Abstract

The aim of this study was to evaluate the productivity of 253 Pelibuey (Pb) ewes lambed over a period of four years (2005-2008), which were synchronized with progesterone and PMSG and mated to Pb, Dorper (Dr), and Katahdin (Ka) rams under confinement. Additionally, birth and weaning weight, and pre-weaning daily weight gain (GDP) of 499 lambs born from these crosses were also evaluated. A linear model including the effects of year of lambing (block), sire breed, type of lambing, sex and their interactions, was used to analyze birth and weaning weight, and GDP of lambs. The same model, without the effect of sex was performed to analyze ewe productivity. Birth weight and mortality percentage at 30 d post-lambing were similar (P > 0.05) among lamb genotypes, but weaning weight and GDP were higher (P < 0.05) in lamb’s crosses from Dr than in those pure Pb and crosses from Ka. The interaction type of lambing × sex affected (P < 0.05) pre-weaning performance. At 30 d and at weaning, the mortality percentage was similar (P > 0.05) between males and females lambs; however, lambs born from single lambing had lower (P < 0.01) mortality percentage compared with those from multiple lambing. At lambing, sire breed did not affect (P > 0.05) size, weight or survival rate of litter per lambed ewe, but at weaning, averages for these productivity traits were higher (P < 0.01) in ewes mated to Ka rams than in those mated to Pb rams. Also at weaning, ewes mated to Dr rams had lower (P < 0.05) litter size and survival rate, and similar (P > 0.05) litter weight than ewes mated to Ka rams. Ewes from multiple lambing presented higher (P < 0.01) litter size and weight, and lower (P < 0.01) litter survival rate than those from single lambing during the pre-weaning period. In conclusion, the Pb ewe productivity synchronized with progesterone and PMSG, and growth of its offspring, can be improved using crossbreeding schemes involving rams from the breeds Dorper and Katahdin.

Keywords
Pre-weaning growth, crossbreeding, hair sheep, weaning weight.