

Meat Goat Management

Meat goats are a growing livestock enterprise in many parts of the United States today. It is important to understand key aspects of meat goat management when deciding to produce meat goats. In this publication, you will learn about meat goat nutrition, breeding, health, and other management issues.

Feeding the Does

Generally, goats can do well on good pasture or browse, but a mature doe will require three to four pounds of hay daily if she is not getting adequate pasture or browse. In addition, a grain-based supplement might be required during periods of high production (flushing, late gestation, and early lactation). The amount of supplement needed varies with pasture and/or hay quality and quantity. The crude protein (CP) concentration of the supplement needed also varies with the forage quality. There are quality commercially sacked feeds available that will meet the nutrient needs of meat goats. You can make your own simple ration for goats, but commercial feeds are often higher quality. Following are two simple grain supplement rations:

1. 50 pounds of corn or milo
20 pounds of oats or barley
20 pounds of wheat bran
10 pounds of cottonseed meal
2. 40 pounds of corn or milo
20 pounds of oats or barley
25 pounds of wheat bran
15 pounds of cottonseed meal

The first ration provides about 14 percent CP, and the second ration provides about 16 percent CP. Goats dislike finely ground, dusty feeds, so grains should be coarsely ground, rolled, or crimped. A commercial pelleted ration is better because goats tend to pick through mixed feed and eat only the most desirable grains. This results in the goat eating an unbalanced ration, which can cause problems. You should add a trace mineralized salt and a balanced, 2:1 ratio calcium/phosphorus supplement to any ration. You can also add molasses to the supplement ration (5 to 7 percent usually is recommended) to reduce dust and to enhance palatability. Always have salt available for the goats.

Breeding the Does

Most goats are seasonal breeders, with the breeding season initiated by decreasing daylight hours. The season varies, with some goats breeding during any season of the year, but reproductive activity is typically greatest from August

to January. Does come in heat (estrus) at intervals of 20 to 21 days and usually remain in heat one to two days. Introduction of a buck to a herd of does after a complete separation of at least three weeks can stimulate some does to come into heat within 72 hours. This is known as the “buck effect.”

Signs of estrus are easily detected and include uneasiness, an unusual amount of tail wagging, frequent urination, an abnormal amount of bleating, reddish and swollen vulva, and mucus under the tail. Riding other animals or standing for riding is not seen as often in goats in estrus as in cows. Conception is usually greatest from the middle to the latter part of the heat period, 24 to 36 hours after onset of estrus. The gestation period in goats is 148 to 152 days. Maintaining good records of all heat periods and breeding dates is important to maximize reproductive efficiency.

Young does tend to reach puberty or sexual maturity at five to eight months of age, provided they have been grown adequately and are in good condition. Keep bucks separated from does (except during the breeding season) in order to breed during the desired time interval. Prepare the bucks for the breeding season by feeding them one to two pounds of grain plus three to four pounds of hay or forage daily.

If does are thin at breeding time, kidding percent can be increased by “flushing,” which is increasing nutrition during the breeding period. This puts the animal in a weight-gaining condition and causes an increase in the ovulation rate. Flushing can be done by turning goats on a fresh, lush pasture if it is available, or by feeding grain. For flushing, corn is most often fed at the rate of one-half to one pound per head per day. Begin feeding two to three weeks before the bucks are turned in with the does, and continue for two to three weeks after the introduction of the bucks (for a total feeding period of four to six weeks). Flushing generally results in a 10 to 20 percent increase in kid crop. Does that are already in good condition generally will not benefit as much from flushing.

Raising the Kids

It is important that kid goats receive colostrum (the first milk) as soon as possible after birth, preferably within the first few hours. The kid’s ability to adequately absorb colostrum decreases rapidly during the first 48 hours of life. Colostrum provides antibodies for resistance to disease and is high in nutrients, including energy, vitamin A, B vitamins, protein, and minerals. Overfeeding colostrum or other milk can cause scours. Extra colostrum can be frozen and fed at body temperature at some later date. Orphan kids may be

left on goat's milk or changed to cow's milk or a commercial milk replacer after the first days on colostrum. Pay special attention to kids born as multiples to ensure that they are receiving adequate nutrients from their dams.

Kids must have a warm, dry place to sleep if they are taken from their mothers. A deep, wooden box with a slanted floor, raised off the ground to provide drainage, makes a good bed for new kids. The box should be well-bedded and draft-free.

For the first three to four days after birth, a kid should receive two to three pints of milk in three to four feedings per day. Kids can be fed twice per day thereafter. A creep feed containing approximately 20 percent CP and a high-quality hay should be made available to kids by two weeks of age. Keep clean, fresh water and salt available at all times, especially when the kids are weaned from milk at eight to twelve weeks of age.

As soon as the kid begins eating a little grain and hay, the rumen will begin to develop, allowing the kid to use roughage materials. The kid will begin chewing its cud at this time. When the kid is eating hay and grain well, usually at about four to six weeks of age, you can discontinue milk feeding. The rumen will be fully developed at approximately eight weeks.

The kid should have plenty of exercise and as much sunshine as possible. Provide boxes or barrels for older kids to have something on which to climb and jump. Separate the buck kids from the does at about two to four months to avoid premature breeding.

Dehorning

Horn development is a recessive trait of goats and is found in most breeds. For safety purposes, remove the horns while the animals are young, between three and fourteen days of age. There are several ways to dehorn goats, including dehorning pastes or similar caustic compounds, burning irons, or physically removing the horns. Use care with caustic pastes to avoid getting these pastes into the goat's eyes. Pastes for dehorning may not be a good option if the goat might be exposed to rain soon after the paste is applied. When using the hot iron method of dehorning, be sure to apply the iron just long enough to produce a copper color to the horn cells. The hot iron method can be effective in minimizing blood loss from dehorning. Apply heat for short periods of time because continued heating can cause brain damage or death.

Castration

Bucks develop musk glands when they reach puberty. These glands emit a distinct odor that often taints the taste and odor of the meat. Once an animal reaches puberty, it is more active and harder to feed to an acceptable level of eating quality. Male goats not to be used for breeding should be castrated at around eight weeks of age (but no earlier) to help reduce the incidence of urinary calculi. Like dehorning, this can be done in several ways. Consult a veterinarian for best results.

Internal and External Parasites

Roundworms (especially the barber pole worm), stomach worms, and coccidiosis are the most significant internal parasites that affect goats. Animals become infested by grazing on pastures contaminated with droppings from other infested goats. Use several pastures in rotation because parasite carryover can be markedly reduced by resting pastures for 30 to 60 days between grazing. Treat newly purchased animals for internal parasites, isolating them from other animals until treatment is complete and there are no signs of sickness or disease.

Coccidiosis can cause severe problems in goats, especially those managed in confined or drylot conditions. These goats should receive a coccidostat regularly in their feed. Treatment of coccidiosis with anthelmintics (dewormers) is not effective. A key indication of potential coccidiosis problem is profuse diarrhea or scouring. **If you suspect coccidiosis, consult a veterinarian.**

Symptoms of parasite infestation include general unthriftiness, a run-down condition, rough hair coat, loss of weight, poor appetite, diarrhea, and anemia. If you suspect an internal parasite problem, collect fecal samples and take the samples to a veterinarian. Examination will determine the type and degree of infestation and a recommended treatment. Producers can also familiarize themselves with FAMACHA scoring, a technique for evaluating anemia in the bottom eyelid of goats, as a way to assess blood-sucking parasite problems.

External parasites, including lice, ticks, mites, horn flies, stable flies, horse flies, deer flies, and mosquitoes, might present serious problems. These pests are most prevalent in the spring, summer, and fall but can be a problem throughout the year.

Overuse of dewormers in the same chemical class can contribute to resistance problems and eventually reduce the effectiveness of these wormers. Choose a dewormer, and then use it until it stops being effective. Use fecal egg counts to monitor this situation. When resistance becomes a problem, switch to a different class of dewormer. It is also important not to underdose goats when deworming them because this also can cause resistance problems.

Common Diseases

A number of diseases occur in goats. When a problem occurs in your herd, consult a veterinarian. Information is readily available about these diseases, their diagnosis, and their treatments. The most significant diseases are soremouth, tetanus, overeating disease, foot rot, and bloat.

► **Soremouth** is a contagious disease that causes scabs on the lips and around the mouths of goats. This virus can affect humans, so be careful when working with goats with soremouth. A live virus soremouth vaccine, available as a preventive measure, is applied to a small scratched area in the fore or rear flank or in the ear. Few medicines help in the actual treatment of soremouth. Iodine can be rubbed

into lesions after the scabs are removed to help dry up the area and reduce the infection. If your goats do not have soremouth, do not vaccinate or you will risk introducing it into your herd.

► **Tetanus (lock jaw)** is a disease usually resulting from a wound infection. This disease is caused by a powerful toxin produced by a bacterium that grows in the absence of oxygen. The first sign of tetanus is a stiffness about the goat's head; the animal often chews slowly and weakly and swallows awkwardly. Also, the goat's third or inner eyelids protrude over the forward surface of the eyeballs. The animal shows violent spasmodic reactions with the slightest movement or noise and usually remains standing until close to death. All ages are susceptible, but kids weakened due to castration or dehorning are more susceptible to tetanus. Tetanus is hard to treat, and death occurs in more than 50 percent of cases. Contact a veterinarian immediately, and keep infected goats as quiet as possible. Tetanus antitoxin might help if administered early, but prevention is the best policy. Reduce the incidence of wounds, apply sanitary and proper wound treatments, and vaccinate with tetanus toxoid immediately after dehorning or castrating. Vaccinate all your goats with the combination CD/T vaccine; multiple vaccinations are recommended. A good vaccination program can help eliminate losses from tetanus.

► **Overeating disease (enterotoxemia)** generally results in death and seldom exhibits clinical signs. This disease is caused by a clostridial organism that is always present in the intestines of most goats. Goats that have their feeding schedules abruptly changed or that consume large amounts of grain are the most susceptible to overeating disease. These changes cause the clostridial organism to grow rapidly and to produce a powerful toxin that causes death within a few hours. The two types of enterotoxemia are C and D. Vaccinate all your goats with the combination CD/T vaccine; multiple vaccinations are recommended. Two or three vaccinations are preferred, with the booster doses coming at three- to four-week intervals following the first vaccination. A good vaccination program should eliminate losses from overeating.

► **Foot rot/scald** is not often seen in goats in the Southeast, but it may occur if animals spend considerable time in wet, unsanitary yards or barns. Most foot problems are foot scald, not foot rot. In either case, the first clinical sign is lameness, followed by an infected area between the toes or in the hoof. In foot rot, the foot will swell and become hot to the touch. In either case, carefully trim any long toe or rotten area away and treat the infected area. For foot scald, use a long-lasting antibiotic directly on the area. For foot rot, treat with a 10 to 30 percent copper sulfate solution or other medication prescribed by a veterinarian.

► **Bloat** is the accumulation of an excessive amount of gas in the rumen. Goats experiencing bloat are unable to expel these gases effectively and may suffocate in extreme cases. This may result from overeating tender, young, high-moisture legumes or other green forages still wet with dew. Overconsumption of grains can also cause bloat. Obvious signs of bloat include lying down and getting up at frequent intervals, kicking at the abdomen, making loud grunting noises, or otherwise showing distress. The left side of the animal is also overly distended when bloated. Prevention includes making sure the animals have a good fill of dry hay before turning them onto moist pasture. Animals can die suddenly with bloat, so don't wait too long before calling the veterinarian for assistance.

Few drugs are approved for use on goats. Nonapproved over-the-counter drugs become prescription drugs. Every goat producer should have a valid client-patient relationship with a veterinarian. Goats have few disease problems when they are kept on adequate browse and grazing and are not overcrowded. You can help prevent bringing in new diseases by carefully selecting new breeding stock and isolating new animals. Many drugs used for goats will only be labeled for cattle or sheep. A goat has a metabolic rate about 2.5 times greater than a cow's. Therefore, when using drugs labeled for cattle, the dosage rate typically will need to be two to three times greater than the cattle rate. **Remember:** most goats will be sold for meat, so after treating goats with any drug, be sure to allow the required withdrawal time before slaughter. Consult a veterinarian for off-label withdrawal times and doses.

References

- Alford, Calvin F. "Meat Goat Production," Georgia Meat Goat Association, Vol. 1, No. 1, March-April 1996.
- Martinez, Edmundo E., Joe C. Paschal, Frank Craddock, and C. Wayne Hanselka. Sept. 1991. *Selection, Management and Judging of Meat-Type Spanish Goats*. B-5018. Texas Agricultural Extension Service, The Texas A&M University System, College Station, Texas.
- Martinez, Edmundo E., Joe C. Paschal, Frank Craddock, and Dale Rollins. *Spanish Goat Management*. B-5021. Texas Agricultural Extension Service, The Texas A&M University System, College Station, Texas.
- Strickland, James. "Goat Health," Georgia Meat Goat Association, Vol. 1, No. 1, March-April 1996.

Meat Goat Production Calendar

Month	Comments
January	Evaluate pasture and forage conditions. Monitor body conditions of does; supplement if necessary. Prepare for kidding.
February	Sort pregnant from open does. Begin feeding pregnant does. Evaluate does and bucks; sell unsound or inferior animals. Treat for internal and external parasites.
March	Begin kidding; check teats for milk flow; identify kids. Separate singles from twins; if possible, pen individual does with their kids; feed does to maintain milk production.
April	Finish kidding. Continue to supplement lactating does. Vaccinate early kids.
May	Consider weaning small, stunted kids. Discontinue supplement feeding to does. Monitor internal parasites through fecal samples. Vaccinate late kids.
June	Begin looking for replacement bucks with good conformation, structural correctness, muscling, and a high weight per day of age. Vaccinate early kids.
July	Continue selecting replacement bucks. Vaccinate late kids.
August	Treat for internal and external parasites. Vaccinate all kids. Select replacement does and bucks. Wean kids; supplement replacement does and bucks with a high-protein (21 percent), high energy feed. Evaluate does and bucks; sell unsound and inferior animals. Criteria for culling: Barren female—missed two seasons in a row. Bad teats or udders—too big or too small (mastitis). Bad mouths—smooth or broken mouth or over- or undershot jaw. Structural defects—bad feet and legs or back. Bad testicles—too small or infected (epididymitis). Unthriftiness—due to old age or disease.
September	Begin flushing does and bucks; flush with fresh green pasture or half a pound of feed per head per day for two to three weeks before and after buck turnout. Treat for lice if necessary.
October	Turn out bucks with does; breeding ratio: 1 buck per 20 to 25 does, depending on pasture size and breeding conditions. Continue to flush does for two to three weeks after buck turnout.
November	Evaluate pasture and forage conditions. Determine does' body condition and plan winter supplemental feeding program. Monitor internal parasites through fecal samples. If heavy, treat after first hard freeze.
December	Remove bucks and feed to regain body condition. Evaluate pasture and forage conditions. Watch body conditions of does; supplement if necessary. Check for lice and use a pour-on lice treatment if needed.

Adapted from Texas Sheep and Goat Production Calendar.

Publication 2781 (POD-06-22)

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Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director