The influence of fainting goat sires on meat goat performance

Myotonic, a.k.a. fainting, goats, though smaller, could be a potential source of meat in the commercial meat goat industry. However, due to their size, they could end up selling for much less than Kiko and Spanish goats at auction. This study aimed to analyze how Myotonic sires influence kid preweaning and doe reproduction traits when bred with Spanish and Kiko does. Over a period of three years (2022-2024), Kiko-based does (n = 191) were bred to either Kiko or Myotonic bucks, and Spanish-based does (n = 149) were bred to either Spanish or Myotonic bucks. Doe litter weights at birth and weaning (LWB and LWW, respectively), litter size at birth and weaning (LSB and LSW, respectively), and kidding and weaning rates (KR and WR, respectively) were recorded during the reproductive year. Kids were weighed at birth and weaning. In the Spanish doe group, sire breed influenced ($p < 0.05$) kid birth weights. Myotonic bucks sired lighter kids than Spanish bucks (2.63 ± 0.10 kg vs. 2.89 ± 0.09 kg, respectively). Birth weight was not impacted ($p > 0.05$) by sire breed in the Kiko group. In both groups, sire breed did not influence ($p > 0.05$) kid weaning weight and average daily gain. Dam age, kid sex and litter size had an effect ($p < 0.05$) on all preweaning performance data. In the Kiko group, LWB was influenced ($p < 0.05$) by the sire breed. Myotonic sires produced lighter litters at birth than Kiko sires (2.42 ± 0.46 kg vs. 3.92 ± 0.45 kg, respectively). Sire breed did not affect ($p > 0.05$) LWB in the Spanish group. For both groups, sire breed did not have an effect ($p > 0.05$) on LSB, LSW, KR, and WR. In this dataset, there was no weight difference seen when Myotonic-sired kids were compared to Spanish- and Kiko-sired kids at weaning. These results suggest that heterosis could be a factor when crossbreeding these populations.