Preparing Meat Goats for the Breeding Season

NC STATE EXTENSION

Animal Science Facts

Breeding is a very important aspect of any meat goat operation. But, preparing the breeding does and buck(s) for the breeding season could have a large influence on the outcome and the profitability of the operation.

Will Body Condition Influence Breeding Success?

As the breeding season approaches, producers should be concerned with the body condition of their breeding does.

Goats should not be allowed to become too thin or too fat (Refer to ANS 00-605MG, *Monitoring the Body Condition of Meat Goats: A Key to Successful Management*). Failure in reproduction, low twinning rates and low weaning rates will result if does are too thin. Overly fat does can suffer from pregnancy toxemia (ketosis) or dystocia, but fat does are rarely a problem.

The term body condition refers to the fleshiness of an animal. Simply looking at a goat and assigning it a body condition score (**BCS**) can easily be misleading. Rather, does should be handled physically. The easiest areas to feel and touch to determine the body condition of an animal are over the ribs, on either side of the spine, by running a hand over those areas and pressing down with a few fingers. In doing so, one is able to determine the amount of fat covering the ribs. In general, does in good condition (BCS = 5 or 6) will have a fat thickness of not more than .05 to .08 inches over the loin and .03 to .05 inches over the backbone. In well-conditioned goats, the backbone does not protrude and is flush with the loin. Other areas to monitor are the shoulders, the tail head, the pins, the hooks, the edge of the loins and the backbone. Does in good condition (BCS = 5 or 6) have a smooth look and the ribs are not very visible. The backbone and edges of the loins are felt with pressure, but they are smooth and round and feel spongy to the touch. Some to significant fat cover is felt over the eye muscle. Does that are in relatively poo condition (BCS = 4 or lower) look angular, the ribs are visible and the backbone and edges of the loins are sharp and easily felt. None to slight fat cover is felt over the eye muscle. Practice makes perfect, thus use your animals to get a feel for it. An easy way to start is to select a few animals that are over conditioned and some others that are thin in order to get a feel for extreme body condition. Then, introduce a small group of animals and compare their body to the animals having extreme body condition. Producers should develop an eye

and a touch for the condition of their animals and strive to maintain a moderate amount of condition on their goats. The ideal BCS just before the breeding season is between a 5 and a 6 to maximize the number of kids born.

One should also be concerned with the body condition of the breeding bucks. If bucks are overfed and become too fat (BCS = 7 or higher), they may have no desire to breed does. Conversely, bucks that are thin (BCS = 4 or lower) at the start of the breeding season may not have sufficient stamina to breed all the does. Because of the increased activity and decreased feed intake during the breeding season, breeding bucks will most probably lose weight. Therefore, they need to be in good body condition (BCS = 6) and physical shape before the season starts.

Body condition is also used to determine whether flushing will be of benefit to breeding does.

Flushing means increasing the level of feed offered to breeding does, mostly energy, starting about one month prior to the introduction of the bucks. By increasing the amount of feed offered, does will put on weight. This in turn will signal to the body that the doe can afford to raise several kids, and ovulation rate and litter size will increase. Increased level of energy offered to does should continue throughout the breeding season and for approximately 30 to 40 days after removing the bucks for adequate implantation of the fetuses in the uterus. Does in extremely good body condition (BCS = 7) will tend not to respond to flushing. On the other hand, does that are in relatively poor condition (BSC = 4 or lower) as a result of poor feed quality and supply, high worm loads, late kidding of twins or triplets, will respond favorably to flushing by improving their body condition. Flushing can be accomplished by moving breeding does to a lush nutritious pasture 3 to 4 weeks prior to the introduction of the bucks. This cost-effective flushing method or "feed flush" or "green flush" is underutilized in the Southeast where forage is abundant. Another method is feeding ½ lb/day of a high energy supplement. Corn is the grain of choice for flushing; whole cottonseed is another low cost, high energy and also high protein supplement. The goal being to increase intake and body weight, breeding does should be grouped according to their body condition.

What Other Measures Will Increase Reproductive Performance?

Several other important measures will affect breeding indirectly, such as trimming feet, the grouping of animals, deworming, using the "buck effect" to synchronize does, and vaccination.

1. **Trimming feet**
   Feet and legs should be examined closely for sores, overgrown hooves and sources of strange smells that could be associated with infections or foot rot. Start trimming the feet of animals several weeks before the breeding season to make sure that they will be in top shape during that period of increased activity. The buck in particular will cover a lot of territory. A lame buck will cover does only sporadically, or might give up altogether. Similarly, limping does may not let bucks breed them.

2. **Grouping of animals**

   Goats are very social animals and should be grouped together several weeks before the breeding season so that the pecking order of the animals may be established. Forming groups just prior to the breeding season will disrupt the pecking order of the animals. The fighting that will ensue to establish a new pecking order within the newly-formed groups will be a source of stress and will influence reproductive performance.

   Young does should have reached approximately 70 to 75% of their estimated mature body weight to be bred successfully without adversely affecting their mature size.

3. **Deworming**

   Deworming breeding does and buck(s) before the start of the breeding season is an important management tool. If flushing is planned, it is advisable to deworm prior to flushing. Wormy does will not increase their body condition during the flushing period and therefore flushing may not increase ovulation rate. In addition, wormy does will not breed well, or may not breed at all, or may conceive and abort later.

4. **The "buck effect"**

   Segregating does from bucks is crucial in the development of sound breeding programs that should be paralleled with feed resources and market demands. The best approach to separate does from bucks is to develop a secure buck pasture. The buck pasture should be far enough from the breeding doe herd, otherwise bucks will attempt to go through fences to breed does in estrus.

   In goats, estrus can be induced with the strategic exposure of anestrus does to intact males. This response is dependent on the depth of seasonal anestrus and associated with a first ovulation in two to three days after the introduction of the buck. The first ovulation is usually silent and of low fertility. The second ovulation five days later is accompanied by a fertile estrus. The response to the male effect is influenced by the sexual aggressiveness of the buck, the intensity of the stimulation and the body condition of the does. Immediate contact results in a greater response than fence-line contact or intermittent contact. The pheromores responsible to induce estrus are present in buck hair, but not in urine, and are not associated with buck odor during the breeding season.

5. **Vaccination**

   Although some producers have had no problems so far without implementing a vaccination program, it is recommended that goats be vaccinated against overeating disease (enterotoxemia) and tetanus. For twice a year vaccination, breeding does should be vaccinated before the start of the breeding season and 4 to 6 weeks before kidding. If vaccinated once a year, it is preferable to vaccinate breeding does prior to kidding because some immunity will be passed on to the newborns. The choice of vaccines is the following:

   A. *Clostridium Perfringens* Types C and D+Tetanus Toxoid in one vaccine, against overeating disease and tetanus. This vaccine is labeled for goats.

   B. *Multivalent* clostridial vaccine (8-way vaccine). One example of a multiway clostridial vaccine, labeled for sheep, is Covexin8. Covexin8 is more reactive and may cause a

higher incidence of adverse reaction at the injection site.
Covexin8 may be used in herds which have had problems with blackleg and malignant edema (gas gangrene). Although blackleg and malignant edema are common and costly infections in sheep and cattle, they are uncommon in goats.

Is the Buck Ready for Breeding?

Bucks may be easily overlooked but one cannot assume that they are reproductively sound. A buck that was sound one year may not be the next. The results of using a reproductively unsound buck will be reduced kidding rates and profits. It is a good idea to watch bucks for normal urination and also for signs of sexual behavior as the breeding season approaches. For a more thorough breeding evaluation, sit the buck on its rump. With the back of its head resting on your thigh, examine the testes. They should be roughly the same size, fairly firm to the touch and devoid of lumps. The presence of testicular abnormalities could indicate that the buck is unsound for breeding. Next, examine the sheath (also called the prepuce) and the penis if you can protrude it. It requires some experience to push the prepuce down to reveal the penis. The penis should be checked for sores and the pizzle (the thin worm-like process at the end of the penis) should not be hard anywhere. The presence of hard, small lumps could be an indication of urinary stones (a condition also called urinary calculi). A buck suspected of reproductive problems, whether in the testes or any part of the penis, should be examined by a veterinarian before allowing it to breed does.

How Long Should the Breeding Season Last?

During the breeding season, does and bucks should be joined for 40 to 45 days, which is the length of time necessary for breeding does to complete two estrus cycles. A ratio of 20 to 30 does per buck is recommended for best breeding results.

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