result can easily be clamped bulls that are stags. This can be due to improper technique or equipment (a sprung burdizzo).

2. **Elastrator.** The elastrators can also be used as a bloodless method of castration for many producers that castrate at an early age. This method also shuts off the blood supply to the testicle and causes the scrotum to fall off (10 to 14 days) or is required to be cut off after several days. To use the elastrators, restrain the animal, expand or stretch the elastrator band and place both testicles through the band. Then release the band from the elastrator and around the scrotum. **DISADVANTAGES** of this method is the danger of clostridial infections and tetanus. This elastrator bands can break and castration may not occur. Lastly, sometimes a testicle can be missed and be retained in the belly cavity, resulting in a stag. This would result in the animal being unable to reproduce, but still retaining qualities of an intact male in appearance and smell.

3. **Surgical Removal.** This technique does involve a knife, or scalpel and is NOT bloodless. On one or two day-old animals, one person can restrain the animal and perform the procedure. Tie both rear legs and at least one of the front legs securely. With the knife or scalpel remove the bottom third of the scrotum. This will allow proper drainage. With ones fingers press the testicles through the removed/opened portion of the scrotum one at a time. Do not use a finger to dig for the testicle until the muscle separates. Then cut the spermatic cord with a knife or scalpel as high up the cord as possible. After testicles are removed, apply an antiseptic that is effective, yet, not irritating. Try to perform the procedure outside the fly season. If done during the fly season, use some type of repellent to keep insects away from the opened tissue. This technique can also be performed using an emasculator. This will help to minimize the amount of bleeding by crushing the cord prior to it being severed.

Have students discuss the advantages and disadvantages of each method of castration. If possible, have students observe the different types of castration methods. Also, use PowerPoint Slide 13.

- C. Docking of tails is a common practice for lambs. **Docking** is the term used to describe removing the animal's tail. This is done for animal health. Feces and urine can collect under the tail and cause disease. Docking ensures proper animal health. **PowerPoint Slide 14.**
- 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. **PowerPoint Slide 15.**
- E. Removal of manure and urine on a regular basis. Since many diseases are passed through feces, you will decrease the occurrence of contamination. **PowerPoint Slide 16.**

Use TM: 2-2 and PowerPoint Slide 17 to discuss docking, dehorning, and castrating. Also have students discuss the practices used in your area for animal health.

Objective 3: Describe identification methods for various animals.

Anticipated Problem: How do I identify my animals?

Ask students to share some ways that we can identify people besides their name. Things like hair color, skin color, eye color, height, etc may be discussed. Now, ask students to share ways that we can identify animals. What if they are all the same color and height?

- III. 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. **PowerPoint Slide 18.**
 - 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 horn of their animals. There are four methods used: **PowerPoint Slide 19.**
 - 1. Hot iron
 - a. visit <http://www.bbqblanton.com/voncattlehot.htm> for detailed steps
 - 2. Freeze branding
 - a. visit <http://www.lhbrandingirons.com/Freeze/Instructions.html> for detailed steps
 - 3. Branding fluids
 - a. A variety of fluids are available. Select the type that best fits your farm.
 - 4. Laser branding
 - a. visit <http://en.wikipedia.org/wiki/Scarification> for more information. **PowerPoint Slide 20.**
- If possible, have equipment used for branding for students to observe. Also, have students respond out loud when asked "What are the branding options available?"**
- 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. **PowerPoint Slide 21. If possible, have ear tags available for students to see.**
 - C. Marking the skin with ink on needle points is called **tattooing**. This is a permanent marking but can be hard to read. **PowerPoint Slide 22.**
 - D. Neck chains are sometimes used but can get lost. The animal on rare occasion could also hang itself.
 - E. 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. **PowerPoint Slide 23.**

Use TM: 2-3 to discuss identifying cattle. Also, have students create their own brand on paper or develop their own ear tag for an imaginary farm. In addition, have students complete LS: 2-1 to show the importance of keeping records and proper identification.

Review/Summary: Use the student learning objectives to summarize the lesson. Have students identify good animal health management practices. Then, have them explain common maintenance needs to promote animal health. Finally, have students describe identification methods for various animals. **PowerPoint Slide 24.**

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

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.**
- **Contact the veterinarian for any situation you don't know how to handle as soon as you 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 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