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The Spanish dairy sheep breeds face new challenges on Mediterranean area

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Sheep production in Spain

16 million heads (19% of EU population, 2nd after UK)

Dairy				
	% (Spain)			
Number of ewes	20%			
Final livestock production value (%)	3.3			
	% (Europa)			
Milk (I)	25% (1st)			
Cheese (kg)	35% (1st)			

Diversity of conditions, breeds & systems



Grasslands







Indoors



Cereal-stubble



Mountains

Crops

Dairy production

Local breeds

Latxa and Carranzana





Churra and Castellana





Manchega





Foreign breeds

Assaf





Lacaune





Farming systems

	Latxa	Manchega	Churra	Assaf	Lacaune	
Type o area	Pastoral or mountain	Lowlands		Indoors		
Reproductive strategy	1 lambing / year	3 lambings / 2years				
Lambing	Indoors					
Lactation length	5-7 months					
Milking period	8 months	12 months				
Milking	Machine					
Milk yield	190 l/120d	194 l/120d	133 l/120 d	350 l /150 d	363 l /150 d	
PDO Cheese	Idiazabal and Roncal	Manchego	Zamorano	-	-	

Classical concerning aspects

Genetic

Selection on pure breed consolidated

Main goal: Milk yield

Other traits:

Milk quality: fat & protein

Udder morphology

Scrapie

Health

Compulsory programs
Mastitis
Blue tongue

Respiratory problems

Nutrition

Use of natural resources
Alternative protein sources

Reproduction

Factors affecting fertility
Artificial insemination
Natural mating

New challenges

One health

Improving competitiveness

Climate change

Predators

Animal welfare

Generational turnover

New challenges: Improving competitiveness

Use of ICTs

Use of molecular information

New traits in genetic programs

Nutrition

Improving fertility

Integral way

Circular Bioeconomy

Multidisciplinary approach

Individualized treatments

Adding value to ecosystem services

Microbiome

GPS, Satellites, sensors:

Data collection

Traceability

Individual management: nutrition, health

Genomic selection:

Increase of production

Functional traits

Integral traits: Functional longevity, robustness

New raw materials

Feed efficiency

Microbiome

CH4 emissions

New artificial insemination tools

Molecular genetics

Microbiome

Nutrition-reproduction interactions

Alternatives to hormonal treatments

Seasonality

New challenges: One health

More efficient production systems Alternatives to hormonal treatments for Al

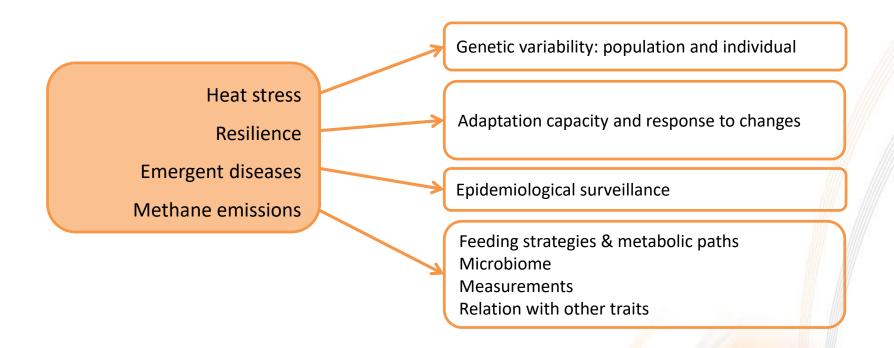
Organic production

Decrease medicalization

Rationalization of the use of medicines Improvements in livestock management Alternatives to antibiotics (Vaccines, pre and probiotics)

Improvement of the immune system

New challenges: Climate change



New challenges:

Predators (wolf, bear, vulture)

Animal Welfare

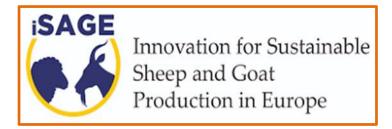
Virtual fencing
Use of shepherd dogs /donkeys
Geolocation and monitoring
Environmental payment schemes

Indicators and assessment

Protocols for certification

Interaction with behaviour, production, health, reproduction

Projects







GRUPO OPERATIVO REPROVI

ENCOMIENDA GENOMICA



Nuevo RTA

RAZAS GANADERAS ESPAÑOLAS OVINAS

































Thanks a































































