Use of prostaglandin to synchronize breeding in meat goats

N. C. Whitley and J. Hartman

University of Maryland Eastern Shore, 2000

Although it is known that prostaglandin can be used in dairy goats to synchronize estrous during the breeding season, little is known about use of prostaglandin in meat goats. Therefore the objective of this applied study was to compare the effectiveness and economics of two different methods of administration of prostaglandin $F_{2\alpha}$ to synchronize estrous in meat goat does. In mid-October, nineteen mature, cycling does with visual and olfactory access to 2 mature bucks were randomly assigned to two groups and were intramuscularly injected with prostaglandin $F_{2\alpha}$ (1.5cc Lutalyse, Pharmacia&Upjohn, Kalamazoo, MI) the day of (n=8; INTRO; day=0) or 4 days after (n=11; DELAY) the introduction of a mature buck wearing a marking harness. All females were checked for mating on day 4 and number of does marked was recorded to determine percentage mated. All does not mated by day 4 were administered prostaglandin $F_{2\alpha}$ (1.5 cc, intramuscularly) and animals were checked again for mating on day 8. Number of animals marked by day 4 and number of does kidding was recorded (in the DELAY group, one doe recycled and one aborted prior to kidding). The number of kids born and kid birth weights was also measured. Cost of treatment was determined by cost of each dose ($0.80) multiplied by the number of doses given. All animals were mated by day 8, indicating that both treatment methods were effective. In addition, treatment method (DELAY vs INTRO) did not influence number mated by day 4, kidding rate, number born or kid birth weights, which averaged 78.9 ± 9.6%, 94.4 ± 5.3%, 1.8 ± .2 kids, and 3.4 ± .2 kg, respectively. However, the cost per doe was higher (p < .0006) for INTRO than for DELAY treatment, averaging $0.90 ± .1 per doe for INTRO compared to $0.22 ± .1 per doe for DELAY treatments. Overall, prostaglandin $F_{2\alpha}$ treatment was 100% effective in synchronizing estrous in a 8-day period in meat goat does, but treating only does not marked 4 days after buck introduction was more cost effective than treating all does before buck introduction.