

Seasonal Lambing in Crossbred of Katahdin Ewes in Tropical Regions of Chiapas, Mexico

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Abstract : In recent years, the Katahdin sheep breeds have been one of the breeds with greater acceptance by sheep farmers in southwestern Mexico. The Hair Sheep breeds from tropical latitudes (16° to 21° North Latitude) show low estrus activity from January to May. By contrast, these breeds of sheep exhibit high estrus activity from August to December. However, the reproductive management of Hair Sheep crossbred is very limited, independently of the socioeconomic levels of sheep farmers. Thus, in crossbred of Hair Sheep, occurrence of lambing is greater in autumn (84%) than spring (16%). In this sense, the aim of this study was to determine the lambing in Crossbred of Katahdin sheep during different seasons of the year. The Hypothesis was that in crossbred of Katahdin sheep, the lambing period has a behavior seasonal in the Southwestern Mexico. The study design consisted in evaluating the lambing proportion in one herds of Katahdin ewes crossbred during one year (October 1st, 2015 to October 1st, 2016). The study was realized in a farm located in the municipality of Jiquipilas, in the State of Chiapas, Mexico (16° North Latitude). A total of 40 female sheep homogeneous in terms of physical condition, age and physiological state were selected; and they were fed in grazing continuous, mainly with Africa star grass (*Cynodon lemfuensis*) and they are provided with water and mineral salts ad libitum; during the dry season, the ewes were supplemented with a diet of maize and sorghum, and the reproductive management was continuous mating. The lambing proportion was analyzed by chi-squared test, using SAS statistical software. The proportion of Katahdin ewes crossbred that lambed during the study period was high (100%; 40/40), the prolificacy was 1.42 (lamb/lambing). The proportion of lambing was higher ($P<0.05$) in autumn (67.5%; 27/40), than winter, spring and summer (32.5%; 13/40; 0%; 0/40; 0%; 0/40; respectively). The proportion of lambing was greater ($P<0.05$) in November (50%; 20/40), compared to October, December and January (2.5%; 1/40; 27.5%; 11/40; 20%; 8/40, respectively). The results are consistent with the fact that in the Hair Sheep Breeds, the lambing appears behave seasonally. The most important finding is that the lambing period in the crossbred of Katahdin Sheep is similar to the crossbred of Hair Sheep in tropical regions of Mexico. Therefore, the period of greater sexual activity occurs in the spring season. In conclusion, the period of lambing in crossbred of Katahdin ewes appears behave seasonally. Further researches to assess the ovarian activity in different breeds of Hair Ewes are under assessment.

Keywords : Katahdin ewes, lambing, prolificacy, seasonality

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