Ewe reproduction affected by crossbreeding Corriedale and Dohne Merino

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Introduction

- Given the changes observed in wool and sheep-meat world markets in the last decades, Dohne Merino (DM) breed has grown in Uruguay, particularly used in crossbreeding schemes with the most popular breed (Corriedale; C).
- The focus of the study was to evaluate the effect of the crossbreeding between DM and C on ewe fertility, prolificacy and lambing percentage.

Materials and methods

- We evaluated 530 records from 384 animals of three genotypes: 100%C (100C), 50%DM×50%C (50DM), and 75%DM×25%C (75DM) during three years. Ewes from each genotype were assigned randomly to 16 DM sires, and managed together grazing native grasslands.
- Fertility (pregnant/inseminated ewes), prolificacy (number of lambs/pregnant ewes), and lambing percentage (number of lambs/inseminated ewes) were evaluated and analysed using mixed models with repeated measures in a randomized block design. Year, genotype, and ewe age group were treated as fixed effects, while the animal as random effect, and bodyweight was included as a covariate.

Effect of Genotype on reproductive traits (mean±s.e.).

Trait	Genotype 100C	50DM	75DM	P
Fertility	0,86±0,03	0,87±0,03	0,83±0,03	ns
Prolificacy	1,13±0,03 [b]	1,26±0,04 [a]	1,13±0,03 [b]	0,01
Lambing percentage	0,94±0,04 [b]	1,07±0,05 [a]	0,91±,04 [b]	0,03
Fertility (BW)	0,88±0,03	0,87±0,03	0,83±0,03	ns
Prolificacy (BW)	1,16±0,03 [ab]	1,25±0,03 [a]	1,12±0,03 [b]	0,02
Lambing percentage (BW)	0,98±0,04	1,05±0,05	0,91±0,04	ns

[ab] Means within rows with differing letter are significantly different (P < 0.05). (BW), bodyweight as a covariate.

Conclusions

1. Prolificacy and lambing percentage of Corriedale can be improved in the first cross by using Dohne Merino.
2. This effect is partially related with the bodyweight differences between genotypes and will be not kept by increasing the percentage of Dohne Merino within this crossbreed.

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