057-AGR

Effect of buck exposure on the estrous cycle of multi-breed meat goats

Meat goat producers are looking for more efficient ways to shorten the breeding season and in turn shorten the kidding season in order to decrease the age disparity among kids at weaning. Buck induced estrus could be a valuable way to shorten both seasons and provide more uniformity in kid age. When a doe comes into estrus (or heat) due to the introduction of the buck, it is known as the 'buck effect' or buck induced estrus. Without the buck effect, an average of 5% of does within a population come in to heat daily during a 21-day estrous cycle. By day 10 of the cycle, about 50% of the population should have come into heat. In this study, we looked at the kidding records from does that gave birth over a period of 14 years (2011-2024) and determined their estrus date by subtracting their kidding day from a 150-day gestation period. Except for 2012, does were divided into two breeding populations each year. They were either bred in October or December for a March or May kidding season. There was only one breeding population for the 2012 year. For each population, we determined if the doe came into estrus within 10 days after the buck was placed into the breeding pen. If more than 50% of the population was impregnated within the first 10 days that the does were exposed to the buck, it was concluded that there was a potential buck effect. A Chi-Square analysis was used to compare the actual population of does that were pregnant to the expected number of does that should have become pregnant within that first 10-day period based on the 21-day estrous cycle. The results showed that there was a potential buck effect (p.¬.0.01) on the does that were analyzed.