



Seasonal behaviour of Criollo-Chaqueño compared to crossbreds kept in the Chaco dry forests of Bolivia



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Introduction

- Gran Chaco: dry forest region in S-America, partly in Bolivia
- Study area: extensive cattle husbandry, mainly forest grazing
- Cattle genotypes: Criollo cattle such as Criollo Chaqueño (local cattle genotype), crossbreeding with exotic breeds such as Brahman
- Question: **Are Criollo Chaqueño better adapted to the conditions in the Gran Chaco compared to Brahman × Criollo Chaqueño crossbreds?**

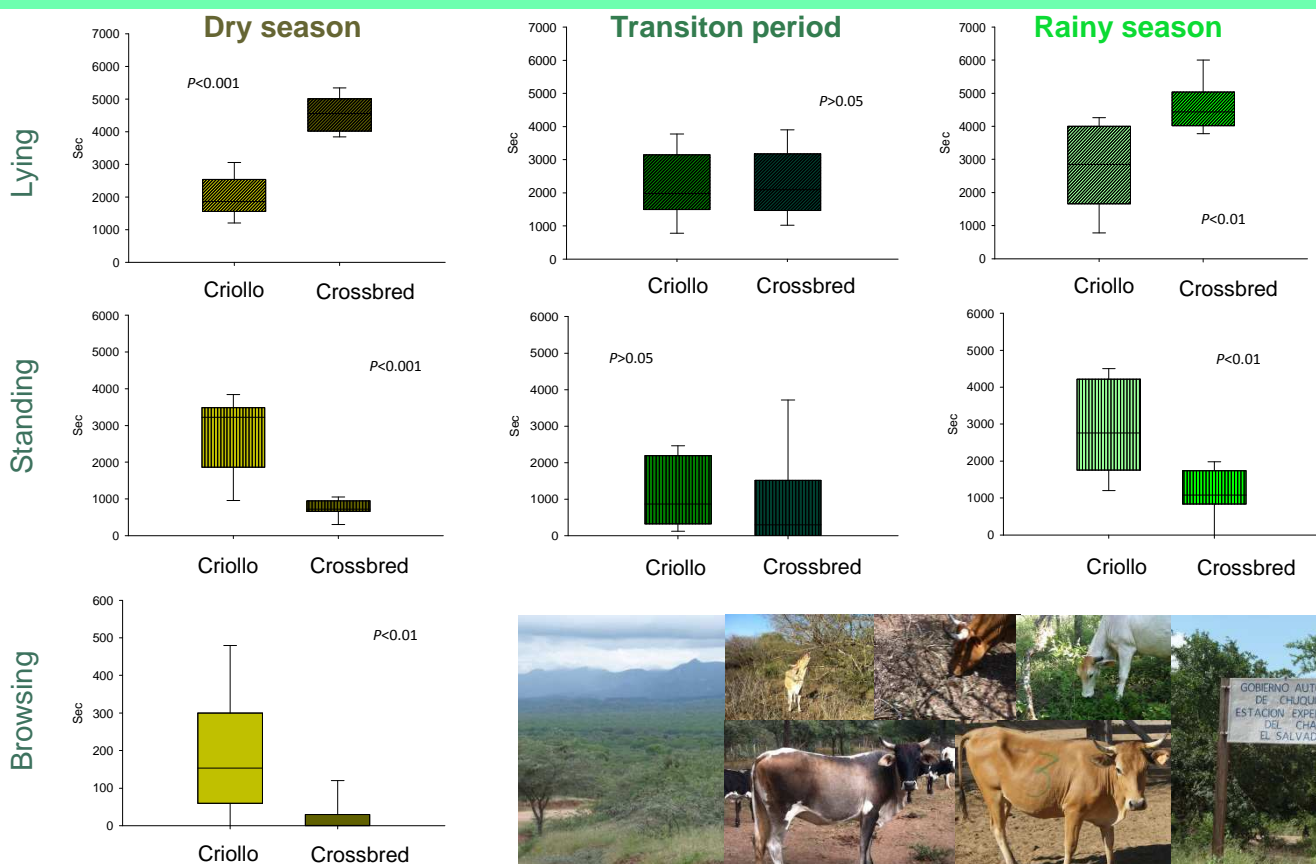
Conclusions

- Time period between 10:00 und 15:00 is mainly used for resting (lying, standing)
- Differences in animal behavior in rainy (R) and dry season (D) but not in transition period
- Main differences found for resting behavior in R and D: Criollos spent less time lying than the crossbreds
- Criollos spent more time browsing in D compared to crossbreds → adaptation to D through switching to alternative forage resources such as browse

Materials & Methods

- Experimental station «El Salvador» (Chuquisaca, Bolivia)
- 12 Criollos (328±22 kg) & 12 crossbreds (399±52kg) each
- 3 Seasons: Dry season (D, Aug/Sep 11), Transition period (T, Oct/Nov 11), Rainy season (R, Jan/Feb 12)
- 2 forested and fenced rangelands of 175 ha each per genotype (switching the herds to the respective other rangeland at half time in each season)
- Behavior observations : every 3-4 min for 60 sec, 1 animal/day in each season
- Data analysis: Time between 10:00-15:00, only animals having full data for this time period ($n=6000$ sec/animal): $n=7$ & 9 , $n=6$ & 6 , $n=8$ & 7 for Criollos und crossbreds in D, T and R
- Statistical analysis separately per season using SAS 9.3, one-way ANOVA with genotyp as fixed effect or Kruskal-Wallis Test (non-parametric) if needed

Results



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