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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

EVALUATION OF THE FACTORS THAT INFLUENCE THE PROLIFICITY OF DAIRY GOATS

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The prolificity contributes to genetic gain, as prolific animals lead to a larger number of goats born per year, making it easier to replenish the stock, reducing the generation interval, increasing selection pressure and off-take rate. The objective was to evaluate the influence of physiological, environmental and genetic effects on prolificity. Records of 171 dairy goats were used, in which 37 were Saanen, 82 Alpine and 52 crossbreds, born in the years at 2016 and 2017. The animals belong to the herd of the Federal University of Viçosa, in the southeastern region of Brazil. They are kept in an intensive production system. The influence of goat's age at calving (IAP), racial group (GR), year (AC) and mating season (EC), calving order (OP), age at first calving (IPP) and milk production at the last lactation (PA) was evaluated for prolificity. Statistical analyzes were performed using generalized linear models, using the binomial distribution function, considering success as the occurrence of multiple birth at 5% of significance. The EC occurred from February to August, being divided into two groups: females mated from February to April and from May to August. The OP ranged from 1 to 8 with a mean of 2.32, the IAP from 10.3 to 109.03 months and an average of 45.52 months, the mean of IPP was 24.78 months. PA was obtained from animals that had at least one previous lactation and it was adjusted to 305 days with a mean of 526.8 liters. The results were converted and interpreted by the odds ratio. There was no significant effect for GR, AC, EC, OP, IPP and PA. Only the IAP was significant, and the chances of multiple births increases with the advancing of female age. On average, at each month of age of a female, the chance of having multiple births is increased by 1.2%. The average prolificity of the herd was 1.58 kids per calving. Prolificity in goats is highly affected by the reproductive age and physiological maturity of the female.

Keywords: age at calving, generalized linear models, physiological effects, reproductive age