









this breed may require a review, aiming to avoid death due to parasitic infections.

Survival analysis of lambs from different breeds after worm replacement with a susceptible isolate of *Haemonchus contortus*

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Multiple anthelmintic resistance of the Haemonchus contortus populations occurs worldwide. The objective of this study was to evaluate the effect of worm replacement on survival of White Dorper (DO), Santa Inês (SI) and Texel (TX) lambs. Ewes from the three breeds in the final third of gestation, and naturally infected with resistant *H. contortus*, were divided into three groups: Control (C), Partial Replacement (PR) and Total Replacement (TR). The PR and TR ewes were dewormed and artificially infected with 3,000 L3 of a H. contortus susceptible isolate (Echevarria1991), and divided into two paddocks: one naturally contaminated with resistant parasites (PR) and another free of contamination (TR). Group C was not submitted to worm replacement or anthelmintic treatment, and animals were allocated into a naturally-contaminated pasture. Lambs born in each group in two birth seasons (85 C, 67 PR,

and 75 TR, totaling 227 animals) were phenotypically monitored for fecal egg count (FEC), packed cell volume (PCV), weigh gain and anthelmintic treatments from day 42 to day 189, every 21 days. Lifesaving treatment with albendazole and levamisole was applied to animals with FEC \geq 10,000 and PCV \leq 24%, or with PCV ≤ 22% independently of FEC. Kaplan-Meier survival analysis was performed considering the number of lifesaving treatments within each group and breed. Throughout the 189 day-period, the survival curve analysis revealed significantly lower (p<0.001) number of lifesaving anthelmintic treatments in lambs from PR and TR compared to C group and in SI compared to DO and TX breeds. The proportion of the lambs surviving at 189 days post-lifesaving anthelmintic treatment were 7%, 12%, and 14% in the C, PR, and TR groups, respectively. At the same time point, survival among breeds were DO: 2%, SI: 41% and TX: 6%. Thus, these results reinforce the potential uses of worm replacement and Santa lnês breed as sustainable strategies for controlling *H. contortus* infections in sheep.

Characterization of gastrointestinal nematode egg shedding in dairy goats from Mexico

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Nematodosis can affect the health and productivity of dairy goats. Control is challenging