VM39

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Meat Goat Herd Health Management[1]

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Herd health programs are management tools designed to meet the production goals of producers. Meat goat producers should strive to raise three kids per year from each doe to a market weight of 60 pounds by six months of age. Achievement of this goal will depend upon the implementation of sound feeding and health management practices designed to satisfy the needs of animals being raised under intensive production conditions. In particular, meeting the nutritional demands for optimal reproductive efficiency and lactation in does, and controlling losses due to parasitism and infectious diseases are continual challenges.

Kid Production

Goats are seasonal breeders with the natural breeding season beginning in August and extending through February. This season is longer in the Southeast where some goats may be bred as early as June and as late as March. Healthy does readily conceive and often carry multiple fetuses. Producers should select for does that consistently produce and wean an average of 1.5 kids per pregnancy. The length of gestation in goats is five months and although it is possible to produce two sets of kids each year, most herds are not managed to do so. Several meat goat producers, however, are able to attain an average of three pregnancies per doe every two years.

The incidence of twinning is markedly influenced by the doe's overall physical condition and nutritional status. Operations which attempt twice-a-year kidding will need to provide supplemental feed to their does during lactation and at breeding times. "Flushing", (feeding females to gain weight just a few weeks prior to anticipated breeding) is one such feeding technique known to be effective in the enhancement of ovulation rates and kidding percentages. Increasing the number of ova shed during the estrus period increases the likelihood of twinning. Where management systems preclude supplemental feeding, the scheduling of kidding during times when natural forage is plentiful can produce similar results. In most goat meat operations in Florida, kids are raised to market weight with the doe on natural forage. However, weaning kids at two to four months of age with subsequent transfer to a feedlot will encourage faster weight gains.

Health Practices for Kidding Does

The adult goat herd should be vaccinated annually with *Clostridium perfringens* type C & D toxoid and tetanus toxoid for the prevention of

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overeating disease (enterotoxemia) and lockjaw (tetanus) respectively, in kids. These vaccines should be administered approximately four to six weeks prior to kidding in order to provide a high level of immunity in the colostrum which can be transferred to suckling kids at birth. Supplemental selenium should be provided either in the feed/mineral mix or by injection of 5 mg selenium (BoSe or MuSe) four to six weeks prior to kidding. This is particularly important in selenium-deficient areas of the Southeast. Deficiencies of this important trace mineral are thought to contribute to an increased rate of retained placenta in does. Deworming should be performed routinely (every two to three months) in Florida goat herds. Deworming programs should be designed to include a deworming treatment for does 30 days prior to and again at kidding. This is advised because information in recent years suggests that the immune response to parasitic infection is suppressed in the doe near kidding time.

Kidding

Kidding problems, although uncommon in goats, should be considered whenever labor becomes prolonged or appears to have stopped. Such difficulties generally arise from the abnormal posture or presentation of a fetus in the birth canal during labor. When multiple fetuses are present, kidding may be impaired by the simultaneous entry of more than one fetus into the pelvic canal. Proper obstetrical manipulations should be performed. Do not hesitate to call a veterinarian for assistance when necessary. It will likely save the doe and kid needless trauma.

Care of the Newborn

The navel of newborn kids should be dipped in 2 to 7% iodine (teat dip can be used). Fresh colostrum (first milking) can be milked from the doe and hand-fed with a nipple. The importance of the timely intake of an adequate amount of fresh colostrum cannot be overemphasized in preventing disease and death in neonatal kids. At least two to four ounces of colostrum should be fed within the first hour after birth if possible. Many producers maintain colostrum from older does for the feeding of orphaned kids. It can be conveniently stored by freezing in ice cube trays. Cubed colosturm can be thawed and warmed for feeding as needed.

Health Management Practices for Kids

The period of developmental transition from a pre-ruminant to a ruminant digestive system in the weaning kid is a particularly crucial time. In situations where feeding is not closely monitored, enterotoxemia can be a costly disease.

Enterotoxemia is caused by *Clostridium perfringens*, an organism present in the gut of many, if not all animals. Under the right circumstances, it multiplies to high numbers and secretes an enterotoxin (poison produced in the gut) which is absorbed from the gut into the blood stream. This enterotoxin circulates to the brain and other tissues causing serious tissue damage which often results in death. Enterotoxemia may occur in goats of any age. The disease is generally associated with overfeeding and indigestion which frequently leads to "gut stasis", an important factor in the pathogenesis of this disease. It may occur in young kids when they are consuming considerable quantities of grain, but are still getting plenty of milk. Other factors which may predispose young or adult goats to enterotoxemia are excess concentrate feed intake, sudden access to palatable feed, or changes in feed or forages offered.

Dehorning and castration are minor surgical procedures which should be performed within the first two weeks of age. Dehorning baby goats requires skill and experience, otherwise serious injury can occur. Cauterizing or burning of the horn buds with an electric dehorning iron is preferred over surgical removal methods. Surgical methods often require general anesthesia. Castration of buck kids, if desired, can be done in combination with dehorning. The use of local or general anesthesia is recommended. Remove 1/4 to 1/3 of the scrotum, expose the testicles, and remove the testicle by cutting the cord above the testicle. An emasculator, which is a cutting-crushing combination instrument, works nicely for this purpose. Depending on the vaccinal status of the dam, all minor surgical procedures in young kids should be accompanied by an injection of tetanus antitoxin. Tetanus or lockjaw, caused by *Clostridium tetani*, is highly fatal in affected animals. The organism inhabits the soil and may increase to high numbers when contaminated by feces. Since the

organism generally gains entrance to the body through puncture wounds, or deep cuts, tetanus protection is advised when surgical procedures are performed.

White Muscle Disease (WMD), a degenerative disease of muscle tissues, is frequently observed in kids raised in geographical areas where selenium is either deficient or unavailable in the soil. Kids affected with WMD often appear "stiff". Many will "arch" their backs and assume a noticeably abnormal posture when standing. This disease can be treated if diagnosed early enough but prevention through timely selenium injections and feed supplementation is best. Current recommendations for young kids are an initial injection of 1 mg selenium (BoSe) at one week of age which should be repeated at weaning.

Contagious ecthyma (sore mouth) is a virus disease of goats and sheep which can be controlled by vaccination at or around weaning. This disease is particularly important due to its zoonotic potential (ability to be transmitted from goats and sheep to man). This disease should be suspected whenever pustular-type lesions are present around the mouth or muzzle, and on teats.

Parasitism

The internal parasites of major importance in young, growing kids are coccidia and various nematodes (worms), particularly Haemonchus.

Coccidiosis can affect kids as early as two weeks of age. Diarrhea is the most consistent sign. Kids become weak, dehydrated and may demonstrate signs of abdominal discomfort. Rapid detection, isolation, and prompt treatment of affected kids is important for reducing losses. Coccidiosis is usually treated with Sulfas or Amprolium.

These drugs may also be used in coccidia prevention strategies in problem herds. Reducing exposure to feces is of prime importance in controlling this disease. Thus feed bunks and hay mangers should be constructed in such a way as to keep kids out.

The nematodes of goats which cause the majority of problems are the large stomach worms (Haemonchus), although lungworms and tapeworms can be important in some herds. Stomach worms suck blood and will cause profound anemia, weight loss and weakness in animals severely affected. Best advice for control at the present time involves a vigorous sanitation and deworming program. Consult a veterinarian for specific deworming advice.

The external parasites are equally important in parasitism problems of goats. They can likewise result in anemia, weight loss and gradual debilitation. The following external parasites affect Florida's dairy goats: 1) biting lice, 2) sucking lice, 3) nose bots, 4) Keds, 5) blow fly larvae, 6) mites, and 7) sticktight fleas. They can be controlled by insecticide sprays, dusts, or dips. As with deworming medications goat owners are advised to consult their veterinarian for specific information on alternative parasite control.