IRIS AperTO

UNIVERSITÀ DEGLI STUDI DI TORINO

AperTO - Archivio Istituzionale Open Access dell'Università di Torino

Does hormonal profile influence behaviors in pubescent ewes?

This is the author's manuscript

Original Citation:

Availability:

This version is available http://hdl.handle.net/2318/1875919 since 2022-10-06T13:38:50Z

Terms of use:

Open Access

Anyone can freely access the full text of works made available as "Open Access". Works made available under a Creative Commons license can be used according to the terms and conditions of said license. Use of all other works requires consent of the right holder (author or publisher) if not exempted from copyright protection by the applicable law.

(Article begins on next page)

17 September 2026

75° CONVEGNO FEDERAZIONE SISVET
15-18 giugno 2022 - Lodi

DOES HORMONAL PROFILE INFLUENCE BEHAVIORS IN PUBESCENT EWES?

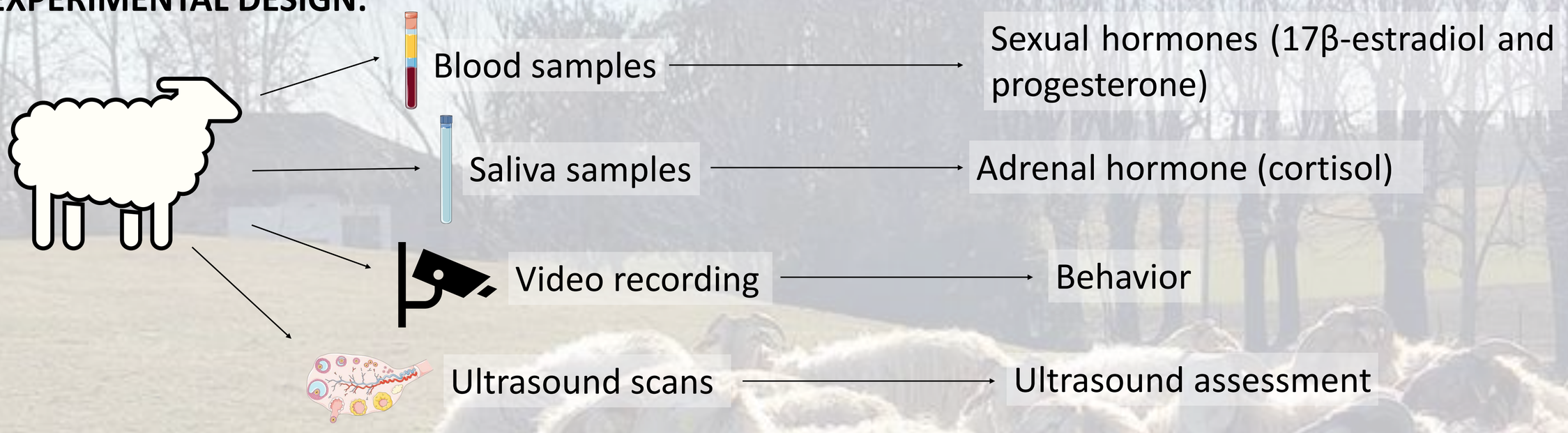
Isabella Manenti (1), Elisabetta Macchi (1), Mario Baratta (2), Silvia Miretti (1), Irene Viola (1), Paola Toschi (1), Paolo Cornale (3)

(1) Università degli Studi di Torino, Dipartimento di Scienze Veterinarie. (2) Università degli Studi di Parma, Dipartimento di Scienze Chimiche, Scienze della vita e Sostenibilità Ambientale. (3) Università degli Studi di Torino, Dipartimento di Scienze Agrarie, Forestali e Alimentari.

INTRODUCTION: Given the importance of small ruminant farming systems for the rural economy and the conservation of the mountain ecology, SmartSheep project aims to contribute in knowledge to develop an efficient and sustainable supply chain in rustic breed.

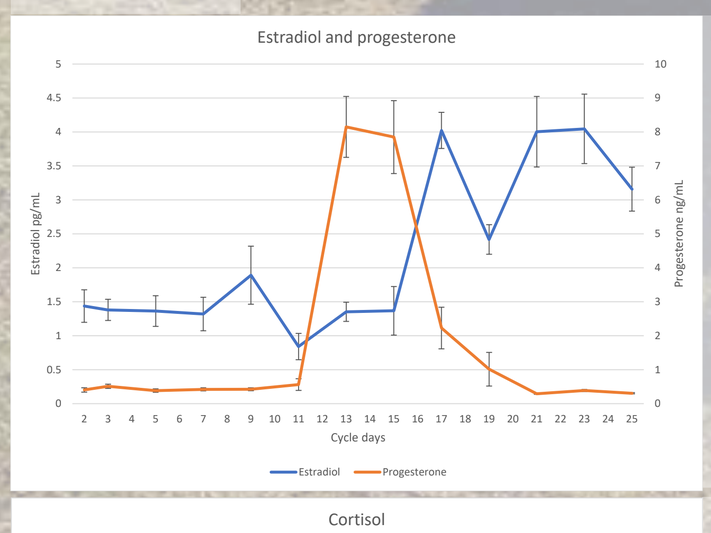
GOALS: Evaluation of behavior modification and adrenal response in relation to the stage of the first estrous cycle in Roaschina-Frabosana breed.

EXPERIMENTAL DESIGN:



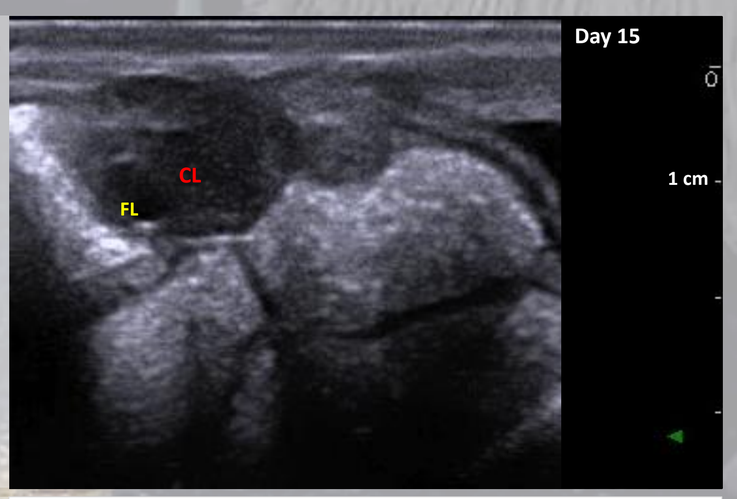
20 ewes of Frabosana-Roaschina breed (10-12 months old) were synchronized with a standardized protocol. Behavioral and hormonal data were analyzed in relation to the estrous cycle phases obtained from hormonal patterns. Video data, registered through scan sampling, were eventually related to an adaptive endocrine response.

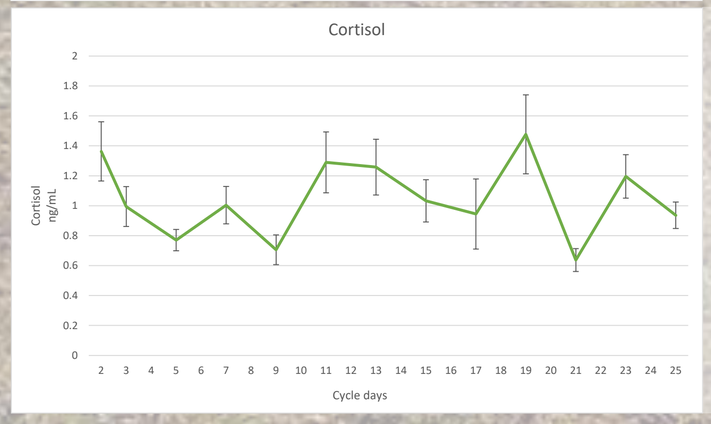
RESULTS:



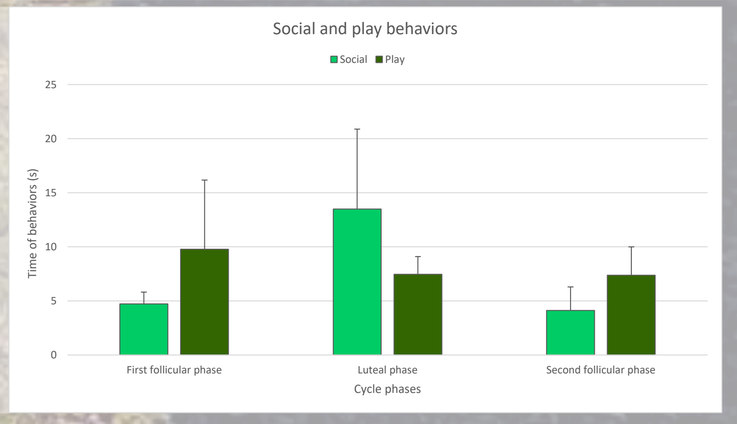
These hormonal levels confirmed proper cyclic activities in the ewes at first estrus. Three phases (first follicular, luteal and second follicular) for behavioral analysis have been identified.

No significant differences were detected in the cortisol levels during the phases of cycle.





The ewes didn't show sexual behaviors during the reproductive cycle. Social (displacing from resources, grooming, nudge, and sniffing) and play (frontal butt, reciprocal butt, side/rear butt, and mounting) behaviors weren't statistically different.



CONCLUSION: Although these animals reached the age of puberty, like other Italian dairy breeds, at 12 months old, they showed a silent ovulation. Play behaviors and breed-specific characteristics may be reflected in reproductive functionality. Frabosana-Roaschina is indeed an autochthonous and rustic breed in West North Alpine bioregion on which a milder selection has been performed. For this reason the reproductive performance of the breed may be taken into account before planning a reproductive strategy in order to reduce the failure rate of fertility.

This work is supported by CRC grant, Agriculture 2.0.