Genetic parameters for feed efficiency, gas emissions, oxygen consumption and wool traits in Australian Merino

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? Is it possible to find Merino rams that are more efficient and emit less GHG?

1 Agroecological Breeding Objectives and criteria

2 Reference population (growing)
930 records
1,962 animals 2019-2021

Automatic feeding & weighing platforms 42 d

3 Estimation of parameters & BV

PAC x2 records

4 Ram´s distribution
Evaluation of commercial flocks

Genetic trends for RFI & reduction of GHG emission

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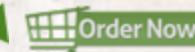
Regenerative Agriculture enhanced by genomic

GIBBSF90

$$y_{ijklm} = CG_i + BT_j + DA_k + age_l + a_m + e_{ijklm}$$

Genetic Correlations

	RFI	F. intake	O_2	CH_4	CO_2	GFW
RFI	**0.27**	0.79	0.37	0.64	0.50	0.05
Feed intake	0.75	**0.38**	0.68	0.88	0.77	0.13
O_2	0.15	0.45	**0.26**	0.57	0.97	-0.13
CH_4	-0.02	0.28	0.57	**0.23**	0.66	0.06
CO_2	0.11	0.44	0.93	0.64	**0.27**	-0.15
GFW (wool)	0.01	0.24	0.26	0.18	0.27	**0.41**

RUMIAR

GrassToGas

Smarter
SMAll RuminanTs breeding for Efficiency and Resilience