

Unit C: Animal Health

Lesson 3: Identifying Equipment Used to Maintain Good Animal Health

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

1. Describe equipment necessary to keep animals healthy.
2. Identify equipment necessary to keep animals groomed.

Recommended Teaching Time: 2 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 health, animal equipment, healthy animal environment, space requirements for animals, and feed requirements for animals.

List of Equipment, Tools, Supplies, and Facilities:

Writing surface	Currycomb
PowerPoint Projector	Hoof Pick
PowerPoint Slides	Bristle Brush
Transparency Masters	Hoof Trimmer

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

Currycomb

Detergent

Grooming

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.

Have students compare their classroom to necessary animal facilities. Discuss temperature, space, availability of water, and medical attention and any other comparison that comes up.

Summary of Content and Teaching Strategies

Objective 1: Describe equipment necessary to keep animals healthy.

Anticipated Problem: What basic equipment will I need to keep animals healthy?

Ask students what they put on a cut or wound they may have. Are there certain items that are better to use than others? Are there certain ointments that are common to use? How about animals?

- I. Diseases and parasites can be very costly to an animal business. Losses can include abortions, reduction in growth, unnecessary medicines, and having to buy feed additives. Here are some things you need to have to prevent sick animals and treat them if they do get infected.

PowerPoint Slide 3.

- A. Water and watering tanks are important because animals can't live without water. Keep water tanks full and free from debris. Clean the water tank if some animals get sick so the disease cannot spread through the sharing of water. Be careful to check your animals if they are watered from a pond, river, or other flowing water. They may acquire diseases that are living in the water. You may want to take a water sample to have it tested for contaminants. **PowerPoint Slides 4 and 5.**

- B. Feed should be kept from spoiling or rotting. Moldy feed can be very dangerous and animals are less likely to eat enough if the feed is rotten. Make sure all animals are receiving proper amounts of protein, fat, carbohydrates, vitamins, and minerals. You may want to make feeders, pails, or other feeding equipment so that you don't have to put the feed on the ground. Some diseases live in the soil and you are more likely to have your animals consuming foreign objects off the ground. **PowerPoint Slide 6.**

- C. Space is necessary for animals to do well. Do not overcrowd animals because contagious diseases will spread faster and it will be more difficult to watch all animals closely. Since different animals have different space requirements, check to see what your animal needs. You may need fences, cages, buildings, and other materials to help you create enough space for your animals. **PowerPoint Slides 7 and 8.**

- 1. Cattle may require some fencing and housing. Normally, however cattle will thrive in any environment and may need the least amount of daily care. **Discuss with students the typical housing and fencing requirements for cattle in your area.**

- 2. Sheep and goats are smaller animals and more likely to be attacked in the wild. This is why these animals need sturdy fences to keep predators out. Also, a watchdog can be helpful. **Have students talk about the different ways sheep and goats are raised in your area.**

- 3. Poultry are typically housed in a small shed or barn. If these birds are reproducing, they will most likely need a box to make their nest in. **Have students tell you how poultry are raised in your area. Then, discuss the material needed to create that environment.**

Use TM: 3-1 and PowerPoint Slide 9 to discuss basic requirements for animal health. Also, have students pick a species of animal and create a list of all the equipment needed to raise that animal. Then, have students share their equipment lists with the class.

Objective 2: Identify equipment necessary to keep animals groomed.

Anticipated Problem: What equipment will I need to keep animals groomed?

Ask students to tell you about their routine in the morning. Do they bathe, brush their teeth, comb their hair? Ask students if they feel better after they have went through their morning routine? Do they think animals need the same things?

- II. In order to maintain animal health, proper grooming must be done to all animals. If given the opportunity, all animals would prefer a clean environment. In nature, animals are able to clean themselves with rain, rolling around in dirt, and other means. In captivity animals don't always have access to these amenities. They rely on their owner to keep them groomed. **Grooming** entails caring for skin and hair, feet and hooves, and other areas of the animals. **PowerPoint Slides 10, 11, and 12.**
- A. If kept clean, an animals skin and coat is less likely to be invaded by parasitic diseases. In most cases, a currycomb or brush is a necessary tool. A **currycomb** is a rubber or metal brush with teeth for cleaning debris off of animals. Never bathe any animal too often as it will take away natural oils. Keep hair trimmed to avoid buildup of feces on some animals. **PowerPoint Slides 13 and 14.**
- B. To tend to animals feet or hooves, a hoof pick will be needed. You will also need to trim hooves of some animals and clip nails of others. Debris and feces can accumulate on the feet and can be dangerous to the animals health. **PowerPoint Slides 15 and 16.**
- C. Other areas that need to be kept clean are ears and genitals of animals. **PowerPoint Slide 17.**

Use TM: 3-2 and PowerPoint Slide 18 to show how to trim and care for the feet of beef animals. Also, if possible, have all equipment discussed available for students to see and use.

Review/Summary: Use the student learning objectives to summarize the lesson. First, have students describe equipment necessary to keep animals healthy. Then, have students identify equipment necessary to keep animals groomed.

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 = d, 2 = c, 3 = e, 4 = b, 5 = a

Part Two: Completion

1. sunlight
2. feces
3. parasitic diseases
4. debris

Part Three: Short Answer

Losses can include abortions, reduction in growth, unnecessary medicines, and having to buy feed additives.

Test

Part One: Matching

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

- | | | |
|--------------|-----------------------|-------------|
| a. Currycomb | c. Detergent | e. Grooming |
| b. Phenol | d. Phenol coefficient | |

- _____ 1. The killing strength of a product compared to phenol.
- _____ 2. Material that removes dirt faster by breaking down the material and increasing the wetting speed.
- _____ 3. Caring for skin and hair, feet and hooves, and other areas of animals.
- _____ 4. A disinfectant otherwise called carbolic acid.
- _____ 5. A rubber or metal brush with teeth for cleaning debris off of animals.

Part Two: Completion

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

- 1. Non-chemical disinfectants can also be used and include _____, heat, time, electricity, antibodies and sedimentation.
- 2. Keep hair trimmed to avoid buildup of _____ on some animals.
- 3. If kept clean, an animals skin and coat is less likely to be invaded by _____.
- 4. Keep water troughs full and free from _____.

Part Three: Short Answer

Instructions. Provide information to answer the following question.

Diseases and parasites can be very costly to an animal business. List four ways that they can cost animal businesses:

- 1.
- 2.
- 3.
- 4.

BASIC REQUIREMENTS FOR GOOD ANIMAL HEALTH

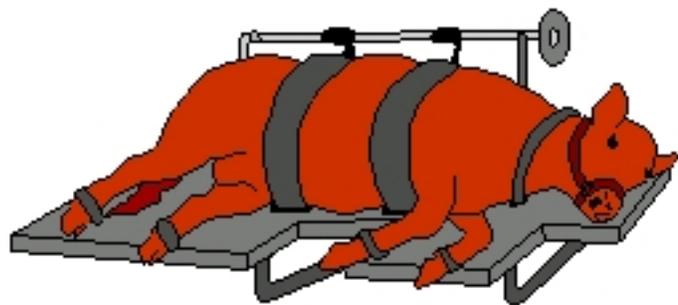
- **Feed that is nutritious and clean**
- **Water that is not contaminated**
- **Enough space for all animals to be comfortable**

TRIMMING AND CARING FOR FEET OF BEEF CATTLE

Why: The feet should be trimmed regularly so that the animal will stand squarely and walk properly. Besides, long toes or unevenly worn hoofs are unsightly in appearance.

How: Where available, the animal should be secured in either a tip-over type trimming table or chute, or a tip-over hydraulic chute. Where tip-over equipment is not available, stocks may be used or the animal may be thrown. Use a foot nipper to cut the feet back, then use an electric sander to shape them. Some experienced fitters also use a chisel, farmer's knife, and rasp. Trimming should be done, or supervised, by a person with experience. In some areas, professional trimmers are available for hire.

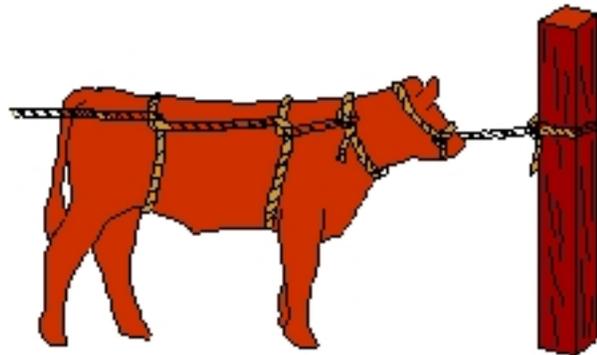
The feet of some animals should be trimmed regularly as often as every 2 months. Too much trimming at any one time, however, may result in lameness. For this reason, it is not advisable to work on the feet immediately before an animal is shown.



Animal restrained on tilting hoof-trimming table.

Pointers on general trimming:

Trim the inside toe and heel before trimming the outside toe and heel, because it generally grows faster and longer. Trim the toe before the heel to ensure that the animal will walk up on its toes.



A simple method of throwing an animal is illustrated here using a rope halter and a rope about 40 feet long. With the animal haltered, tie the halter shank or lead to a stout post, tree, etc. Then, with one end of the rope around the neck, tie a bowline (nonslip) knot. Next, circle the animal's body just behind the shoulder and a half hitch at the withers; continue the rope back to the loin and make a second half hitch and circle the rope around the body at the flanks. Make sure the second half hitch is just in front of the hooks. A strong backward pull on the rope will cause the animal to sink, and a shift in the pull to the side on which the animal is to fall will result in an easy, soft fall to the ground. Maintaining the strong pull on the rope will keep the animal lying on the ground, making it possible to do minor doctoring, foot trimming, etc.

Remove the outgrowth or rim of the sole around the edge of the toes and along the side of the foot with the nippers. Be careful to keep the foot level while trimming.

When the bottom of the foot is springy to the touch, the next cut will probably draw blood and you have gone too far.

Shape the foot and all rough edges with a rasp. An electric sander generates too much heat and may seal the pores of the foot. However, a sander may be used for steers, because they are slaughtered at an early age.

The bottom of the foot, between the toes, should be hollowed out to allow mud, etc., to ooze up through the toes. This functions as a self-cleaning mechanism.

Make the side of the toes relatively straight on the inside by rasping between them.

Apply a disinfectant to any cracks or cuts in the foot, especially between the toes and along the hoof head, to aid healing.

Common leg problems and how to correct them:

Bow-legged behind.

Trim inside heel down.

Trim rim off the inside claw out to the toe, but leave the toe long.

Build up the outside heel.

Trim the outside toe short.

Toe-out in front. Trim both the inside toe and heel short.

Pigeon-toed in front. Same as trimming for the bow-legged condition.

Cow-hocked behind. Same as trimming for the toe-out condition

Note: To correct leg problems, trimming should be performed regularly every 30 days.

Treating dry, brittle hoofs:

Quite often, when cattle are kept constantly in stables, the feet may become dry and brittle. This condition can usually be corrected by turning the animals out in a pasture paddock at night when there is dew on the grass. Packing the hoofs with wet clay, or applying neat's-foot oil will also be helpful in such cases. If the animal gets sore feet from standing in a filthy stable, the soreness should first be corrected. Following this, the feet should be washed and disinfected.