



2016

GLOBAL DOHNE CONFERENCE

JULY 21 -22 | AUSTRALIA

Celebrating
50 years

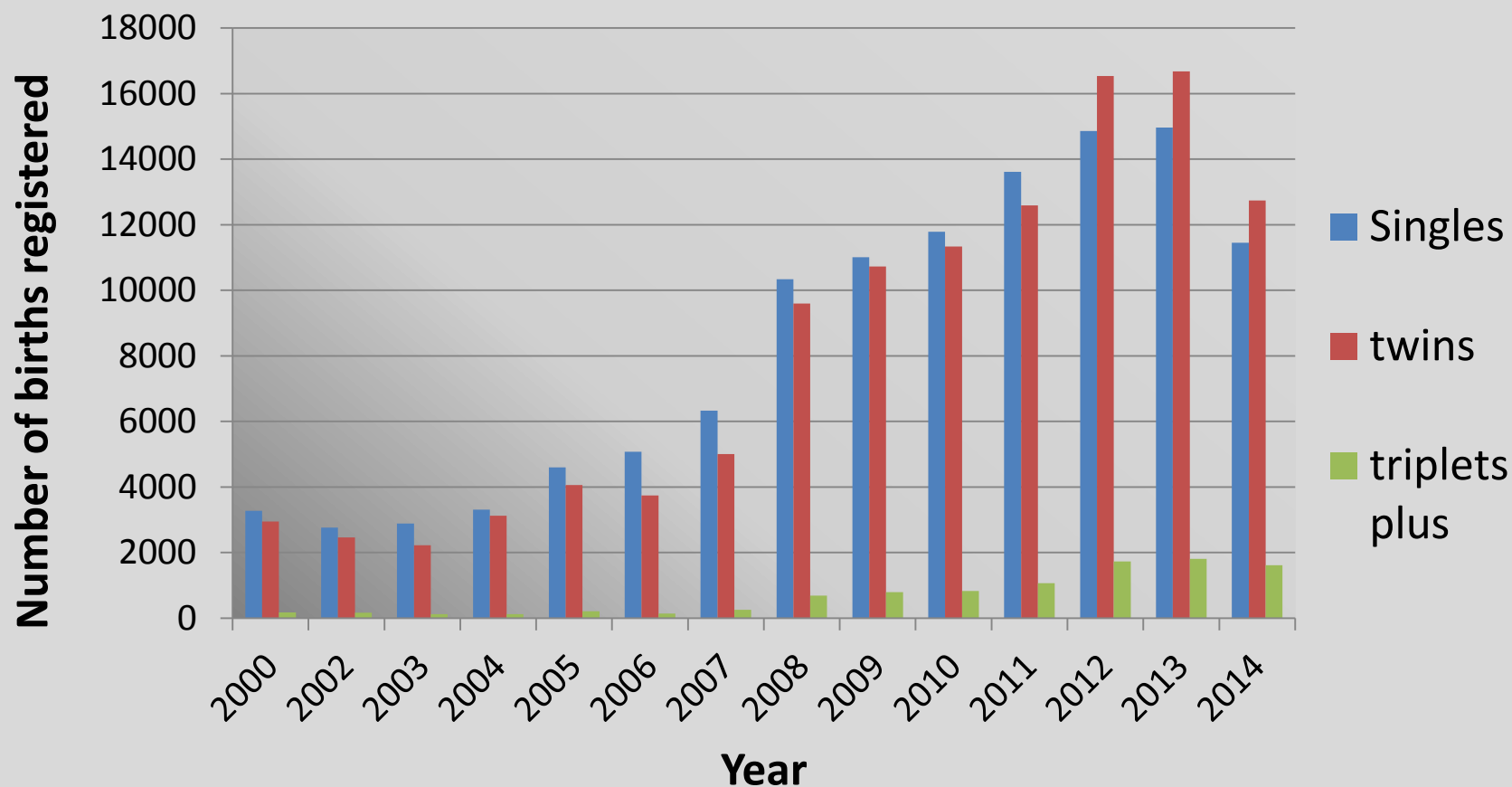
"A must for all sheep producers"

**IMPROVING REPRODUCTION RATE IN
THE SOUTH AFRICAN DOHNE MERINO
POPULATION**

South African farming conditions dictate high levels of reproduction



Reproduction rate of registered Dohne Merinos in South Africa



Investigation

- Parameter – Number of Lambs weaned
- Data selection – 27 studs of which 7 use natural mating exclusively



The Data Set

Lambing opportunity	1 st lambing	2 nd lambing	3 rd lambing	4 th lambing
Number observations all data	30556	21508	14274	8167
Natural mating	4436	3165	2193	1332

Mathematical Models

- Fixed effect Model (R-lsmeans) – followed by multiple trait mixed model (ASREML)
- Operational Model – Repeatability model to use all available records

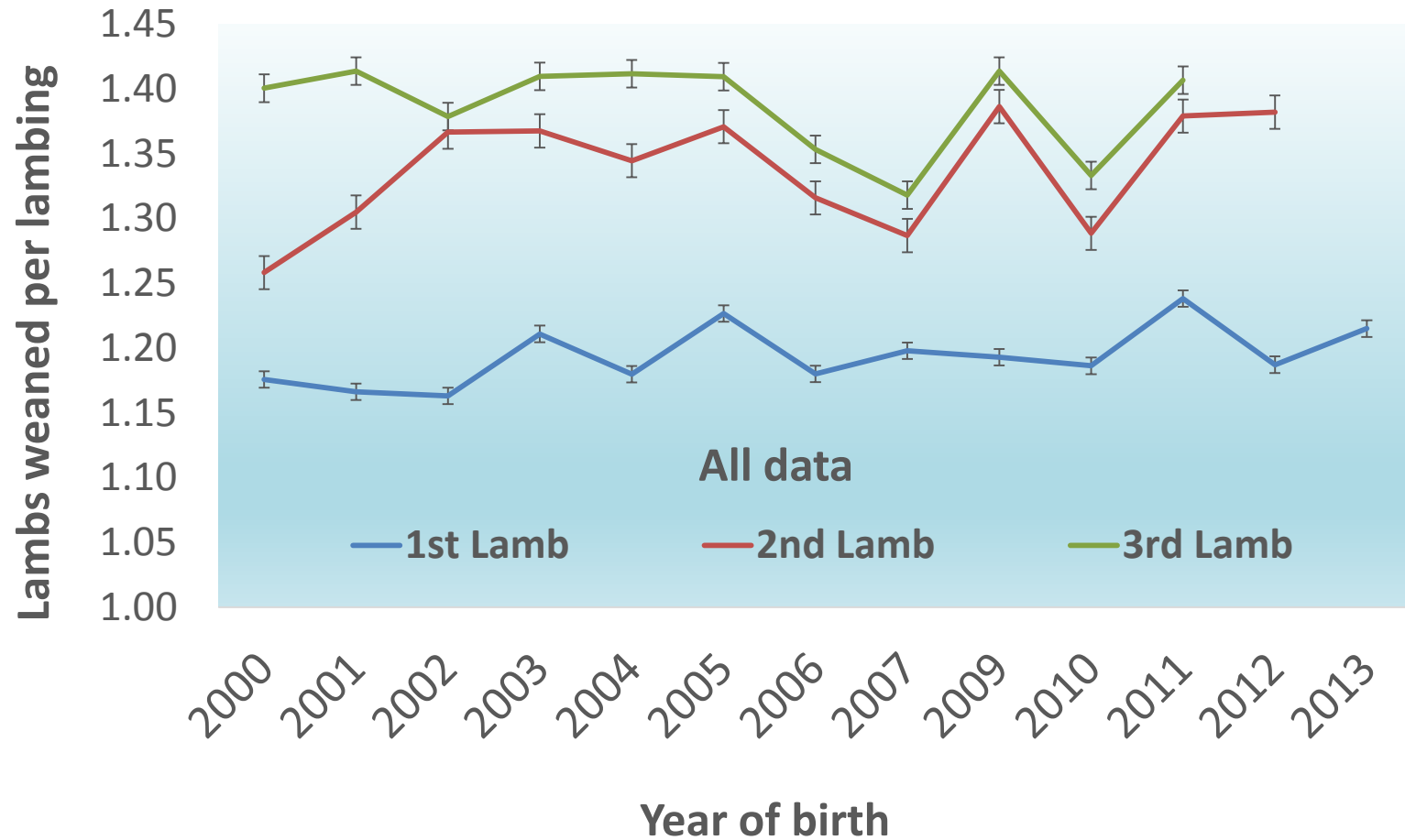
Lifetime Reproduction

1 st lambing	2 nd lambing		3 rd lambing		4 th lambing	
	natural	all	natural	all	natural	all
0	1.18±0.04	1.23±0.02	1.30±0.06	1.31±0.02	1.32±0.08	1.29±0.03
1	1.20±0.02	1.30±0.01	1.28±0.02	1.35±0.01	1.33±0.03	1.36±0.01
2	1.33±0.03	1.45±0.01	1.45±0.04	1.49±0.01	1.46±0.05	1.47±0.01
3	1.37±0.18	1.55±0.05	1.00±0.25	1.56±0.06	1.08±0.57	1.43±0.08

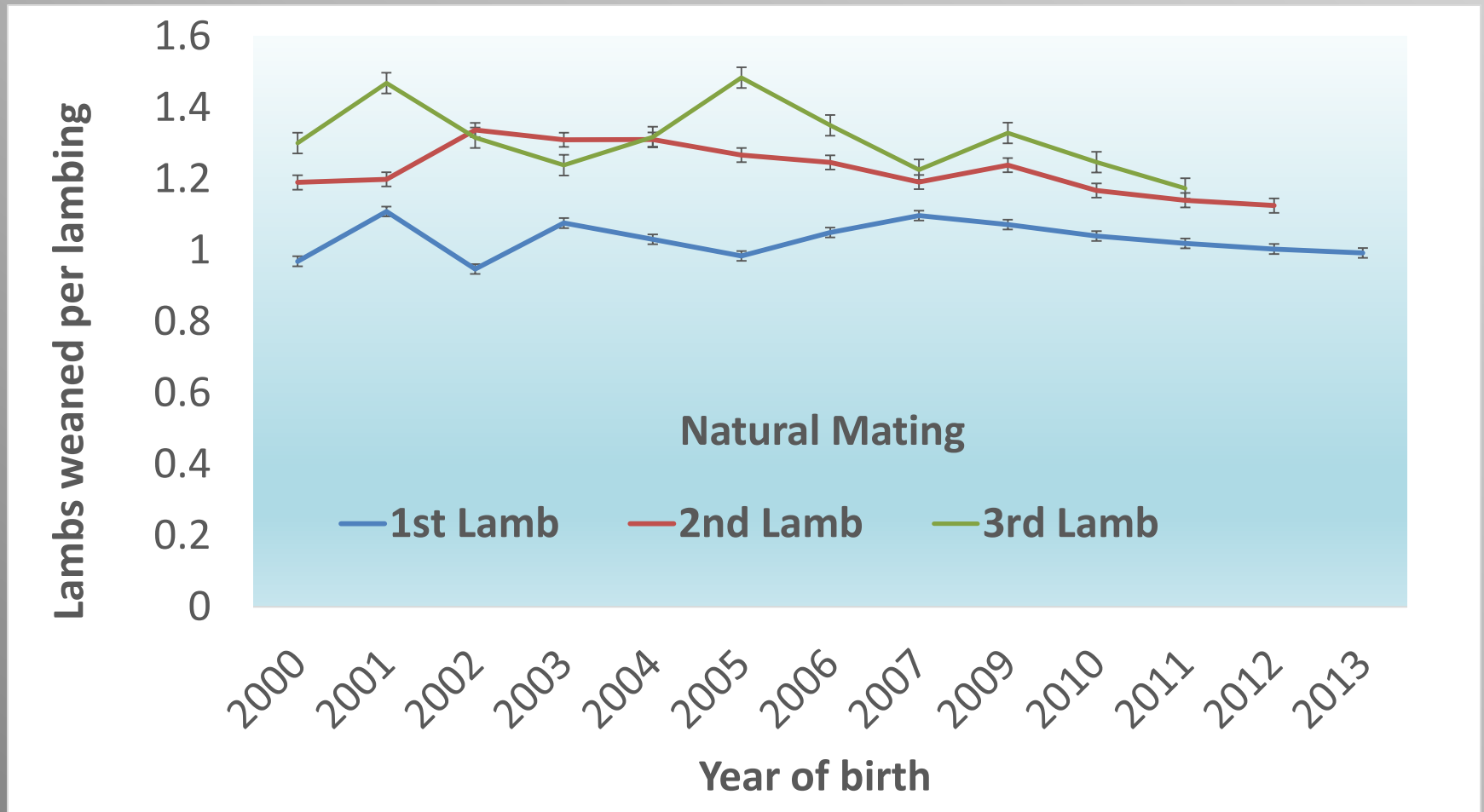
Genetic Variance Co-Variance

	All data	Se	Natural mating	Se
h^2 1 st lambing	0.0232	0.0064	0.0592	0.0241
h^2 2 nd lambing	0.0198	0.0077	0.0420	0.0271
r_g	0.81	0.22		

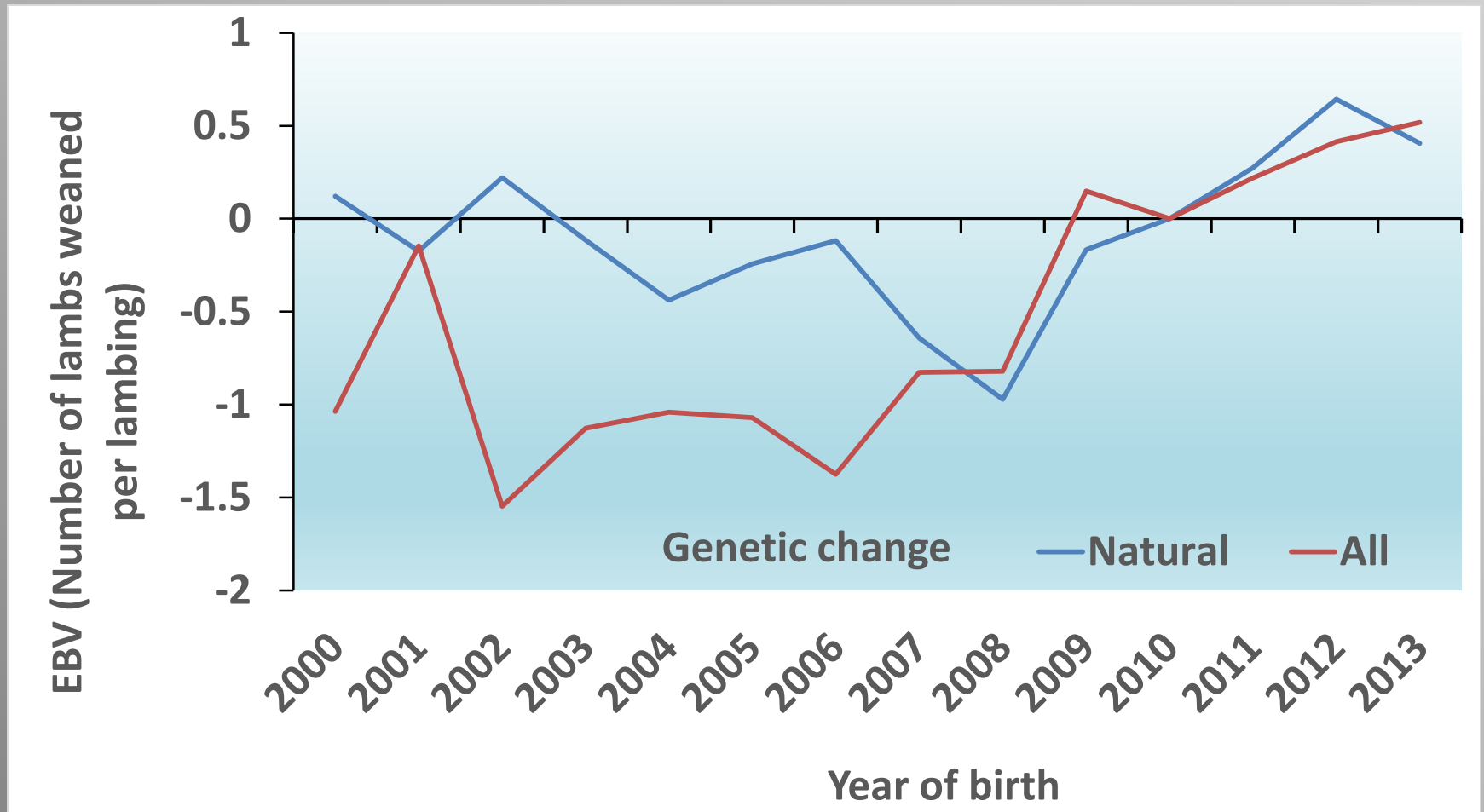
Phenotypic Trend All Data (Ls-means)



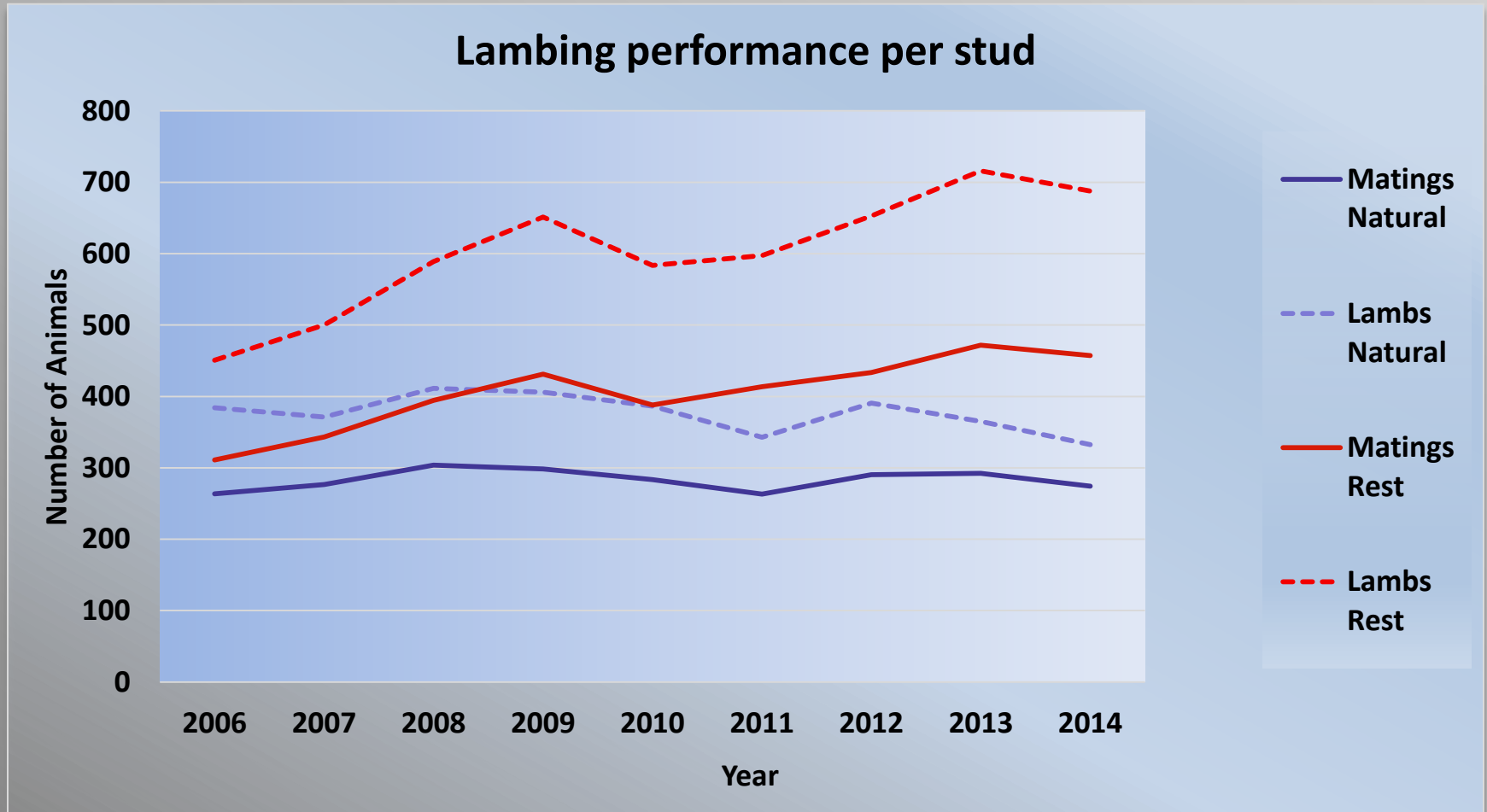
Phenotypic Trends Natural Mating (Ls-means)



Genetic trends (from repeatability model)

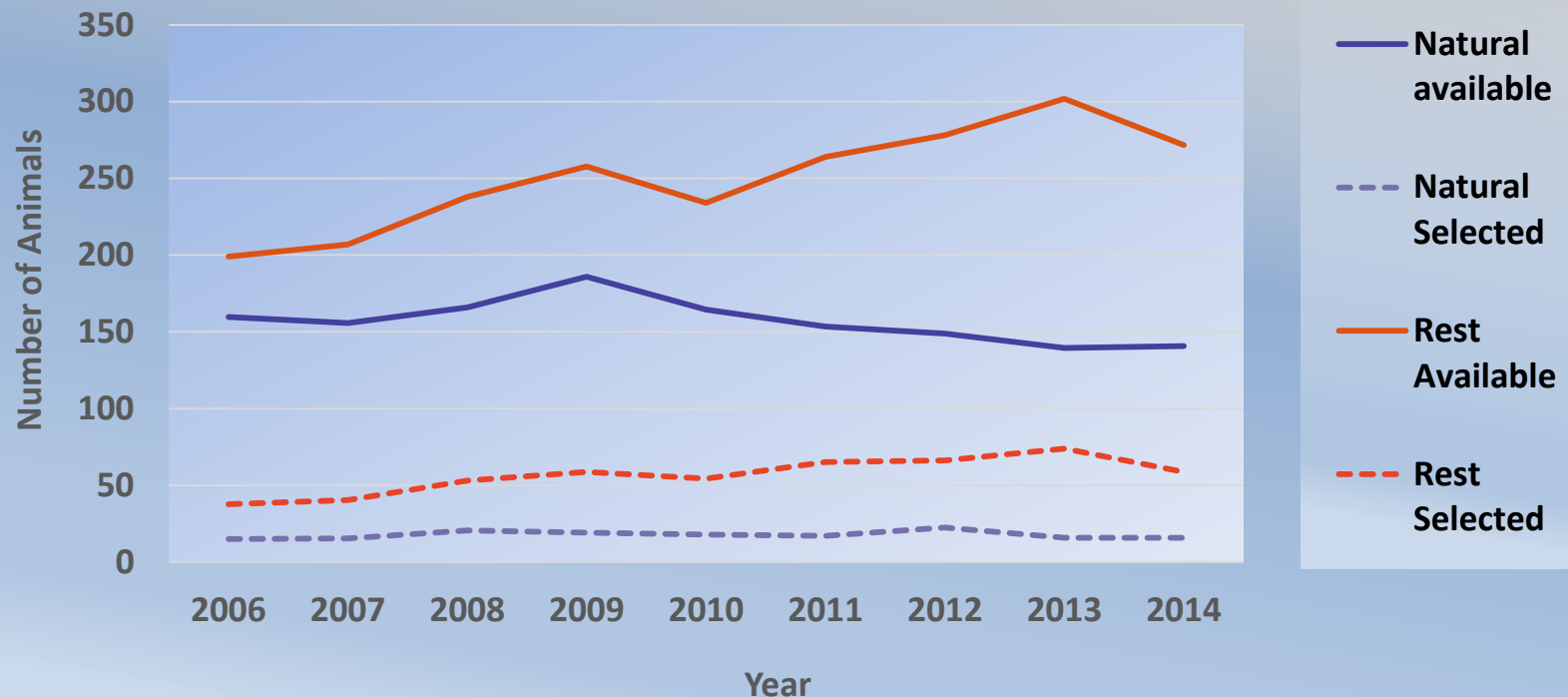


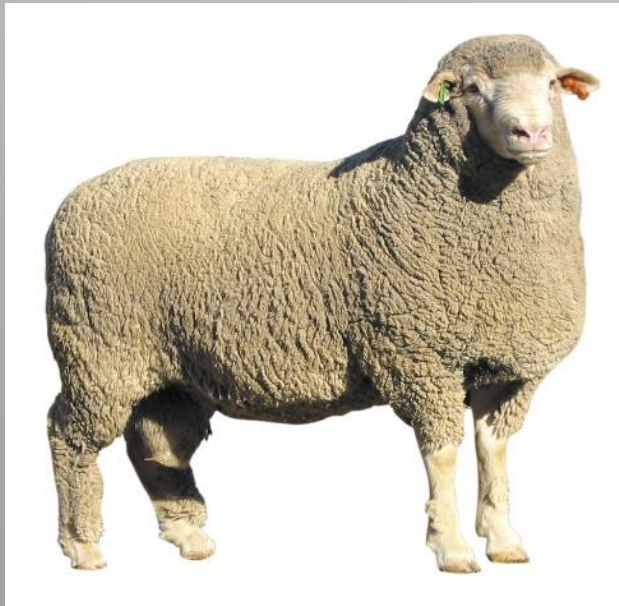
From Birth Registrations



From Classing Lists

Selection Intensity per Stud





On behalf of the Dohne Merino Breed Society of South Africa, we thank Dohne, Australia for hosting this inaugural Global Dohne Merino Conference in recognition of the 50th anniversary of the South African Dohne Merino Breed Society

**Thank you for your
attention**



