



Seminal characteristics of Dorper rams with different social hierarchies in northern Mexico



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Abstract

The aim of this study was to evaluate the possible difference in seminal characteristics of Dorper rams of either high, medium or low social ranks in northern Mexico (26° N).

Material & Methods

The male's social status was quantified through a competitive behavioral test in a herd of 36 adult males, the aggressive interactions and their consequences were registered to calculate the success index (SI), where low hierarchy (LH) rams had a SI of 0 to 0.33, medium hierarchy (MH) rams had a SI of 0.34 to 0.66 and high hierarchy (HH) had a SI of 0.67 to 1. Afterwards, the rams were subjected to an estrogenized female (2 mg of estradiol cypionate) for teasing in order to collect a semen sample with an artificial vagina. The semen was evaluated for volume, motility and concentration. The seminal characteristics differences were analyzed using a one-way ANOVA tests and establishing a p-value of 0.10 as significance level in the SPSS statistical package.

Conclusion

In conclusion, low hierarchy Dorper rams show a statistical tendency to have a lower sperm concentration.

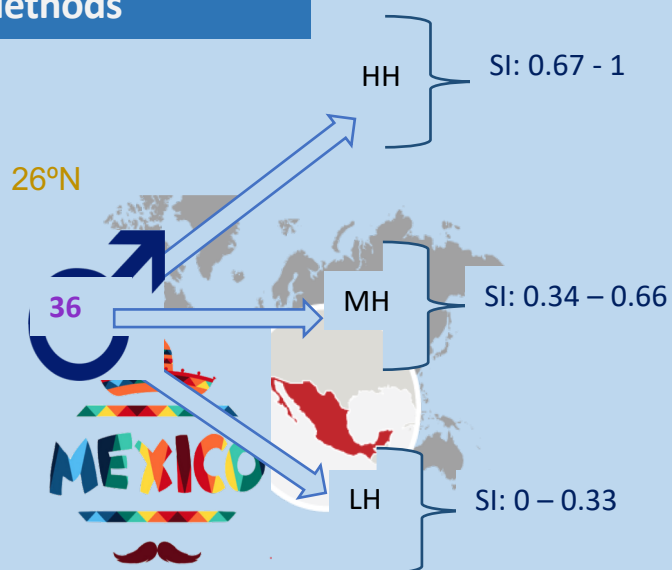
Material & Methods

Competition Test



Success index =

$$\frac{\text{Won events}}{\text{Won events} + \text{lost events}}$$



Semen Sample



Strogenized female (2 mg of estradiol cypionate)



Results

Table 1.- Seminal characteristics of Dorper rams of either low, medium or high social ranks within a heard.

Social Rank	Volume (ml)	Motility (%)	Concentration (10 ⁶ x ml)	Body weight (kg)
LH	0.86±0.11 ^b	1.75±0.68 ^a	2660.38±463.20 ^b	83.93±3.40 ^a
MH	1.03±0.10 ^a	2.30±0.29 ^a	3687.46±101.78 ^a	81.92±2.91 ^a
HH	0.86±0.05 ^b	2.84±0.44 ^a	3848.06±187.00 ^a	81.68±3.38 ^a

^{a,b} Literals between columns show a statistical difference (P<0.10)