Management Practices for Sheep

This lesson addresses basic management practices in sheep production: maintaining adequate facilities, land, and equipment; monitoring sheep for physical signs of health problems; preventing and controlling diseases and parasites; minimizing loss from predators; and considering proper nutrition for the sheep.

Facilities, Land, and Equipment Needed in Sheep Production

For effective sheep production, producers need proper facilities, a sufficient amount of land, and the appropriate equipment for handling and producing sheep.

Facilities

Sheep need an adequate form of shelter, and lambs, in particular, need to be protected. This could be a barn, machine shed, unused hog buildings, or any other suitable building on the land that could house sheep. The building should be kept dry, free from drafts, and have good ventilation so that moisture does not build up and cause health hazards. Electricity and water should be installed in the shelter to help the producer. A corral helps the producer maneuver the sheep with ease.

Land

The amount of land needed depends on the type of enterprise. For example, a farm flock can be raised on a few acres of land whereas range sheep usually graze on hundreds of acres. If sheep are in a confined area only, they need 16 to 20 square feet of space per animal. If kept in an open-front building, sheep require 10 to 12 square feet of space in the building plus 25 to 40 square feet of outdoor lot space per animal.

Equipment/Supplies

The type of equipment/supplies that a producer requires may vary, depending on the operation. Some operations require watch animals, such as sheepdogs, llamas, and donkeys to protect the flock. They are very important to have because they deter predators and help the producer maneuver, or work, the animals. Some producers may be able to borrow equipment. The following are typical items needed in sheep production. To maintain the flock's general health, the producer should have docking and castrating equipment, hoof trimmers, and shearing and deworming equipment. To give the animals medication, the producer also needs drenching equipment for administering oral liquid medication, a balling gun for oral delivery of pills, and injection equipment for vaccines and medicines.

Tattooing, ear notching, and ear tagging equipment are needed to properly identify the animals. The producer should also have a record book to document everything that happens in the operation. These records usually include births, miscarriages, diseases, and medications, among other details.

Throughout the sheep's development, the producer keeps track of how much the animal weighs, so therefore weight scales are desirable. Weight is a good indicator of the animal's general health and its suitability for going to market. Knowing how much the animal weighs is useful when taking sheep to market, shearing, or medicating a sick animal. Sufficient feeders, watering facilities, panels, and corrals are needed as well.

Physical Signs That Sheep Have Health Problems

A good producer should always monitor the flock for signs of health problems. Once sheep become ill, it is hard for them to fully recover. By noticing physical signs early, a producer can save the sheep and save money for the operation.

One key sign that an animal has health problems is isolation from the flock. Some other signs to look for are pale eyelids (which may indicate parasites or anemia), poor growth, a large amount of weight loss, potbellies, and swelling under the jaw known as bottle jaw (also called poverty jaw). A significant decrease in milk production may be a sign that a ewe is sick. A producer may also notice sheep with a loss in appetite or diarrhea.

Management Practices Used to Prevent and Control Diseases

The best way to control diseases is to prevent them from happening. A producer should be able to identify common diseases to ensure that the entire flock receives proper care. Five common diseases that sheep can develop are pneumonia, foot rot, enterotoxemia, tetanus, and mastitis in ewes. Each disease has different causes, symptoms, and treatments.

Description of Common Sheep Diseases

Of the five common diseases mentioned above, pneumonia and foot rot are highly contagious. The symptoms of pneumonia are high temperature, depression, runny nose, and loss of appetite. Preventive measures include ventilating the animal's shelter. As mentioned earlier, good ventilation prevents the unhealthy accumulation of moisture. Bedding must be dry and clean, and the sheep should not be overcrowded. Treatment with antibiotics is also effective.

A sign of foot rot is lameness, inability to breed, lengthy time to reach market weight, and red swelling between the toes. To prevent this disease, the producer should trim the sheep's hooves regularly and remove the animal from wet pastures. Antibiotics are used for treatment.

Enterotoxemia is an overeating disease with high death rates. The sheep overeats and then a poisonous bacterium begins to grow rapidly in the animal's gastrointestinal tract. Symptoms are convulsions or nervousness and diarrhea. Unfortunately, there is no cost-effective treatment once the animal has the disease. However, the producer can prevent enterotoxemia by regularly vaccinating the sheep, slowly introducing the animal to grain, and controlling grazing.

Symptoms of tetanus, also known as lockjaw, are localized stiffness in the neck and jaw area, then muscle spasms, rigidity, and convulsions. If an animal is infected it will die because at present, there is no cure. The producer can prevent this disease by vaccinating the animal when it is docked or castrated, because tetanus usually enters through open wounds.

Mastitis is an infection of the udder that can affect milk-producing ewes. A red, swollen udder characterizes the early stages of mastitis. Soon the udder turns blue and the ewe will not allow her lamb to nurse. If left untreated, mastitis can be fatal; however, if the producer acts quickly and starts the ewe on the proper medication, the ewe can usually be saved. Once a ewe has had mastitis, she will no longer be able to produce milk in the affected portion of her udder and sometimes becomes unable to produce milk at all.

Ringworm is an infection of the outer layer of skin and hair shafts, caused by a type of fungus, which threatens all domestic animals and people as well. Most often, the fungus causing ringworm is spread when infected sheep are closely sheared, which sends spores of the fungus (attached to wool shafts) into the air. Ringworm is easily spread by handling infected sheep, clipping, brushing, using lamb tubes or blankets, or through facilities. In fact, once equipment or facilities have been infected, they may harbor the infection for as many as four years.

One specific type of fungus, very similar to ringworm, is known as club lamb fungus. Club lamb fungus is typically recognized as scaly, round lesions on the head and neck although the lesions can be found on other areas as well. Because this disease is contagious to humans and other animals, rubber gloves should be worn when handling sheep that are potentially infected. Sheep owners should take preventative measures to reduce the likelihood of contracting the disease because there are no specific treatments for club lamb fungus. These measures include avoiding frequent washing and shearing since lanolin helps protect against the fungus, disinfecting tools and equipment between animals, and isolating infected animals to prevent the spread of the disease. It typically takes 8 to 16 weeks for the disease to run its course.

Another disease of major concern to sheep producers, particularly in recent years, is known as scrapie. Scrapie is a fatal, degenerative disease that slowly affects the central nervous system of sheep and goats. Similar in nature to bovine spongiform encephalopathy (BSE) in cattle and Creutzfeldt-Jakob disease (vCJD) in people, scrapie must be addressed by sheep producers. Early symptoms may include anxiousness and excitability, head/neck tremors, and uncoordinated movement. Advanced stages of the disease are characterized by progressive weight loss,

intense rubbing and scraping, as well as uncoordinated movement and violent shaking. Because the incubation period for the disease is so long, most frequently mature sheep are affected. In recent years, the U.S. Department of Agriculture developed a scrapie eradication program that seeks to identify and control instances of scrapie within the United States.

In Europe, foot and mouth disease is currently threatening livestock. Producers in England and other countries are suffering huge losses in meat production. The attempts to cure the disease are expensive, as well. The last outbreak in sheep that occurred in the United States was in 1929. But all producers are still concerned. This disease is highly contagious and can spread very quickly and easily, thus making it extremely difficult to control.

General Management Practices to Prevent Diseases

The producer can use several general management practices to prevent diseases among the sheep. Observing the flock very closely, watching for any signs of illness, is a vital first step. Because sheep require careful handling, the producer must prevent any situations that will stress the animals. If the sheep have any wounds, the producer should disinfect and treat them immediately. The entire flock should be vaccinated in accordance with an established health program on a regular basis.

Various management practices occur during lambing. Soon after a lamb is born, the producer should dock, or cut off, the tail. Removing the tail helps keep the rump area clean and it is less likely to get infected.

Trimming hooves regularly helps prevent foot rot, which is described above in more detail. Another management practice is to isolate any newly purchased sheep from the rest of the flock for at least 30 days. This allows the producer time to observe any signs of illness or distress and to prevent the healthy members of the flock from becoming sick.

General Management Practices to Control Diseases

Once sheep are infected, the producer must remove the sick animals from the rest of the flock and rely on the appropriate medication. One consideration if sheep are medicated is when to withdraw the medication. If the medicated sheep will be sold for processing, the medication must be withdrawn a certain amount of time before the sheep are sold so the meat will be safe for the consumer. The amount of withdrawal time depends on the type of medication. It is critical that the producer reads the label on the medication and follows all directions on the bottle regarding site, method, dosage, and withdrawal of medication.

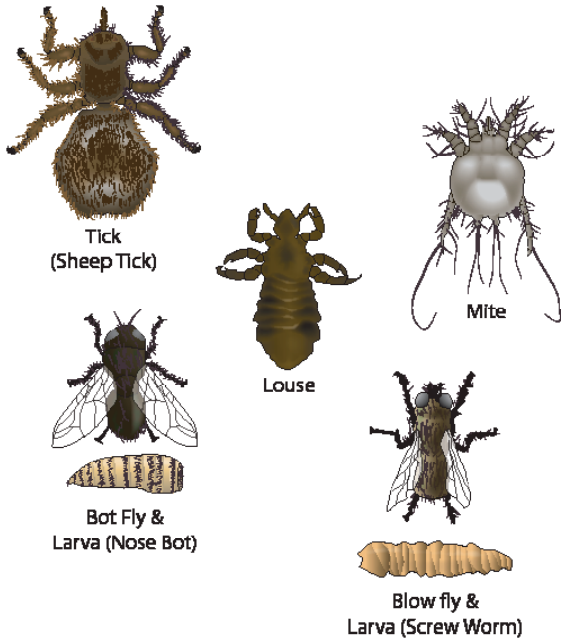
Management Practices Used to Prevent and Control Parasites

There are two types of parasites - external and internal. Producers have to control parasites because major health problems could affect the flock that would cost producers a loss of animals and a significant amount of money.

External Parasites

Examples of common external parasites are ticks, mites, lice, bot flies, and blow flies, as illustrated in Figure 3.1. To manage and control external parasites a producer dips, dusts, or sprays the sheep with insecticides. This helps keep the parasites away from the sheep. Producers should keep newly purchased sheep away from the flock and treat them to prevent or control any external parasites they may have. Damp areas on a sheep's body attract

Figure - 3.1 - External Parasites



external parasites. Producers should shear areas that are damp due to diarrhea or abrasions and treat those areas with insecticides to avoid infestation.

The actual sizes of these external parasites vary greatly. Ticks are usually 1/8 inch to 1/4 inch long. Mites are very small parasites, averaging about 1 to 2 millimeters. Lice are less than 1/8 inch long. Bot flies range from 1/2 inch to 2 inches and blow flies average between 1/2 inch and 1 inch long.

Internal Parasites

Examples of common internal parasites are broad tapeworms, flukes, brown stomach worms, twisted stomach worms, lungworms, and ascarids (also called intestine worms) (see Figure 3.2). To manage internal parasites, the producer should deworm sheep in accordance with an established health program regularly, rotate pastures, and prevent sheep from overgrazing. Sheep will eat grass all the way down to the ground even if fecal matter from another animal is present. When this occurs, they may ingest some internal parasites from the feces. The animal then becomes infested with the parasite, and this cycle repeats itself. Another important management practice is to keep the water supply clean and well drained. The producer should also ask a veterinarian to analyze the sheep's feces to ensure appropriate treatment if worms are present.

The sizes of internal parasites differ even more than the external parasites. Broad tapeworms can reach from 10 to 20 feet long; flukes are about 20 to 25 millimeters. Brown stomach worms can reach up to 10 millimeters long, and the twisted stomach worm varies from 5 to 40 millimeters. The length of lungworms averages about 100 millimeters; whereas ascarids range from 5 to 10 feet long.

Figure 3.3 illustrates some common methods for deworming sheep. Drenching is a common method of deworming that involves spraying liquid medication down the sheep's throat. Another method of deworming uses a paste gun to dispense medicated paste into the sheep's mouth. Once the paste is swallowed it is absorbed by the sheep's stomach. A balling gun is an alternative to the drenching and paste guns. It is used to give sheep medicine in a pill form.

Figure - 3.2 Internal Parasites

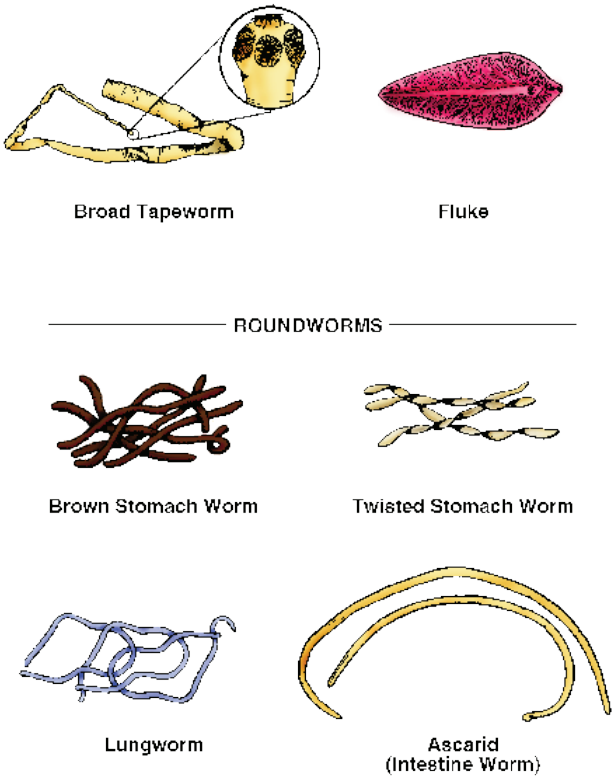
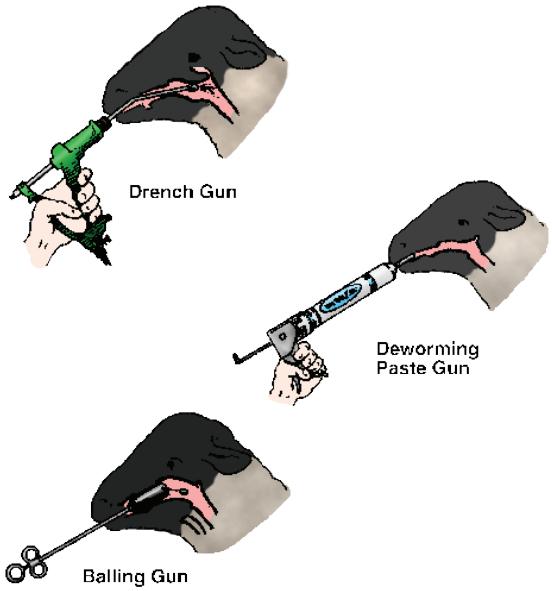


Figure - 3.3 Methods for Deworming Sheep



Management Practices Used to Minimize Loss from Predators

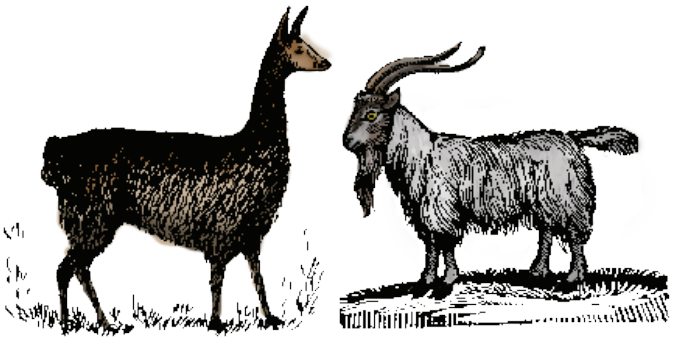
Sheep are such an easy target for predators, such as stray dogs, bobcats, bears, coyotes, and foxes. These attacks can substantially reduce the flock and cost a producer thousands of dollars.

Figure - 3.4 Predators of Sheep

To help minimize loss from these predators, producers can use guard animals such as sheepdogs, donkeys, and llamas. These animals can be pastured with the sheep to watch for predators and protect the sheep. Another deterrent is to pasture billy goats, which are more aggressive animals, yet are harmless to sheep.

An additional method for keeping predators from attacking sheep is to use either electric or coyote-proof fencing around the sheep enclosure. For producers of small farm flocks, corralling the sheep at night is a good management practice to help control the loss due to predators.

Figure 3.5 - Guard Animals



Factors to Consider in Feeding Sheep

Sheep are ruminant animals, meaning they have multiple stomachs that digest feed and forages. Feeding sheep correctly is an essential aspect of sheep production. If the sheep do not receive adequate nutrition, they will not perform properly for the producer.

Figure - 3.6 Feeding Sheep

The correct type of nutrition is important to consider when feeding sheep. The animals need the appropriate amount of energy sources such as from hay, silage, or various grains (corn, barley, milo, wheat). Other important sources needed to keep sheep healthy are protein (supplemented by soybean meal and linseed meal), minerals, vitamins, and water.

In feeding lambs, the producer should first identify the desired performance he/she wants from the animals and then consider their breed and age to determine the actual or desired intake of feed. The producer must also determine the grain source for energy in the feed ration.

When feeding breeding animals, the producer considers the animals' age, body condition, and stage in the breeding cycle (gestation, lactation, etc.). Producers often consult the National Research Council for recommendations about suitable nutrients.

Producers also have to determine available feed sources. They must identify the cost and the availability of feed in their area.

The toxicity of some plants and feed stuff is of grave concern to producers. Toxic wild plants that may grow near their operations include lupines (bluebonnet), milkweed, lantana shrub, orange sneezeweed, goldenrod, and poison vetch. Producers should become familiar with these plants and be aware if any of them are present.

Mycotoxins, which are poisonous fungi, are toxic substances in feedstuffs. Examples include Aureomycin (chlortetracycline), Terramycin (oxytetracycline), and neomycin. Producers should be very careful not to use copper sulfate, which is a mineral additive used for other livestock, but it is toxic to sheep. Nontoxic plants could turn poisonous when certain environmental conditions cause the plants to accumulate excess amounts of poisonous substances. A good way to prevent this from happening is to ensure the animals have access to quality forages.

Summary

Responsibilities for managing a sheep operation include providing the sheep with suitable facilities, land, and equipment so the operation runs smoothly. The producer must identify signs of health problems and recognize which management practices are appropriate for preventing and controlling diseases. Other responsibilities include knowing how to prevent and control external and internal parasites, minimize loss from predators, and provide proper nutritional requirements for the sheep.

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