INNOVATION AND MULTI-ACTOR CROSS-BORDER COOPERATION IN CENTRAL PYRENEES
TO IMPROVE SUSTAINABILITY OF LOCAL SHEEP BREEDS:
PIRINNOVI PROJECT

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Sheep farming of local breeds in the Pyrenean region is of major significance from an economic, social and environmental viewpoint. However, this activity is in continuous recession. Common problems are found in both sides of the border, in France and in Spain: Its scarce profitability and a lack of generational renewal, due in part to the lack of innovation linked to its particular geographic isolation which is threatening its sustainability and with it, the survival of some local meat breeds.

Objective of PIRINNOVI
To establish a forum for acquisition, exchange and transfer of field knowledge and research methodologies to improve sheep farming sustainability by the way of management and reproductive genetics.

Sustainability axis
Indicators for economic, social and environmental sustainability valid for both sides of the border are being designed and implemented. This information, as well as the innovations raised on the project, will be shared with different actors within the territory.

Technological actions

Implementing electronic identification and automatic lamb weight recording
Surveys and research for improving fertility of artificial insemination
Design of a SNP array paternity test valid for all the Pyrenean breeds in the project

Choosing for Maternal ability
Better maternal care behaviour and sufficient milk to rear their lambs

Genetic axis
Common work is carried out to improve maternal abilities and prolificacy linked to major genes, as a strategy to increase productive efficiency and therefore sustainability of sheep farms.

1,337,000 sheep animals belonging to a total of 18 local breeds
Spain: Anestana, Churra Tenerina, Xilqueta, Roys Biblittanos, Maeblona, Rasa Aragonesa, Navarra.

Prolificacy
Studying pleiotropic effect of known prolific polymorphisms (Fecl/Lac and FecA/Flasa Aragonesa), using high density SNP array and whole genome sequencing to search for new prolific alleles in these two breeds and searching for already worldwide known prolific alleles in the endangered breeds of the project for optimal management.

Multi-actor cooperation
7 R&D agencies, 8 livestock associations, 4 agricultural cooperatives

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