

Course	Agricultural Science I
Unit	Sheep Production
Lesson	Management Practices for Sheep
Estimated Time	50 minutes

Student Outcome

Identify management practices for sheep.

Learning Objectives

1. Describe facilities, land, and equipment needed for sheep production.
2. Recognize physical signs that help to identify common health problems.
3. Determine what management practices can be used to prevent and control diseases in sheep.
4. Determine what management practices can be used to prevent and control parasites in sheep.
5. List specific management practices that help minimize death loss from predators.
6. Describe factors to be considered in order to meet the nutritional needs of sheep.

Grade Level Expectations

SC/LO/1/B/09-11/b SC/ST/1/B/09-11/a

Resources, Supplies & Equipment, and Supplemental Information

Resources

1. PowerPoint Slides
 - ☐ PPt 1 – Common External Parasites
 - ☐ PPt 2 – Common Internal Parasites
 - ☐ PPt 3 – Methods for Deworming Sheep
2. Activity Sheet
 - ☐ AS 1 – Common Sheep Diseases
3. *Sheep Production (Student Reference)*. University of Missouri-Columbia: Instructional Materials Laboratory, 2001.
4. *Sheep Production Curriculum Enhancement*. University of Missouri-Columbia: Instructional Materials Laboratory, 2003.

Supplies & Equipment

- ☐ Health care related items for interest approach (such as hairbrush, toothbrush, soap, nail clippers, nail file, vitamins, or any other related products)
- ☐ Sheep management related items for interest approach (such as hoof trimmers, shearing equipment, and an ear notcher or tagging equipment)

Supplemental Information

1. Internet Sites
 - ☐ Internal Parasites. Maryland Small Ruminant Page. Accessed July 2, 2007, from <http://www.sheepandgoat.com/parasite.html>.
 - ☐ Jordan, R. M. *Sheep Diseases*. University of Minnesota Extension. Accessed July 2,

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- 2007, from
<http://www.extension.umn.edu/distribution/livestocksystems/DI1877.html>.
- ❑ Predator and Wildlife Management. Maryland Small Ruminant Page. Accessed July 2, 2007, from <http://www.sheepandgoat.com/predator.html>.
 - ❑ Sachse, J. M. Revised by C. P. Mathis and T. Ross. *Sheep Production and Management*. New Mexico State University. Accessed July 2, 2007, from http://www.cahe.nmsu.edu/pubs/_b/100B15.html.
 - ❑ Whittier, W. D. and S. H. Umberger. *Control, Treatment, and Elimination of Foot Rot from Sheep*. Virginia Cooperative Extension. Accessed July 2, 2007, from <http://www.ext.vt.edu/pubs/sheep/410-028/410-028.html>.
2. Print
- ❑ Acker, D. and M. Cunningham. *Animal Science and Industry*. 5th ed. Upper Saddle River: Prentice Hall, 1998.
 - ❑ Barrick, R. K. and H. L. Harmon. *Animal Production and Management*. New York: McGraw-Hill Book Company, 1987.
 - ❑ Gillespie, J. R. *Animal Science*. Albany: Delmar Publishers, 1998.
 - ❑ Herren, R. V. and R. L. Donahue. *The Agriculture Dictionary*. Albany: Delmar Publishers, Inc., 1991.
 - ❑ Ricketts, G. E., Scoggins, R. D., and Thomas, D. L. *Management Guidelines for Efficient Sheep Production*. University of Illinois at Urbana-Champaign. North Central Regional Extension Publication 240.
 - ❑ Scott, G. E. *The Sheepman's Production Handbook*. Denver: Abegg Printing, 1982.
 - ❑ *Sheep Resource Handbook for Market and Breeding Projects*. Curriculum Materials Service: Ohio State University, 2000. (More information available at <http://www-cms.ag.ohio-state.edu/>).
 - ❑ Smith, B., M. Aseltine, and G. Kennedy. *Beginning Shepherd's Manual*. 2nd ed. Ames: Iowa State University Press, 1997.
 - ❑ Taylor, R. E. and T. G. Field. *Scientific Farm Animal Production: An Introduction to Animal Science*. 6th ed. Upper Saddle River: Prentice Hall, 1998.
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Interest Approach


Bring in several personal care items that humans use (e.g., hairbrush, toothbrush, soap, nail clippers, nail file, vitamins, or any other related products). Ask the students what these items have in common. Why do we use these products? Elicit from the students that these products are used to help keep humans strong and healthy. We use these products to help us take care of our bodies. Inform students that sheep also have to be cared for in a similar way. Items that are used to care for sheep could also be shown in class (e.g., hoof trimmers, shearing equipment, and an ear notcher or tagging equipment).

Communicate the Learning Objectives


1. Describe facilities, land, and equipment needed for sheep production.
2. Recognize physical signs that help to identify common health problems.
3. Determine what management practices can be used to prevent and control diseases in sheep.
4. Determine what management practices can be used to prevent and control parasites in sheep.
5. List specific management practices that help minimize death loss from predators.
6. Describe factors to be considered in order to meet the nutritional needs of sheep.

Instructor Directions	Content Outline
Objective 1 <i>Numerous resources are needed to accommodate sheep production. Ask the students to identify some of them. Every operation needs different facilities and equipment to facilitate its operation.</i>	Describe facilities, land, and equipment needed for sheep production. Facilities are used to protect the lambs if needed. Most enterprises have some type of facilities for the animals, but a range operation may only have a small building for lambing. <ol style="list-style-type: none">1. Adequate shelter is required, consisting of a barn, machine shed, unused hog buildings, or other building located on the land.2. Building should be kept dry and free from drafts.3. Good ventilation is needed so that moisture does not build up, which can cause health hazards to the sheep.4. The shelter should be equipped with electricity and water.5. The facility should have a corral area so the producer can maneuver the sheep more easily. Land requirements vary for every operation. The amount of land needed depends on the type of enterprise. <ol style="list-style-type: none">1. In a confined area only, sheep need 16-20 square feet of space per animal.2. In an open front building, sheep need 10-12 square

Instructor Directions	Content Outline
	<p>feet of space in the building along with 25-40 square feet of outdoor lot space per animal.</p> <p>Equipment/supplies that may be needed are listed below. In addition, sheepdogs or other guard animals can be a very important tool for those producers whose flocks are not brought to shelter every night.</p> <ol style="list-style-type: none"> 1. Docking and castrating equipment 2. Hoof trimmers 3. Shearing 4. Deworming equipment 5. Drenching equipment for giving oral liquid medication 6. Balling gun for oral delivery of pills 7. Injection equipment for giving vaccines and medications 8. Tattooing, ear notching, and ear tagging equipment for identification 9. Record book 10. Weight scales 11. Feeders and watering facilities 12. Panels and corrals
<p>Objective 2</p> <p><i>Ask the students to identify some symptoms that they have when they are sick. Relate these symptoms to some that sheep might have. After reviewing the physical signs, distribute AS 1 and have students work individually or on teams to research a sheep disease.</i></p> <p> AS 1 – Common Sheep Diseases</p>	<p>Recognize physical signs that help to identify common health problems.</p> <ol style="list-style-type: none"> a. Isolation from the flock b. Pale eyelids, which may indicate parasites or anemia c. Poor growth d. Large amount of weight loss e. Potbellies f. Swelling under the jaw known as bottle jaw, or poverty jaw g. Lower milk production than normal h. Loss of appetite i. Diarrhea
<p>Objective 3</p> <p><i>Ask students if they have had experience working with livestock</i></p>	<p>Determine what management practices can be used to prevent and control diseases in sheep.</p> <p>Common sheep diseases</p> <ol style="list-style-type: none"> 1. Pneumonia

Instructor Directions	Content Outline
<p><i>other than sheep. What management practices did they use to prevent and control diseases for these animals? Sheep producers use specific management practices to prevent and control diseases.</i></p>	<ol style="list-style-type: none"> 2. Foot rot 3. Enterotoxemia (overeating disease) 4. Tetanus (lockjaw) 5. Mastitis 6. Ringworm 7. Club lamb fungus 8. Scrapie <p>Management practices to prevent diseases</p> <ol style="list-style-type: none"> 1. Watch for signs of illness from the sheep. 2. Avoid stressful situations. Handle the animals carefully. 3. Disinfect and treat all wounds immediately. 4. Vaccinate in accordance with a health program on a regular basis. 5. Dock the tails of lambs. Removing the tail helps keep the rump area clean. 6. Trim hooves. 7. Separate newly purchased sheep from the rest of the flock for at least 30 days. <p>Management practices to control diseases</p> <ol style="list-style-type: none"> 1. Remove sick animals from the rest of the flock. 2. Medicate sick animals. 3. Read the label and follow all directions on the bottle regarding site, method, dosage, and withdrawal of medication.
<p>Objective 4</p> <p><i>There are two types of parasites – external and internal. Ask the students to describe the difference between the two types and to infer the kind of damage each type of parasite might inflict upon sheep. Refer to PPt 1 and PPt 2 to illustrate common external and internal parasites of sheep. PPt 3 illustrates some of the common methods of deworming sheep.</i></p> <p> PPt 1 – Common External</p>	<p>Determine what management practices can be used to prevent and control parasites in sheep.</p> <p>Management practices for external parasites (e.g., ticks, mites, lice, bot flies, and blow flies)</p> <ol style="list-style-type: none"> 1. Dip, dust, or spray sheep with insecticides. 2. Separate newly purchased sheep from the rest of the flock and treat them to prevent or control external parasites. 3. Shear areas on a sheep's body that are damp due to diarrhea or abrasions and treat them with insecticides. These damp areas attract parasites. <p>Management practices for internal parasites (e.g., broad tapeworms, flukes, brown stomach worms, twisted stomach worms, lungworms, and ascarids)</p>

Instructor Directions	Content Outline
<p>Parasites</p> <p><input type="checkbox"/> PPt 2 – Common Internal Parasites</p> <p><input type="checkbox"/> PPt 3 – Methods for Deworming Sheep</p>	<ol style="list-style-type: none"> 1. Deworm in accordance with a health program on a regular basis. 2. Rotate pastures and avoid overgrazing. 3. Keep the water supply clean and well drained. 4. Have a veterinarian analyze the fecal matter of sheep for worms.
<p>Objective 5</p> <p><i>Ask students why they think sheep are such easy targets for predators. Why do predators attack sheep? Ask the students what animals they think are considered predators of sheep.</i></p>	<p>List specific management practices that help minimize death loss from predators.</p> <ol style="list-style-type: none"> 1. Predators of sheep include stray dogs, bobcats, bears, coyotes, and foxes. 2. Guard animals such as dogs, donkeys, llamas, and billygoats can be pastured with the sheep to watch for predators. 3. Use fencing or electric fencing to keep out the predators. 4. For producers of small farm flocks, corralling the sheep at night helps minimize predator loss.
<p>Objective 6</p> <p><i>Ask the students how their eating habits relate to their health. Do their parents let them eat whatever they want? What are the benefits of good nutrition to humans? Relate their answers to nutritional requirements sheep need to stay healthy. Sheep producers must plan the diets of their sheep just as parents must be concerned about what their children are eating.</i></p> <p><i>If possible, have on hand, samples of various feedstuffs used in sheep rations.</i></p>	<p>Describe factors to be considered in order to meet the nutritional needs of sheep.</p> <p>Nutrition</p> <ol style="list-style-type: none"> 1. Energy sources – hay, silage, and various grains (corn, barley, milo, wheat) 2. Protein 3. Minerals 4. Vitamins 5. Water – most important <p>Lambs</p> <ol style="list-style-type: none"> 1. Identify the desired performance of the animal. 2. Consider the type (breed, age) of lamb being fed. 3. Determine the actual or desired intake of feed. 4. Determine the grain source for energy in the feed ration. <p>Breeding animals</p> <ol style="list-style-type: none"> 1. Consider the age of the animals. 2. Consider the body condition of the animals. 3. Consider which stage in the breeding cycle the animals are in (gestation, lactation, etc.). 4. Consult the National Research Council for the

Instructor Directions	Content Outline
	<p>recommended nutrient requirements.</p> <p>Available feed sources</p> <ol style="list-style-type: none"> 1. Cost 2. Availability in the area <p>Toxicity of some plants and feedstuffs</p> <ol style="list-style-type: none"> 1. Toxic plants such as lupines (bluebonnet), milkweed, lantana shrub, orange sneezeweed, goldenrod, poison vetch can harm sheep. 2. Mycotoxins in feedstuffs can adversely affect sheep; at high levels they are detrimental, e.g., Aureomycin (chlortetracycline), Terramycin (oxytetracycline), and neomycin. 3. Copper sulfate, a mineral additive used for other livestock, is toxic to sheep.
<p>Application:</p> <p> AS 1 – Common Sheep Diseases</p>	<p>Answers to AS 1 Answers will vary.</p> <p>Other activities</p> <ol style="list-style-type: none"> 1. Have a local producer come to class and demonstrate how to trim a sheep's hooves or shear a sheep. 2. Ask local producers or a veterinarian to discuss some common diseases, parasites, and predators and to relate how they affect sheep production.
<p>Closure/Summary:</p>	<p>Management practices are vital to successful sheep production. The producer must give proper care to all animals to prevent health problems, disease, or attacks by predators. Producers must consider the facilities, land, and equipment that a flock will need. They also must provide the sheep animals with the proper nutritional requirements so they can stay healthy and be productive.</p>
<p>Evaluation: Quiz</p>	<p>Answers:</p> <ol style="list-style-type: none"> 1. b 2. c 3. d 4. a 5. a 6. b 7. d

Instructor Directions	Content Outline
	<ol style="list-style-type: none"> 8. b 9. Students may list any five of the following: <ol style="list-style-type: none"> a. Vaccinate regularly in accordance with health program. b. Deworm regularly. c. Keep water supply clean. d. Dock lambs' tails. e. Remove sick animals from rest of flock. f. Medicate sick animals. g. Trim hooves. h. Disinfect and treat all wounds immediately. i. Watch for signs of illness from the sheep. j. Avoid stressful situations. Handle the animals carefully. k. Read the medication label and follow all directions on the bottle regarding site, method, dosage, and withdrawal of medication.