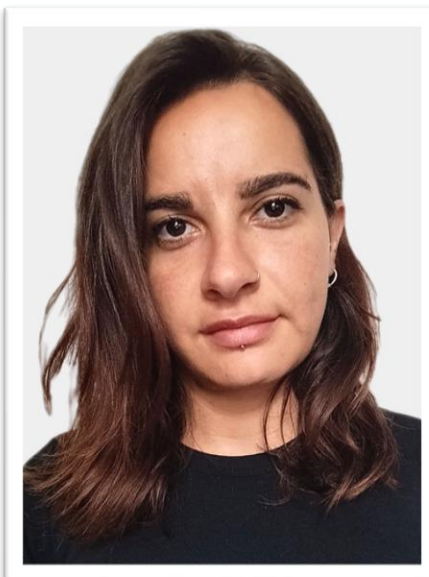




EVALUATION OF MILKING ATTITUDE AND MILK QUALITY IN NATIVE CIUTA SHEEP BREED



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INTRODUCTION



Pecora Ciuta is a small, local breed native to the Central Italian Alps.

Livestock activity involving **native breeds** is a fundamental means to **support disadvantaged areas**, limiting depopulation and abandonment of the territory, and all the related negative consequences on the **environment**, **biodiversity**, and **landscape**. In fact, local breeds are part of the original landscape, contributing to its maintenance through their grazing activities.

From this perspective, farming of local native breeds can provide numerous cultural, regulatory, and **ecosystem services**, in addition to contributing to local **food supply**. Although the productivity levels are lower compared to those from more specialized breeds, native breeds can offer multiple products due to their lack of specialization. These products often have **unique qualitative characteristics** which, if properly identified and promoted, can help creating **added value** for local supply chains.

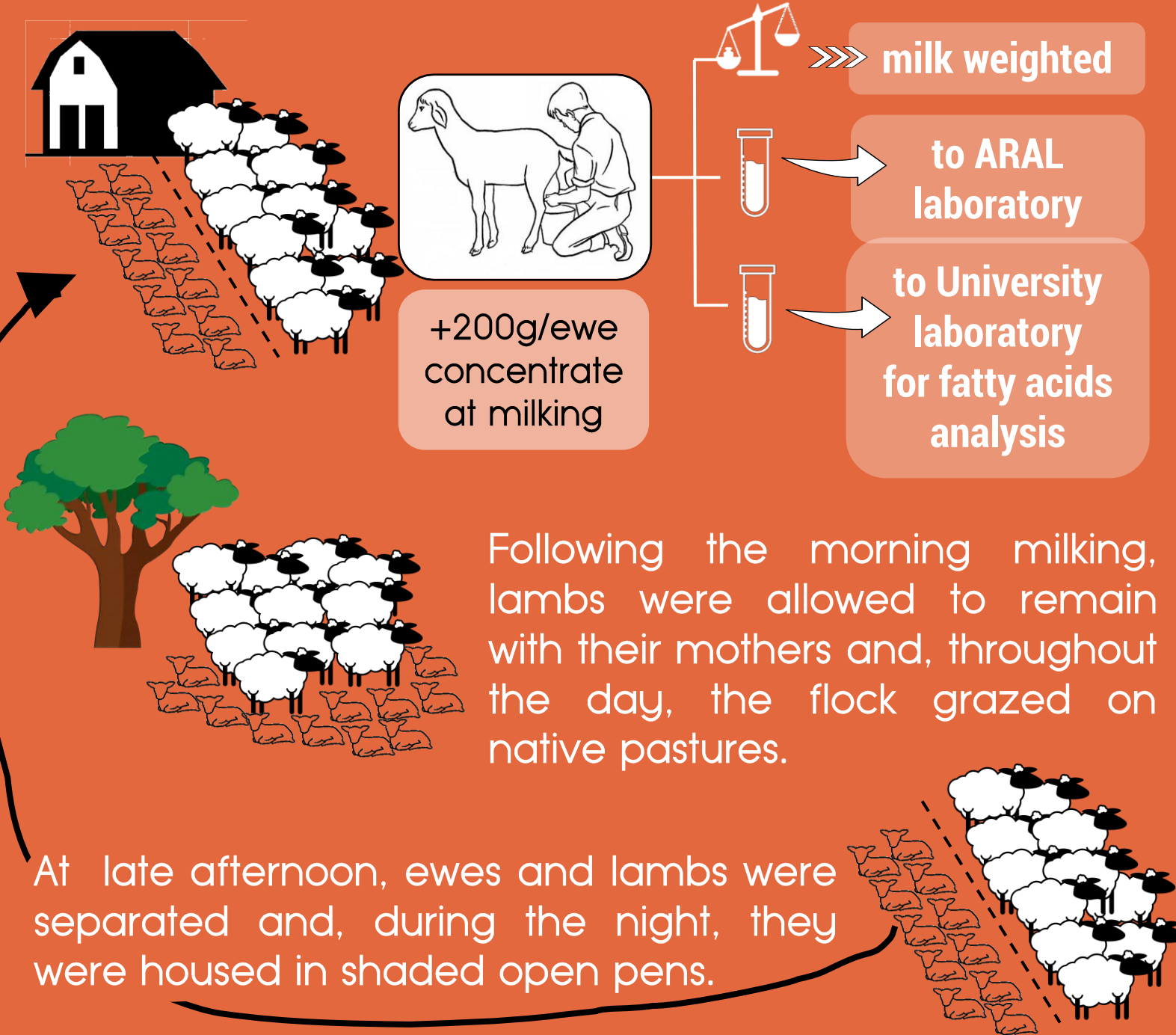
Particularly, dairy products from native and not specialized sheep breeds have different **nutritional quality** compared to those obtained from cosmopolitan and specialized breeds. These differences primarily concern **protein content** and **fat quality** and are linked to numerous factors, such as the animal's genotype and its individual characteristics, but also the farming system and nutrition, which, in the case of native breeds, is predominantly **grass-based**.

OBJECTIVE

Even if there is **historical documentation** of its traditional use for mixed-milk (cow, goat and sheep) cheese production, Pecora Ciuta is nowadays raised exclusively for meat production and **there is no knowledge about ewe's milking attitude and milk quality features**. As part of the VAL3CIUTA project, the aim of this study was to **acquire, for the first time, a deep knowledge of Ciuta sheep milking attitude and milk quality features**, with the further goal to **lay the groundwork for initiating a local supply chain** for the processing of Ciuta sheep milk.

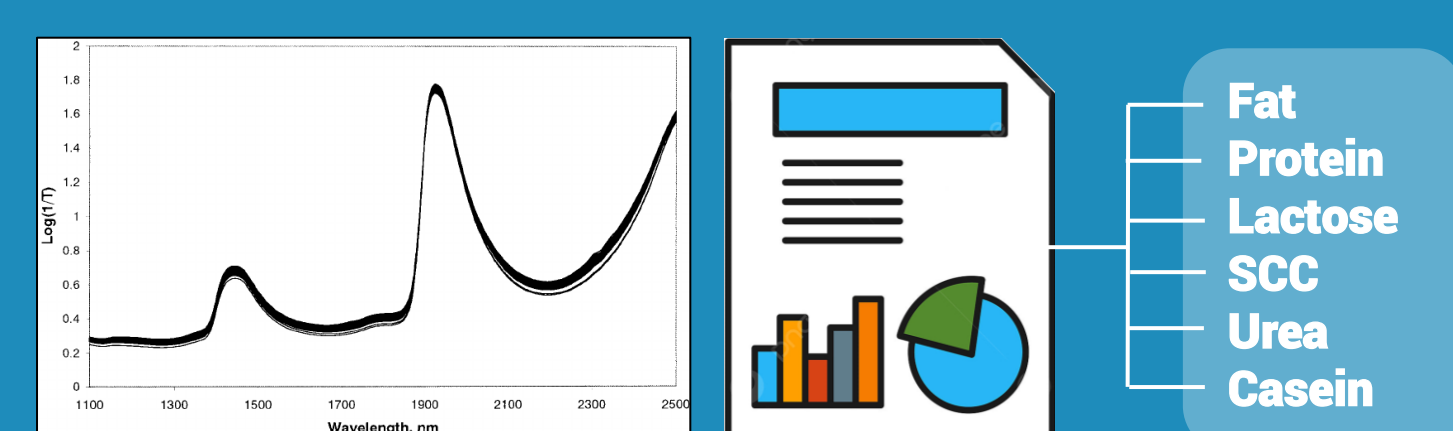
METHODOLOGY I

The experiment was conducted at one sheep farm located in Valtellina, Lombardy. A flock comprising 11 ewes and their lambs was utilized and housed in a single barn equipped with a catch feeder. The ewes were manually milked once a day in the morning.

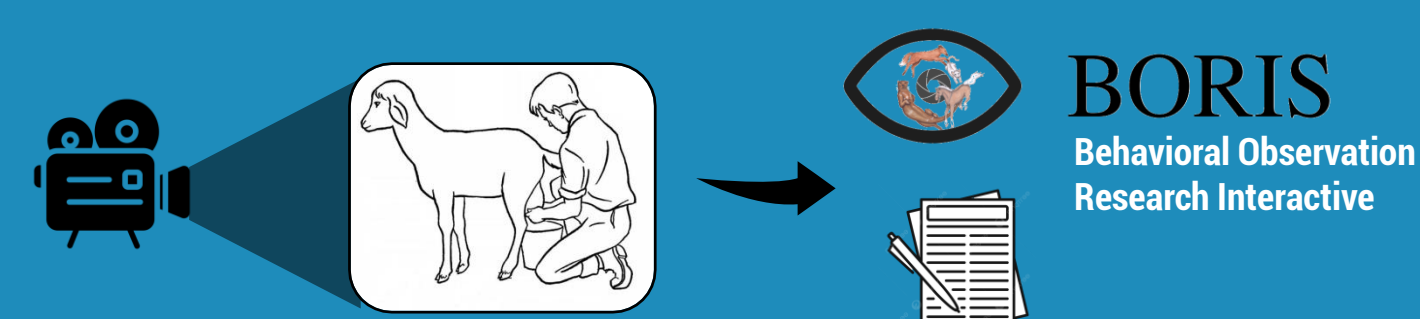


METHODOLOGY II

Individual milk production was recorded weekly and individual samples of milk were dispatched to the accredited laboratories of ARAL (Regional Association of Farmers) for compositional analysis, conducted in accordance with official methods (ISO 9622:2013, IDF141).

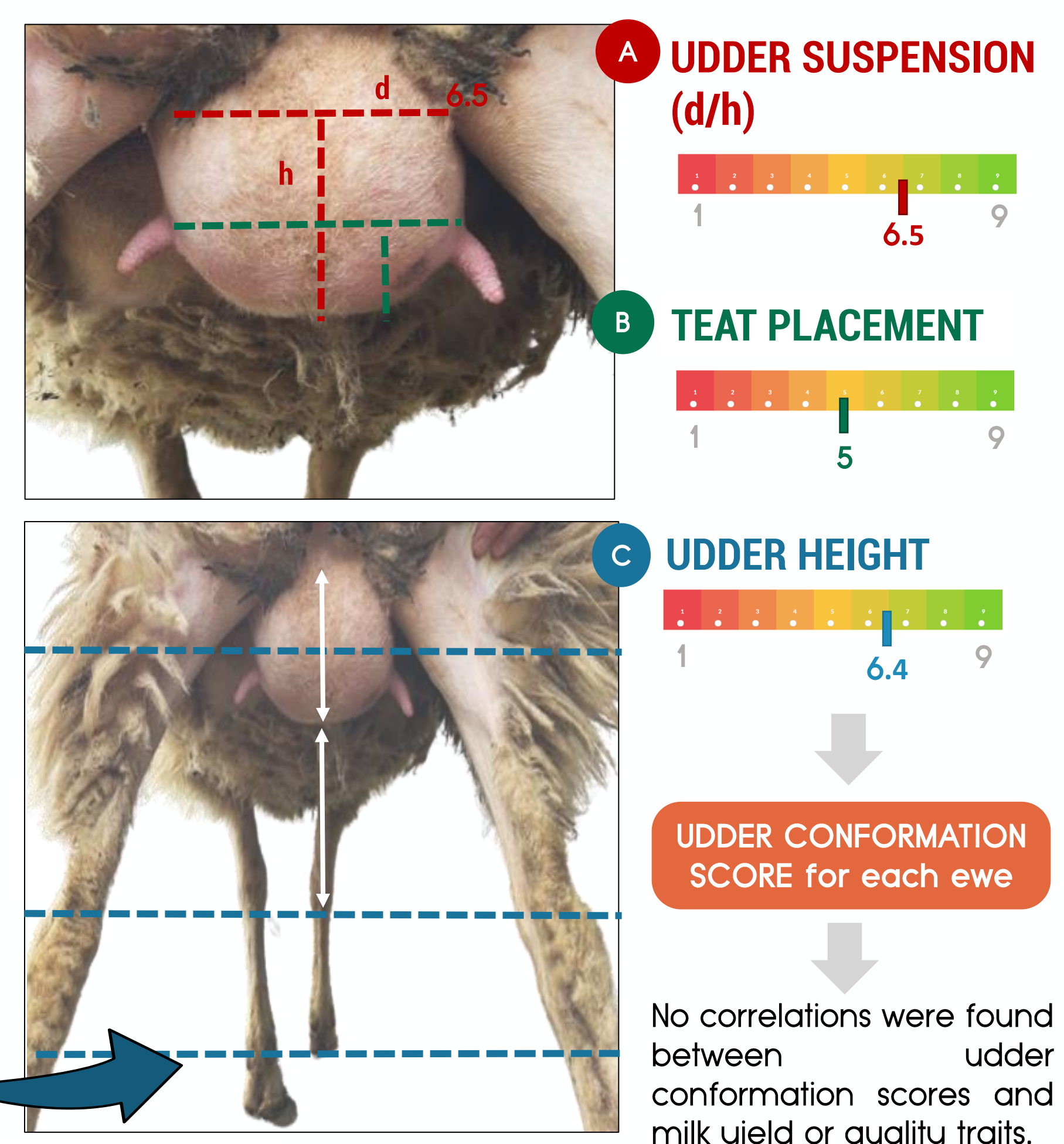


Sheep behaviour was recorded during milking sessions, aligning with the days designated for milk sample collection.

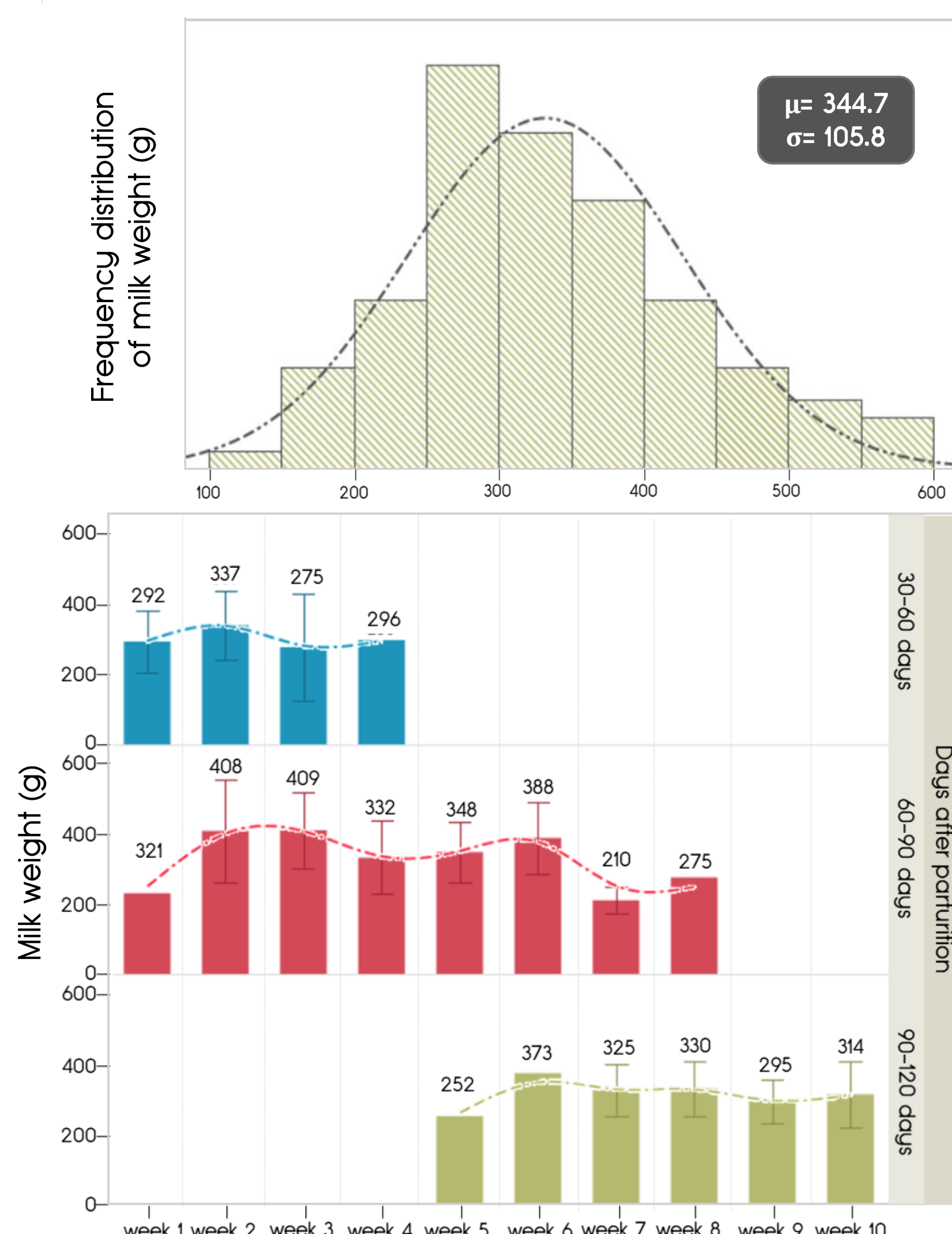


Udder conformation scores were documented for each ewe at the commencement, midpoint, and conclusion of the trial.

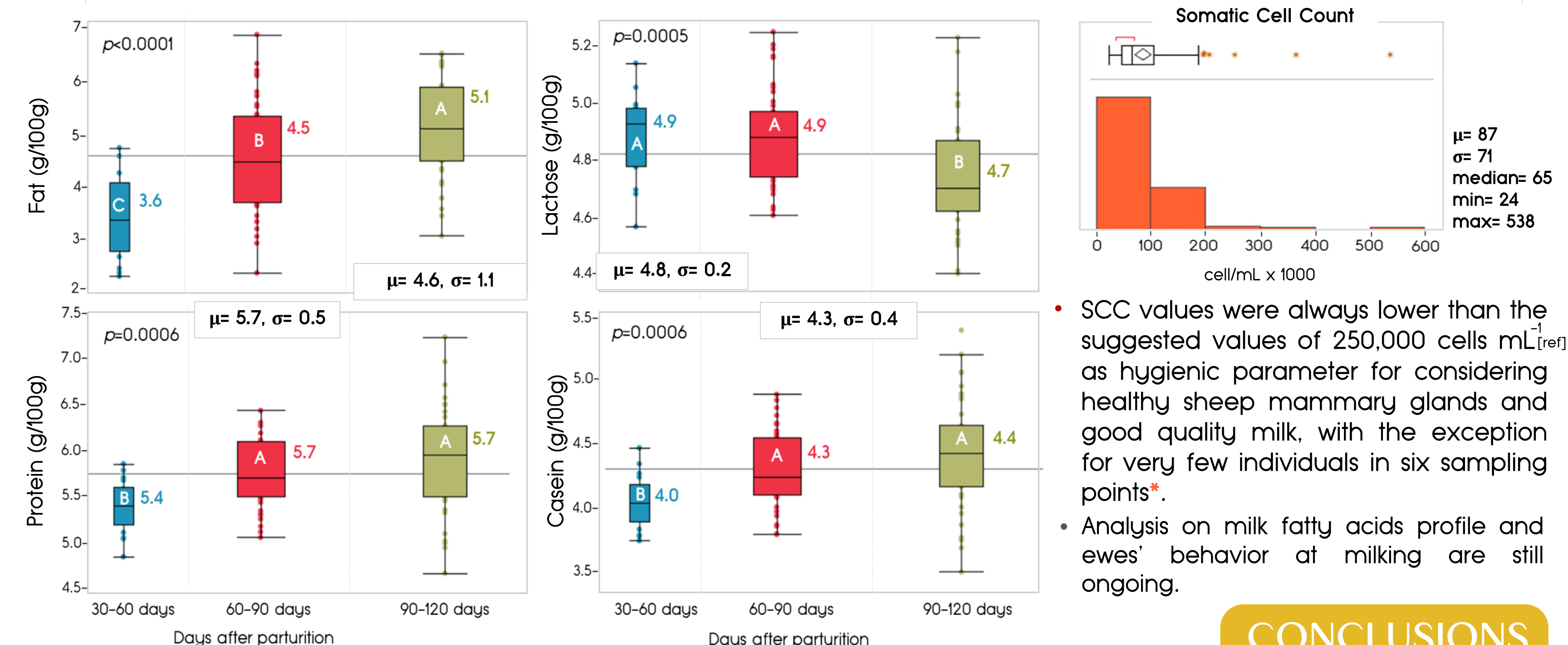
RESULTS



MILK PRODUCTION



MILK QUALITY TRAITS



CONCLUSIONS

Results from this research are a complete novelty for the current conditions of the production reality under consideration. Further, they could represent an extremely valuable tool for **supporting the promotion and enhancement of this versatile breed** and its dissemination throughout the territory with positive **repercussions for farmers and the entire local community**.



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[ref]
Albenzio et al. (2019) Somatic cell count in sheep milk. *Small Ruminant Research*, Volume 176, July 2019, Pages 24-30