



10th
International
SHEEP
VETERINARY
Congress
2023

Seville
Spain
6th-10th March



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Pass, Present and Future of Merino in Argentina and Uruguay

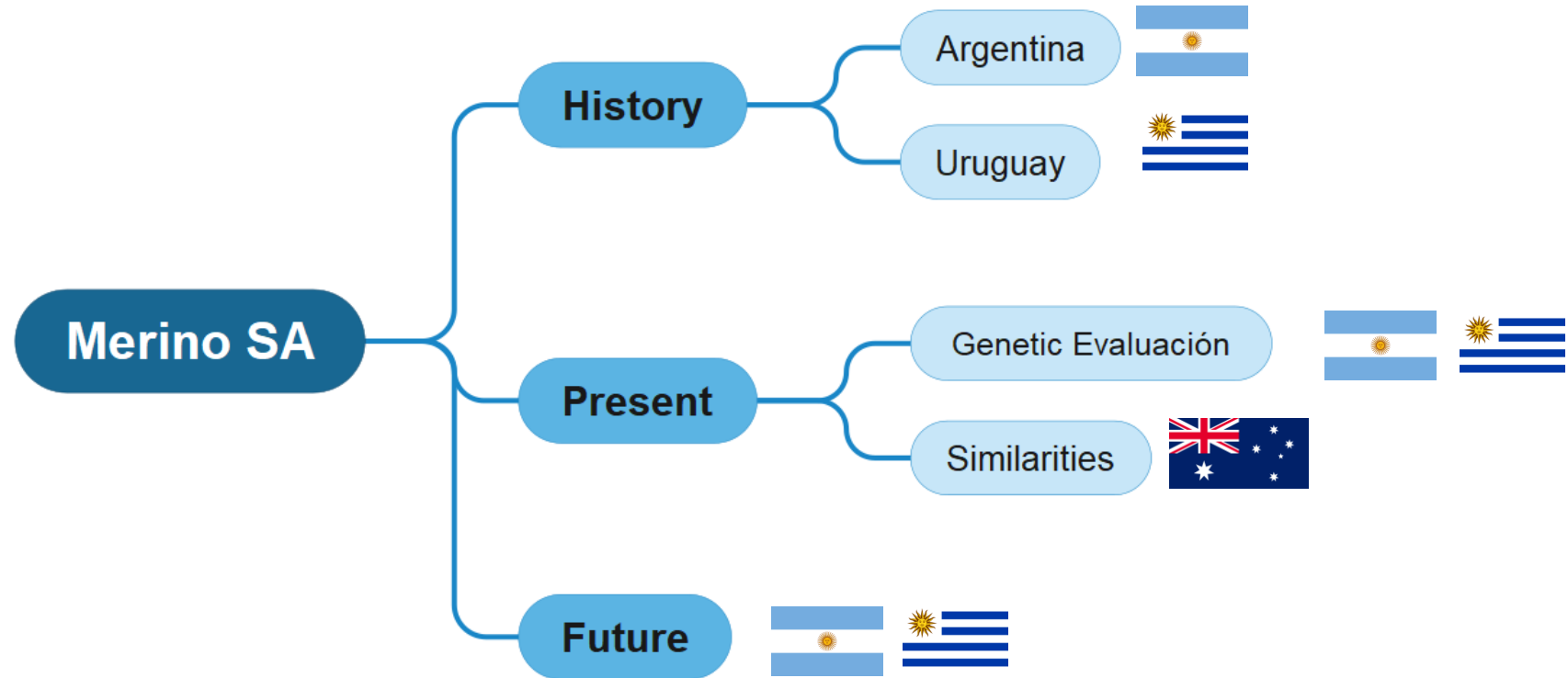


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History of Merino Breed Argentina and Uruguay





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Merino breed in Argentina

1825-1827 -> Three Merino entrances took place

Argentinian Sheep Stock -> 3 million

1826 -> *Los Sajones* Stud

Breed Pure Merinos and applied zootechnics standards

1834 -> wool production was getting a relevant place in the exports

1836-1838 -> **MERINOMANÍA**

3,802 Merinos was imported

1840 -> Wool Boom

Local differences in selection -> *Argentine Merino*

1912 -> *Sociedad Rural Argentina* opened the Flock Book

1937 -> census, stock 44 million sheep (54% Merino, Argentine & Australian biotypes)





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Merino breed in Uruguay

- ✓ Introduced in **1875** (Basque-French immigrants)
- ✓ Imports from **Arg, USA and Aus** (1903, 1911 & 1924)
- ✓ Crossbreeding with Merino -> "*Río de la Plata wool*"
- ✓ **In 1943** Breeder Association was founded

- ✓ **In 2016:** 84% Merino related breeds
- ✓ First shearing (yearling): **15.6 μ FD, 39 kg BW, 3.4 kg GFW**
- ✓ Price per kg clean wool (last week)
 - **16.5 μ 16.7 USD**
 - **22.0 μ 9.5 USD**

Breed	% National Flock	Rams with EPD % flock
Corriedale	42%	42%
Australian Merino	26%	62%
Dohne Merino	3%	23%
Polwarth	9%	79%
Merilin	4%	37%
Texel	3%	16%
Romney Marsh	3%	45%
Total	6.7 millions	48%



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Present of Merino Breed



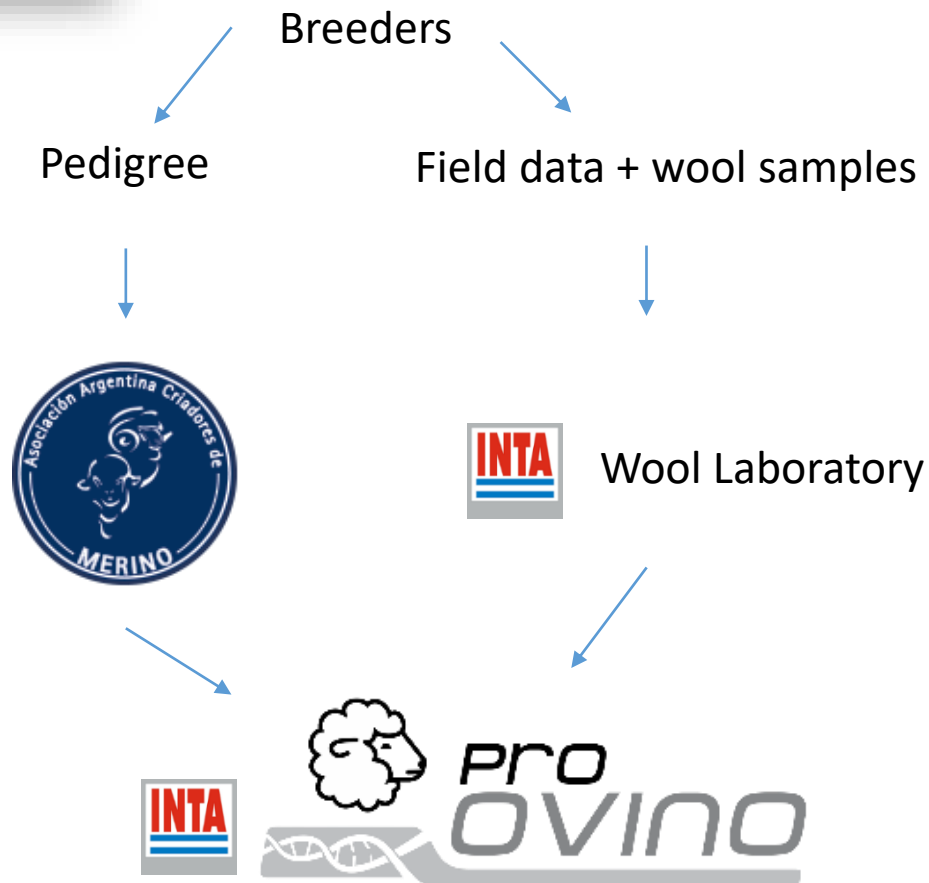


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Genetic evaluation in Argentina



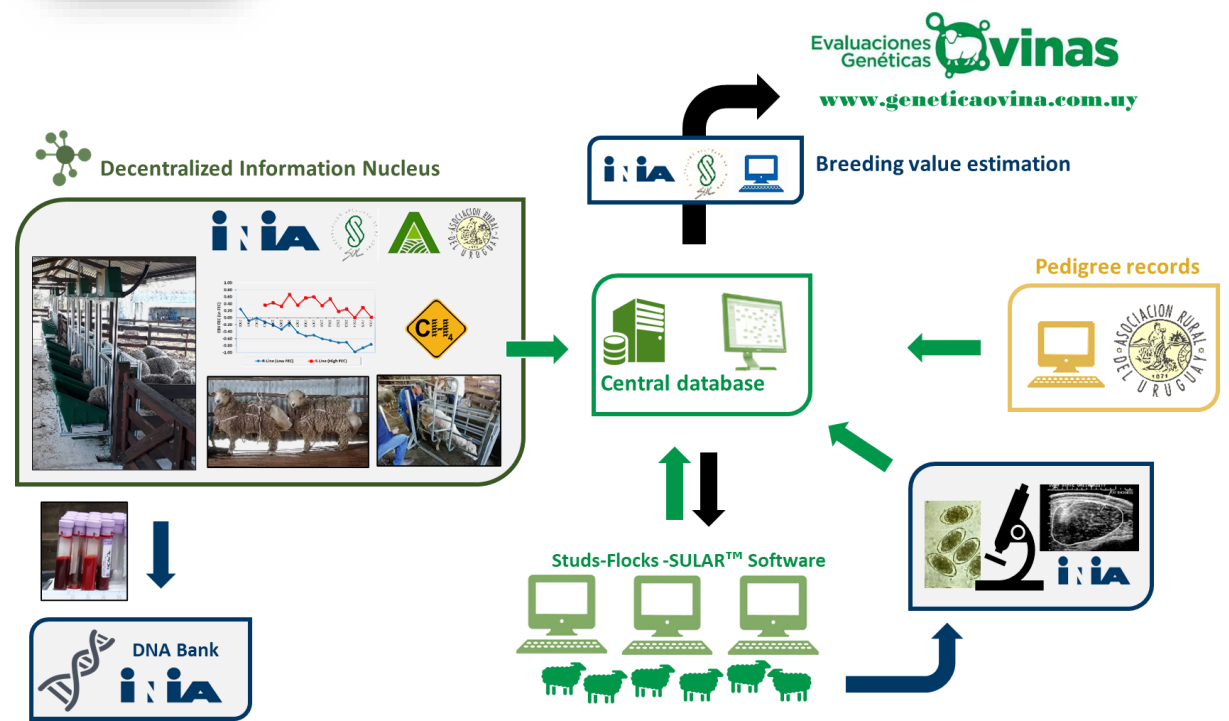
- ✓ From **1991**: INTA + Breeders Association
- ✓ **1,750** new lambs per year (Polled, Horned and Dohne M.)
- ✓ **32** active stud flocks
- ✓ **9** EPD traits and selection indexes
- ✓ **~33,000** animals evaluated



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Genetic evaluation in Uruguay



- ✓ From 1969: Flock testing (SUL)
- ✓ From 1995: SUL + INIA + Breeders Association
- ✓ 12 breeds evaluated (6 related with Merino)
- ✓ 25,000 new lambs per year (4 to 5.000 Aus Merino)
- ✓ 90 stud flocks (19 Aus Merino)
- ✓ 20 EPD traits and selection indexes (5 research EPD)
- ✓ 325,000 animals evaluated (115 k in Aus Mer)
- ✓ >7,000 genotyped animals (3,000 in Aus Mer)

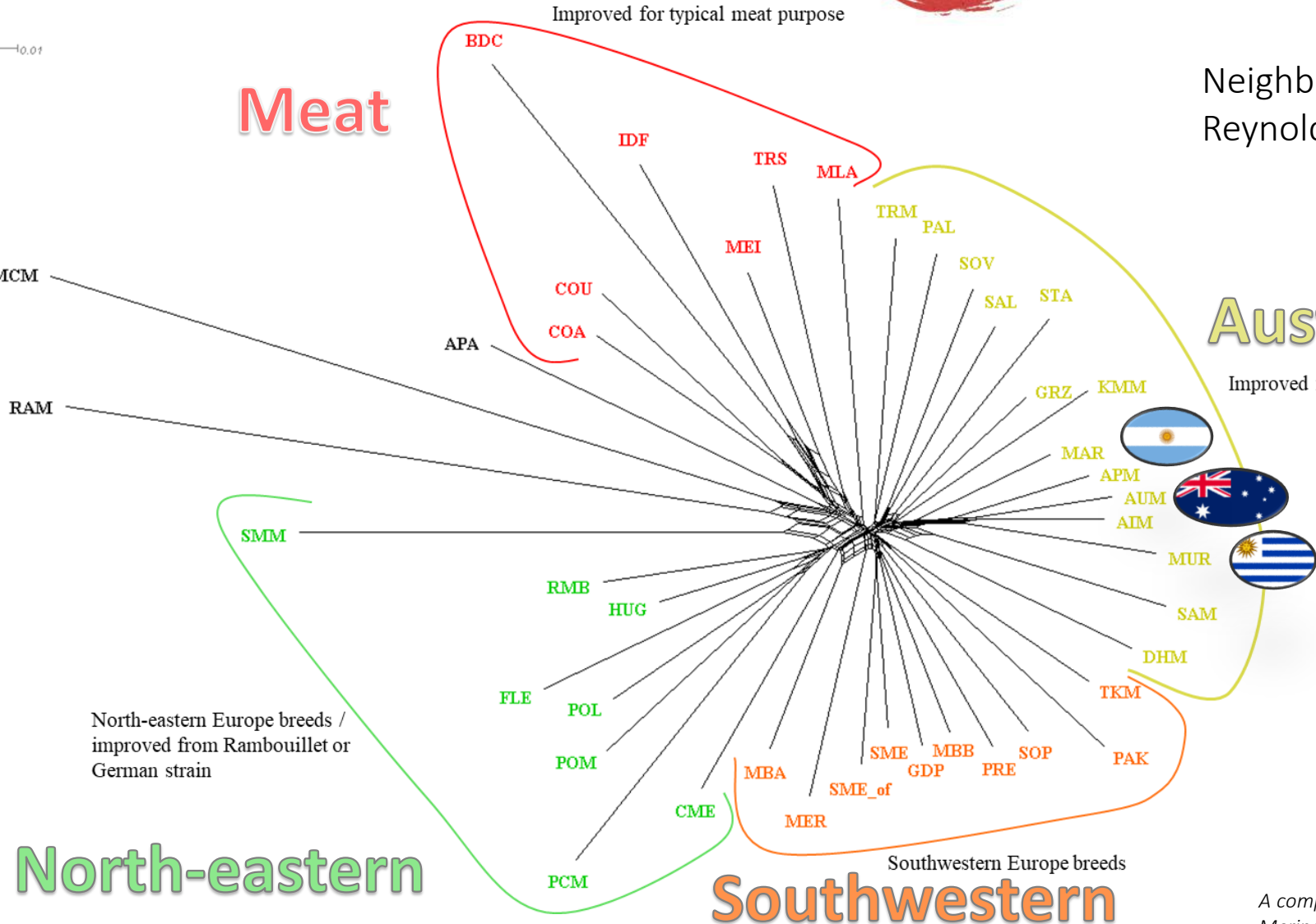


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Meat

Australian strains



Neighbour-net graph based on between-breed Reynolds distances

International collaboration, Ceccobelli et al. submitted

A comprehensive analysis of genetic diversity and environmental adaptability in worldwide Merino and Merino-derived sheep breeds.

North-eastern

Southwestern

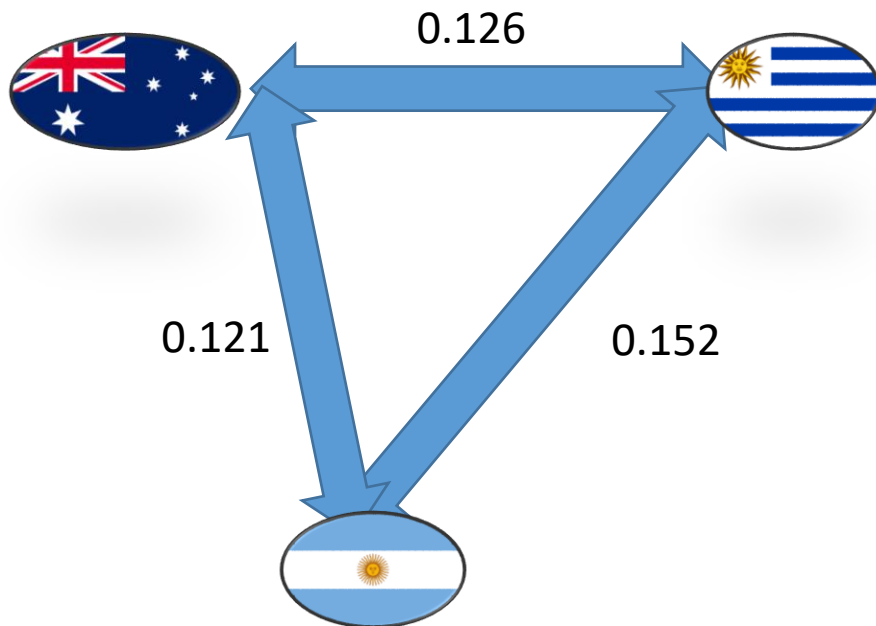


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Similarities between the Merinos of Australia, Argentina and Uruguay



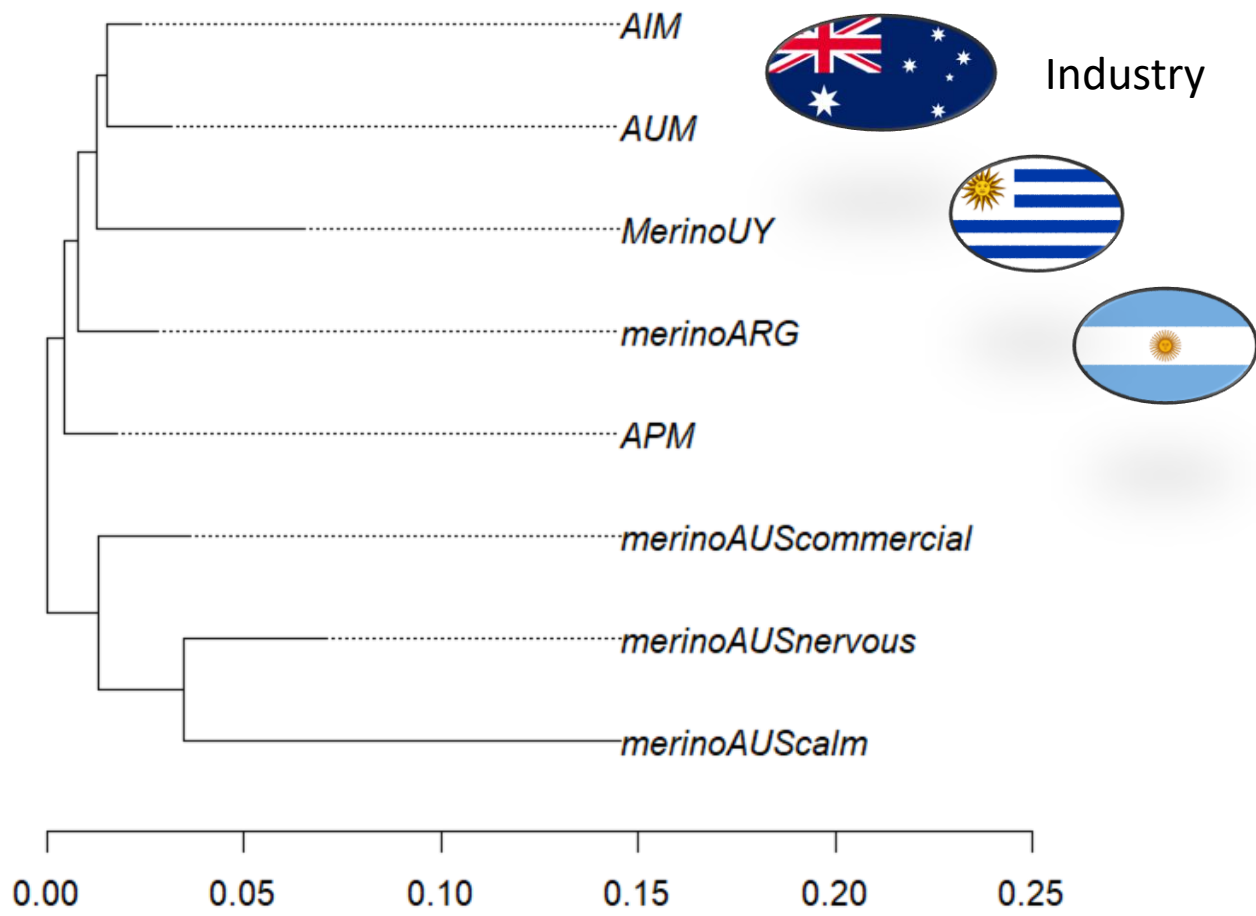
The populations are very close with low genetic differentiation between them ($F_{st} < 0.05$)



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Selection signatures



Poll



Commercial WA

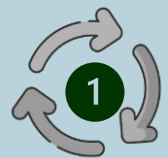




THE SHEEP ←
OF THE FUTURE

REGENERATIVE AGRICULTURE: FIVE POINTS VISION

The Gaucho's way



1 Life Cycle Assessment
greenhouse gases emission

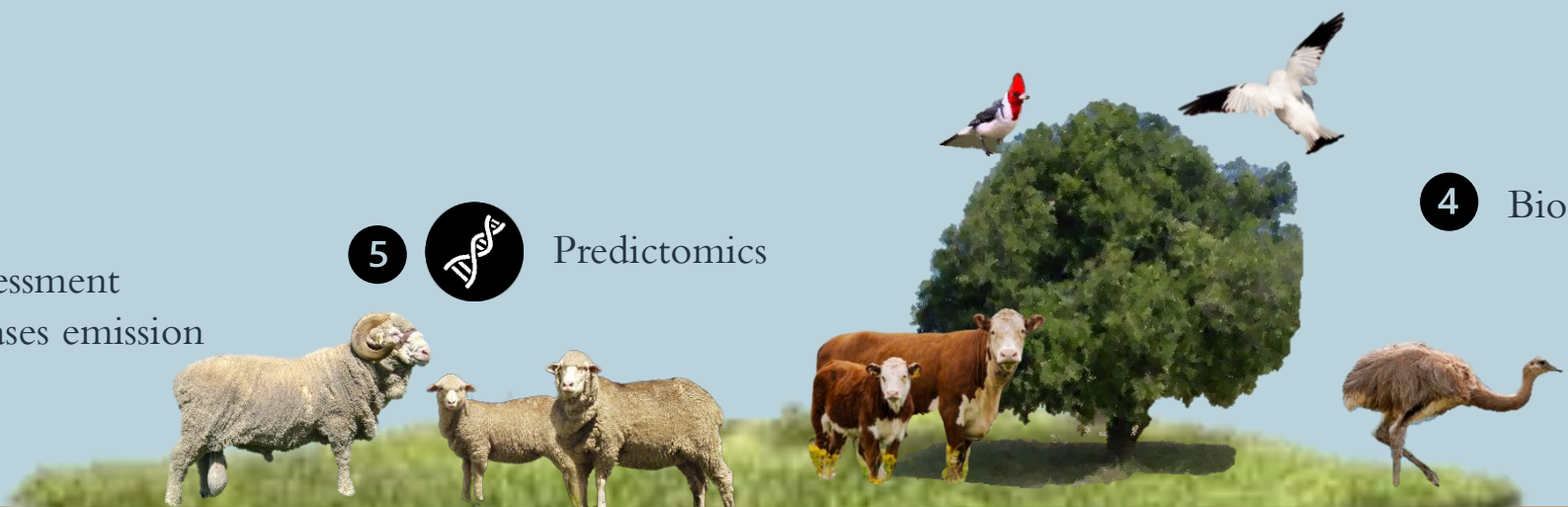
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Predictomics

4

Biodiversity



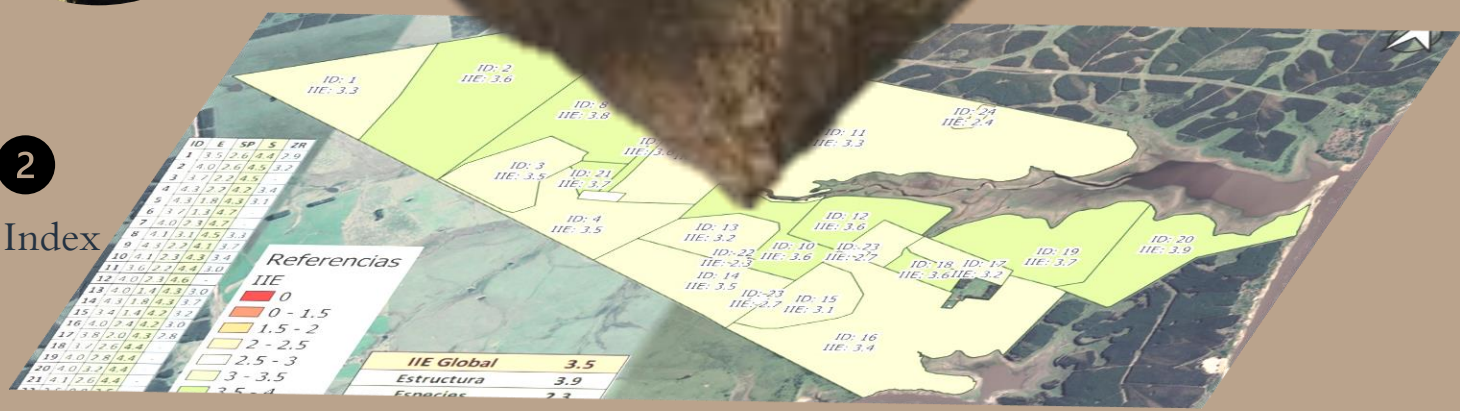
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Soil Organic Carbon Stock



2

Ecosystem Integrity Index



Blumetto, et al. (2019)





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5

Predictomics Prediction of genetic level for main traits at commercial level



■ Wool production

- ✓ Based in national genomic estimations
- ✓ Close related Merino populations



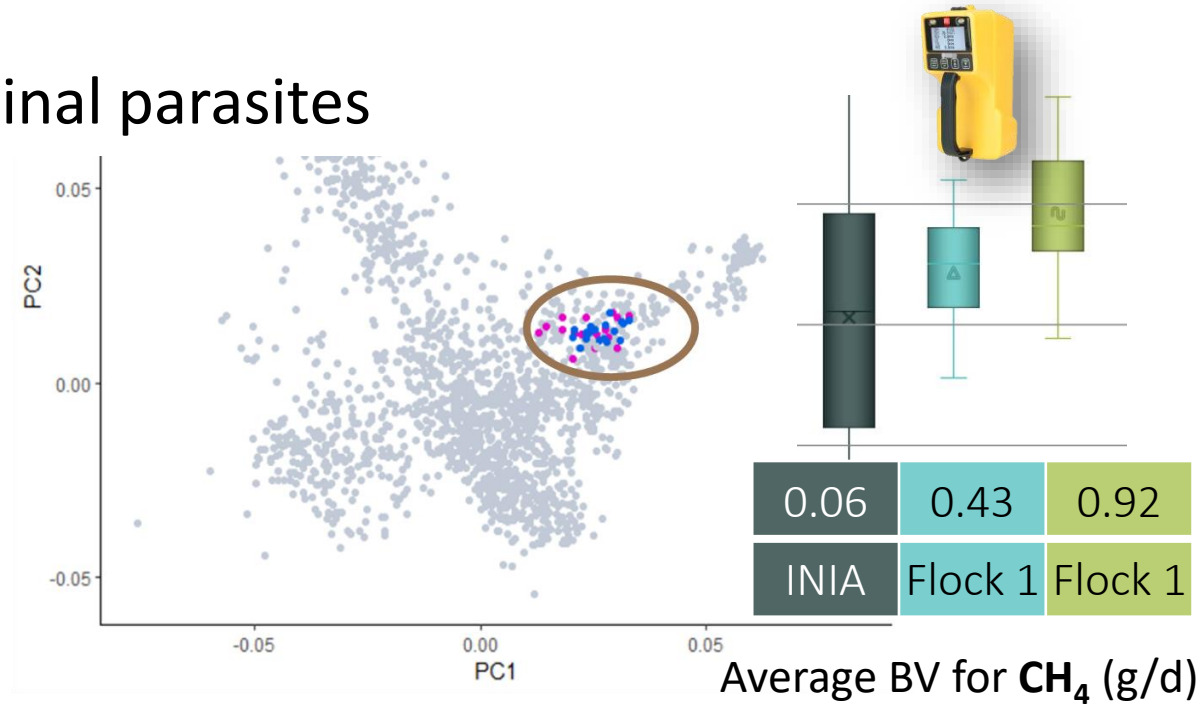
■ Resistance against gastrointestinal parasites



■ Methane emissions (GHG)



■ Residual Feed Intake





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Main topics



- Breed well adapted to different (extensive) conditions
- Growing breed with high quality products
- Great potential for added value (environmental/social)



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Acknowledgments

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SEOC
Delia Casta

