

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

Genetic group and environmental effects on fertility and litter size of Santa Inês and crossbred ewes in semiarid

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The productivity of sheep is directly dependent fertility and litter size and those are more important than lamb gain of weight. The objective of this study was to determine the genetic group and some environmental factors on reproductive performance traits of the ewes in semiarid of Northeast of the Brazil. Information of 120 Santa Inês and F1 Dorper + Santa Inês ewes, lambing from 2012 to 2015, under semi-intensive regime and a reproductive program of three births per 2 years were used (n= 427 lambing). The effects on fertility and litter size included in the models were: production cycle, defined as the period between mating and the weaning (PC), genetic group of the ewe, as fix effect (GGE), body condition score (BCS) of the ewe, at mating (to fertility) and at lambing (to litter size), live weight of ewe at lambing (LWL) to litter size, age of the ewe at lambing (AEL), as covariates to fertility and litter size and all possible interaction on fertility and litter size. The Fertility of the ewe was affected ($P<0.05$) by GGE, PC BCS at mating, AEL, LWM and by the interaction GGE x BCS of ewe at mating. On the other hand, litter size was influenced ($P<0.05$) by PC, BCS of ewe at lambing and LWL. F1 Dorper + Santa Inês ewes gave highest value for Fertility (88.9 %) compared to the Santa Inês (74.2 %). Fertility on production cycle, ranged from 66.4% to 92.56% and from 77.3% to ewes with BCS between 2.5 and 3.5 to 88.7 to those ewes with BCS of low than 88.8. The means for litter size were (1.46 vs 1.42) for F1 (Dorper + Santa Inês) and Santa Ines ewes respectively. The values for litter size on production cycles ranged from 1.24 to 1.60 and for classes of BCS of the ewes at lambing varied from 1.75 to 1.18. The F1 (Dorper + Santa Inês) ewes have better performance on fertility compared to the Santa Inês ones. However, for litter size, both attained similar figures. Using suitable breed genetic groups or genotypes, like these, together with optimum management, could improve lamb production in a reproductive program of three births per 2 years on semiarid condition.

Keywords: body condition, reproductive efficiency, reproduction, weaning, type of birth

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