

2024 Sheep Breeders Round Table

The Australian Lamb Eating Quality Journey

Peta Bradley

Manager – Sheep Genetics



Overview – The Australian Lamb Eating Quality Journey

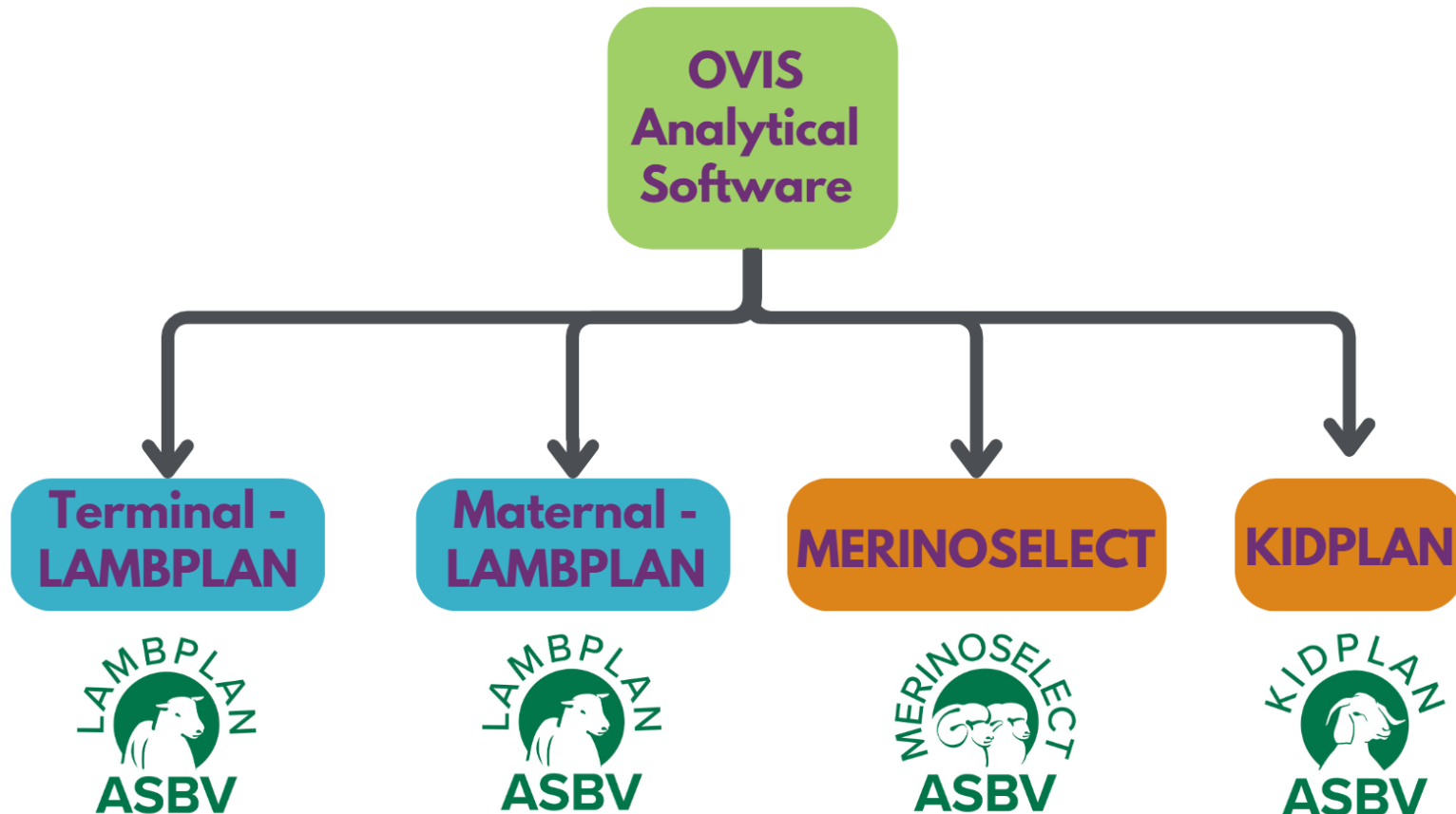
1. Australian Sheep Genetic Evaluation

2. The Landscape for Eating Quality

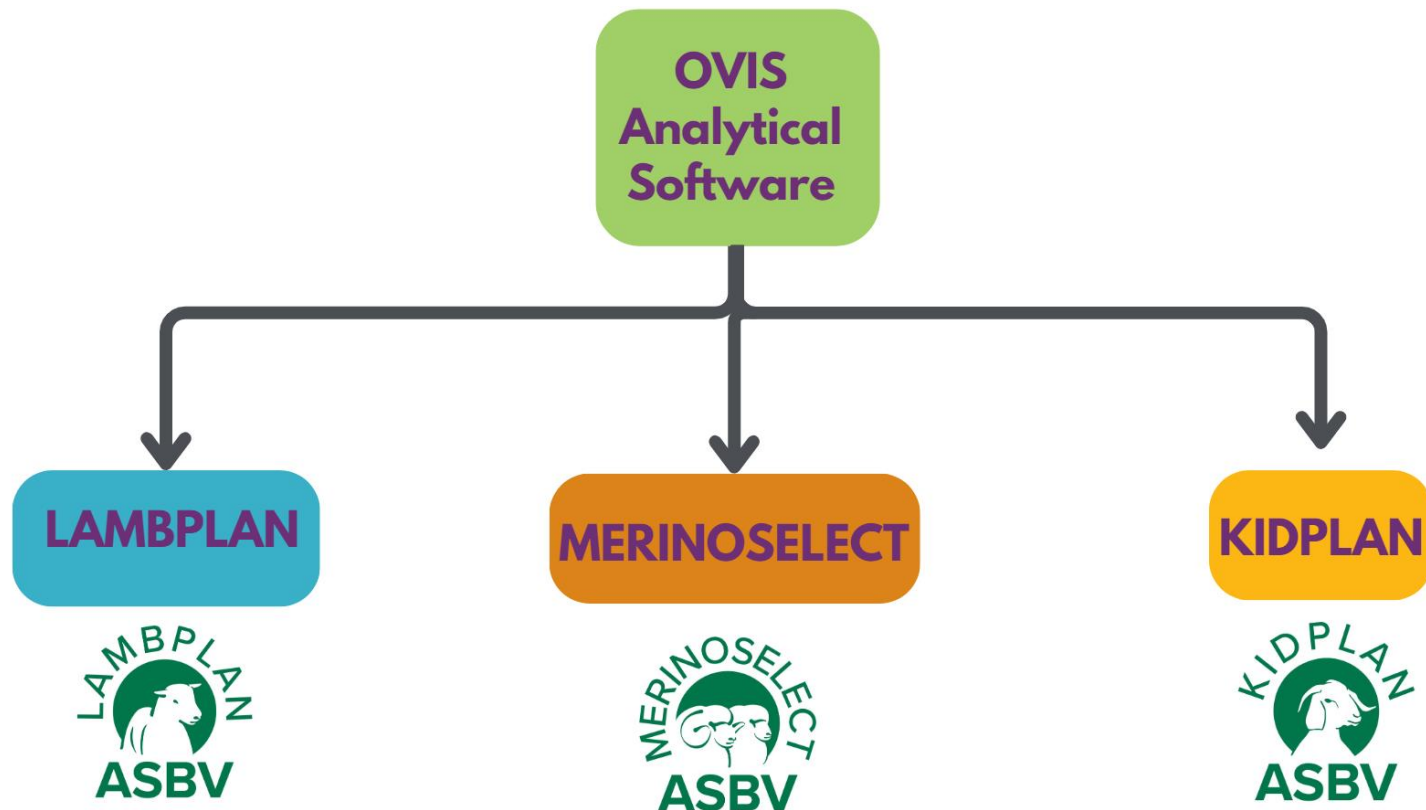
3. Breeding Values and Reference
Populations

1. Australian Sheep Genetic Evaluation

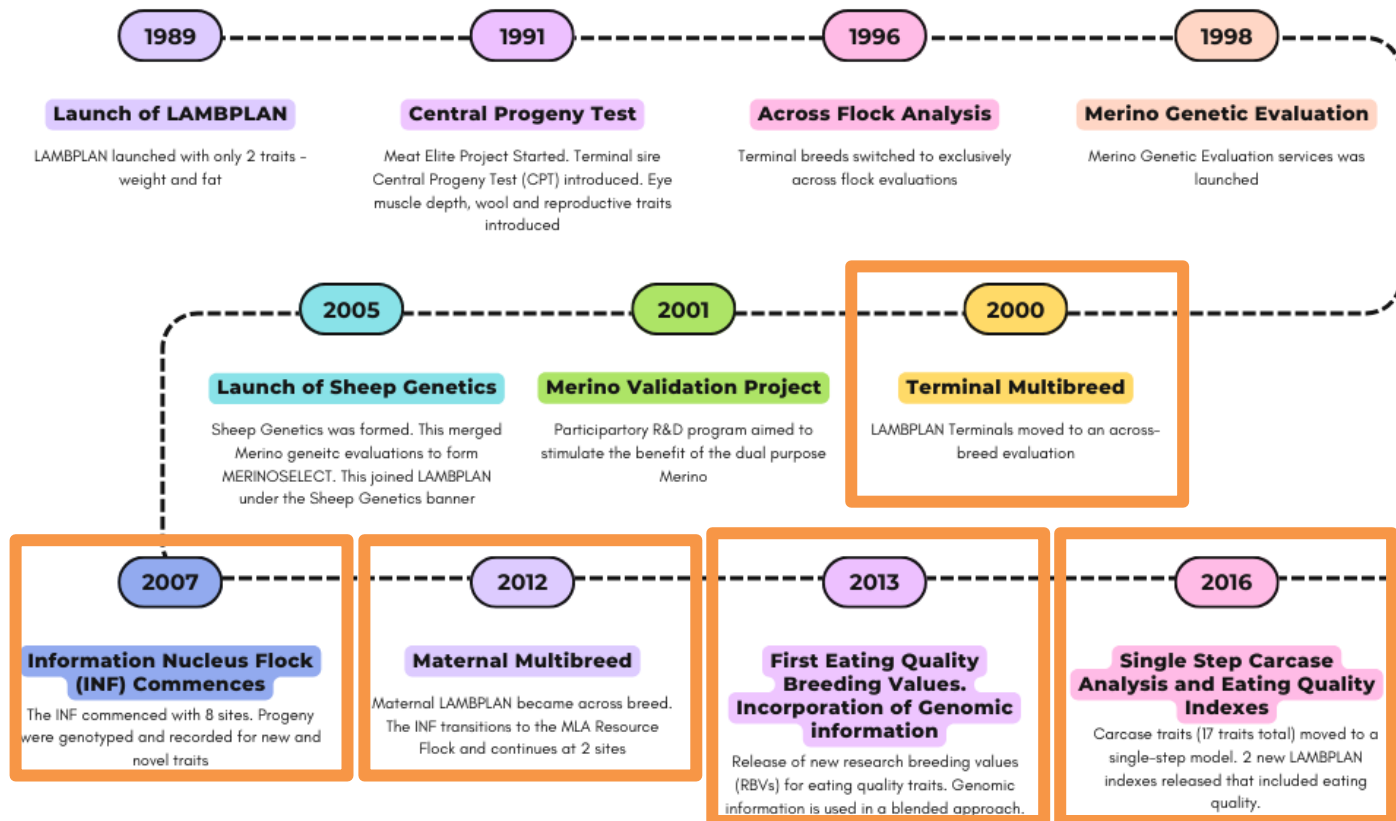
Sheep Genetics Multi-breed Services



Sheep Genetics Multi-breed Services (post 2025)

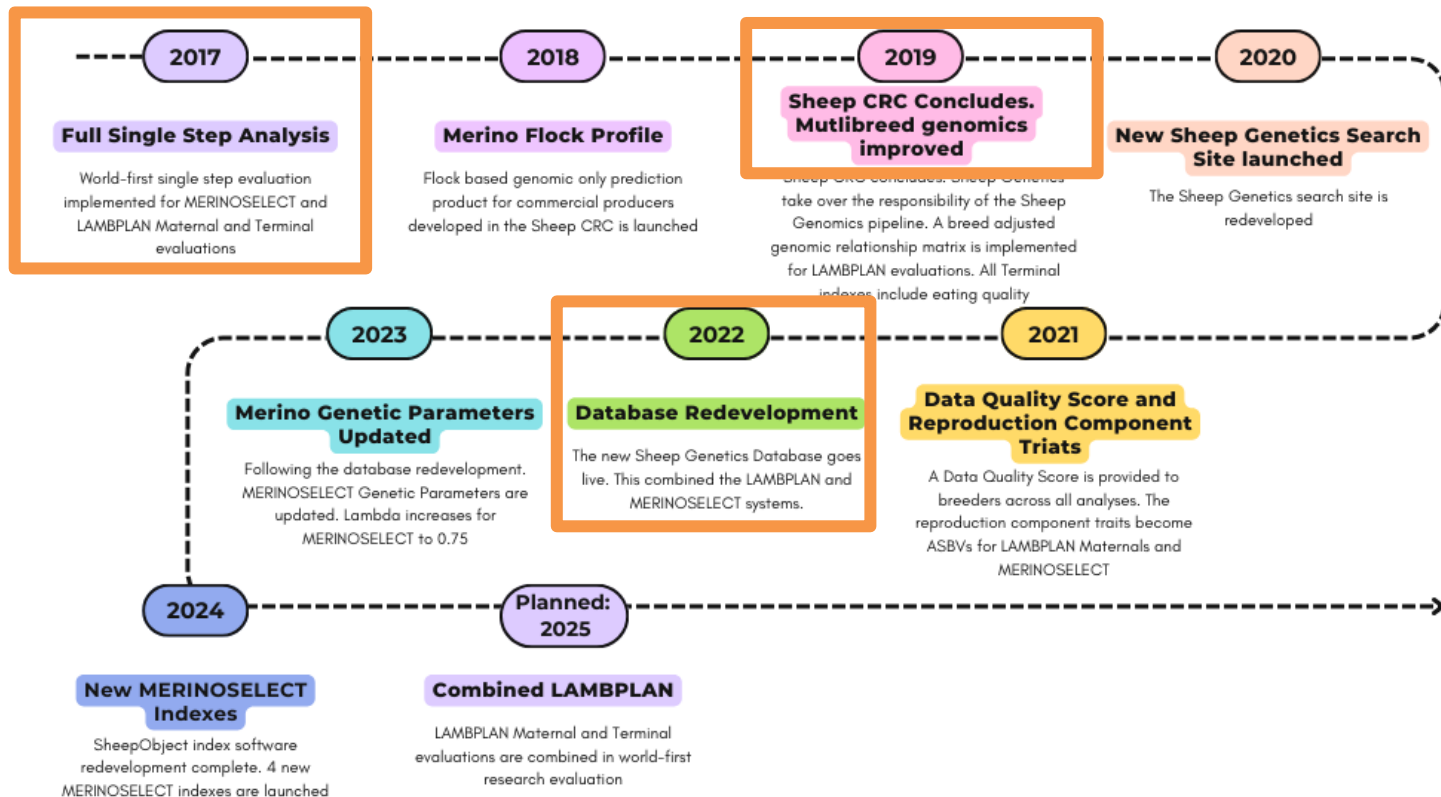


Sheep Genetics Evaluation History



Key events in the eating quality journey

Sheep Genetics Evaluation History



Key events in the eating quality journey

2. The Landscape for Eating Quality

Ensuring consistency of Australian beef brands

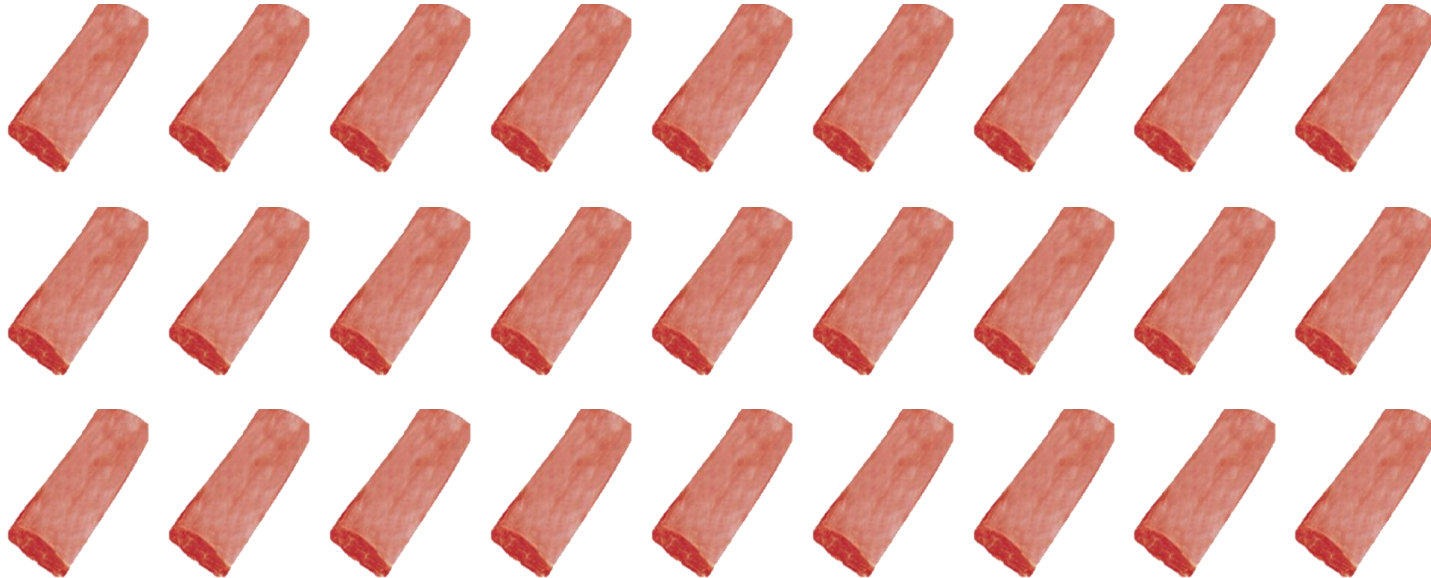
- Meat Standards Australia (MSA)
- MSA is not a marketing tool nor a brand in itself. MSA is a system that underpins consistency within brands.



What currently happens for lamb



YUMMY BRAND



 **sheep** GENETICS


MEAT & LIVESTOCK AUSTRALIA

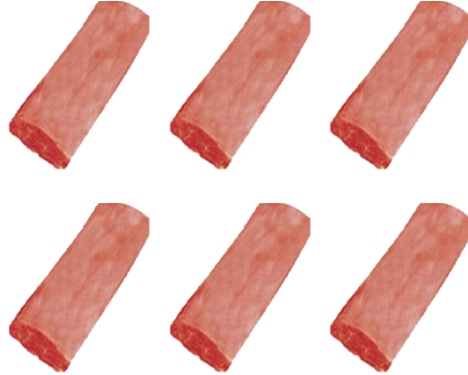
What MSA in lamb enables



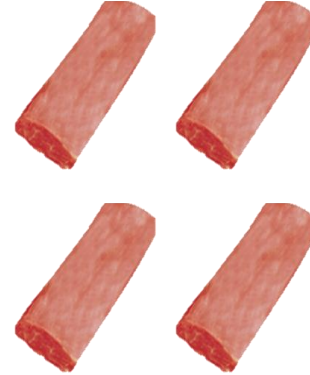
Economy Range



YUMMY BRAND



premium
brand



What are the inputs to the MSA model

INPUTS

- Hot carcase weight (HSCW)
- Lean meat yield (LMY)
- Intramuscular fat (IMF)
- Electrical stimulation
- Ageing (5-20 days)

OUTPUTS

Grill



knuckle

loin

outside

rump

topside

Roast



knuckle

leg

loin

shoulder



UNGRADE

MSA Sheepmeat Index

- Weighted average of the eating quality of the whole carcase
- Single number provided in feedback
- Assists in identifying on-farm opportunities



Measuring intramuscular fat (IMF)



**MEQ Probe
(invasive device)**

- Accredited for use



**SOMA Optics NIR
(cut surface device)**

- Accredited for use



**OCT
(invasive device)**

- In development



**Nuclear Magnetic
Resonance (non-
invasive)**

- In development

Other technology in the supply chain



Hyperspectral

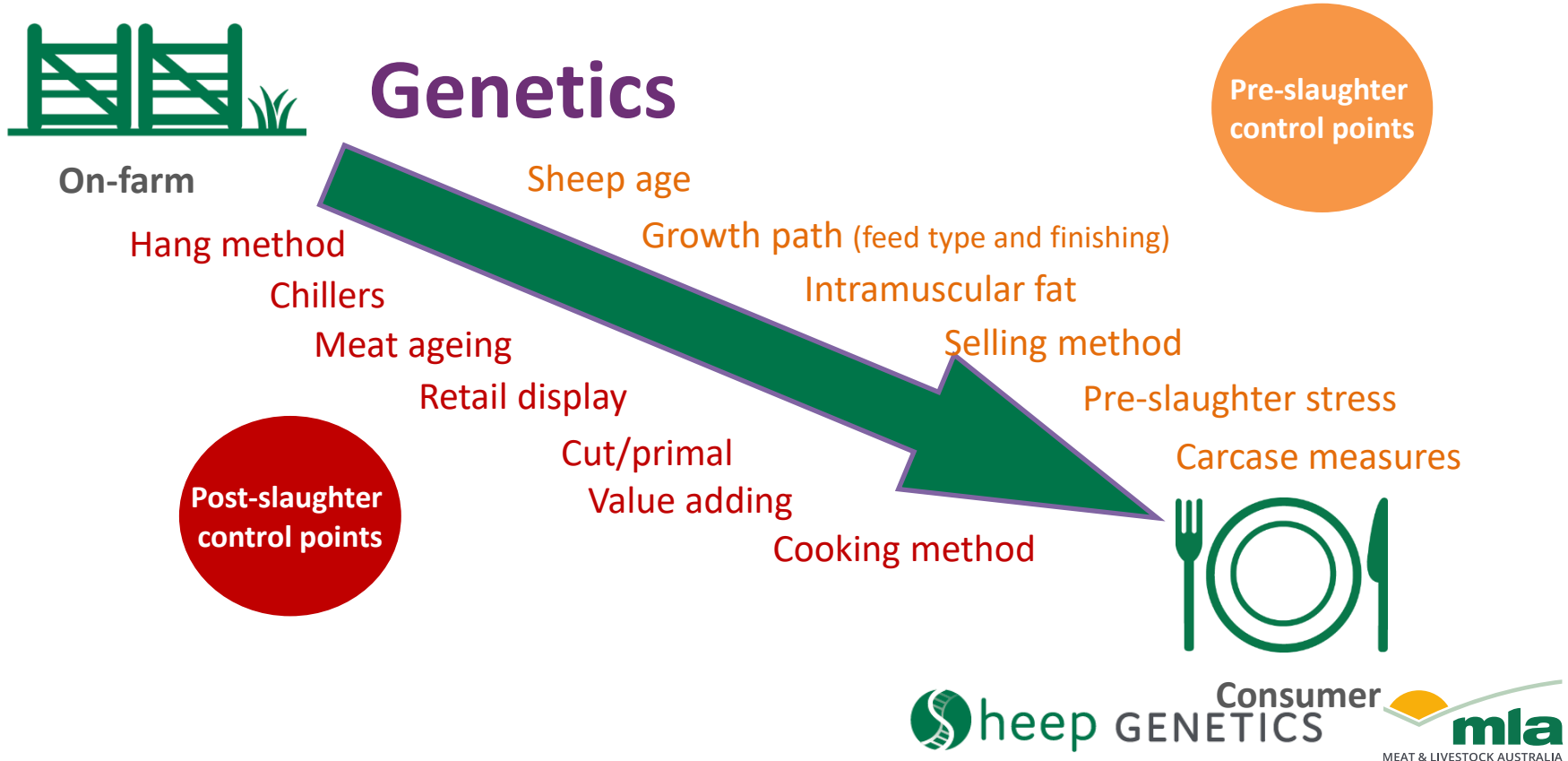


Microwave



DEXA

What can be done to control Eating Quality



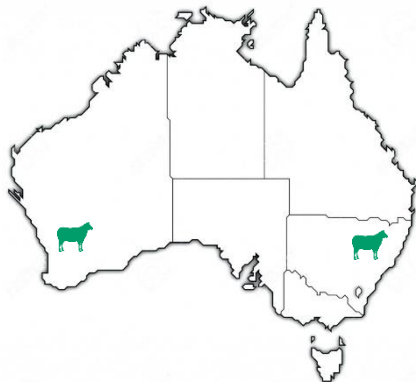
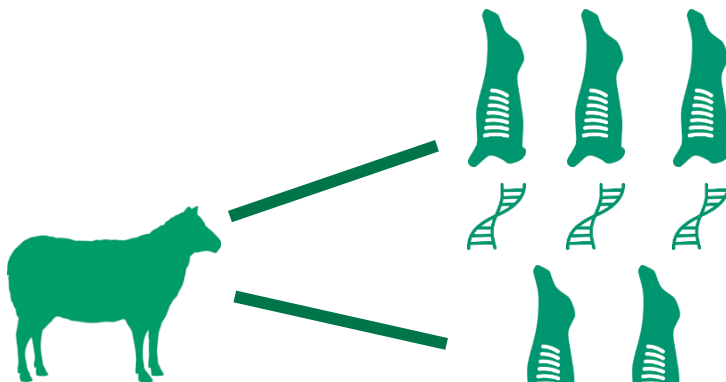
3. Breeding Values and Reference Populations

The Resource Flock – Our industry reference population



Department of
Primary Industries and
Regional Development

Sheep Genetic Clients



3.3 What ASBV traits are available?



Growth traits

Live weight

Adult weight



Carcase & eating quality traits

Eye muscle

Intramuscular fat

Shear Force

Lean Meat Yield



Wool traits

Fleece weight

Fibre diameter

Staple strength

Staple length



Reproduction traits

Weaning Rate



Health traits

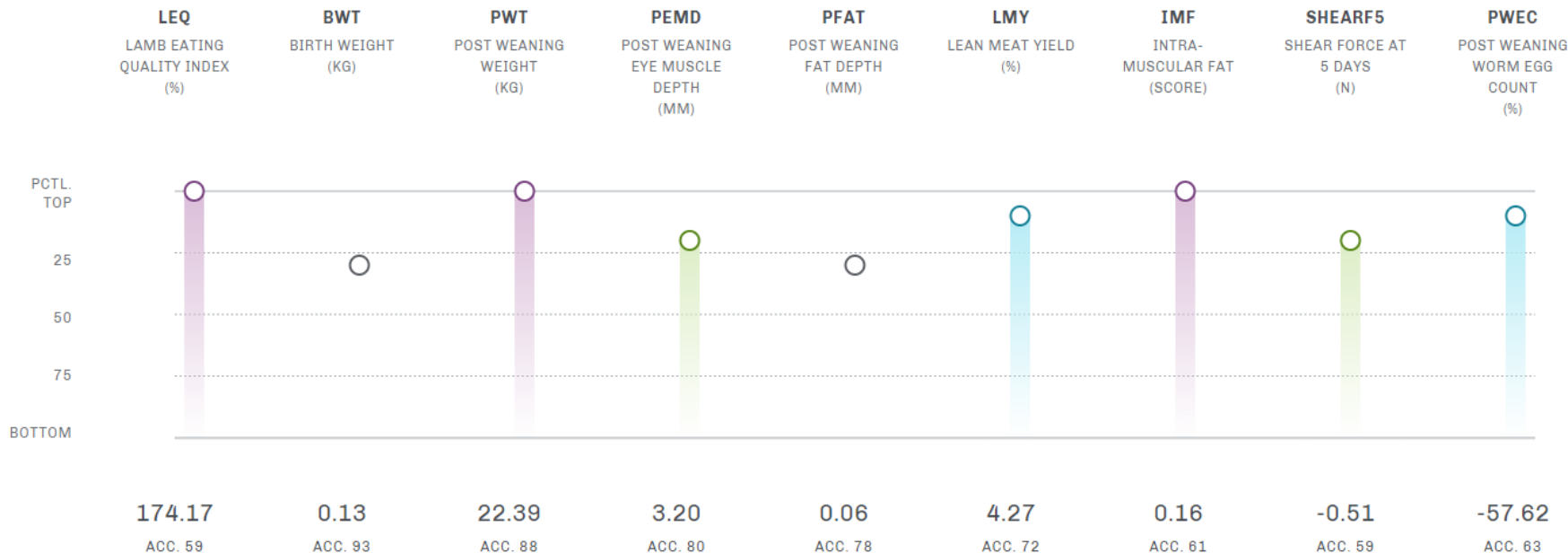
Worm egg count

Breec wrinkle

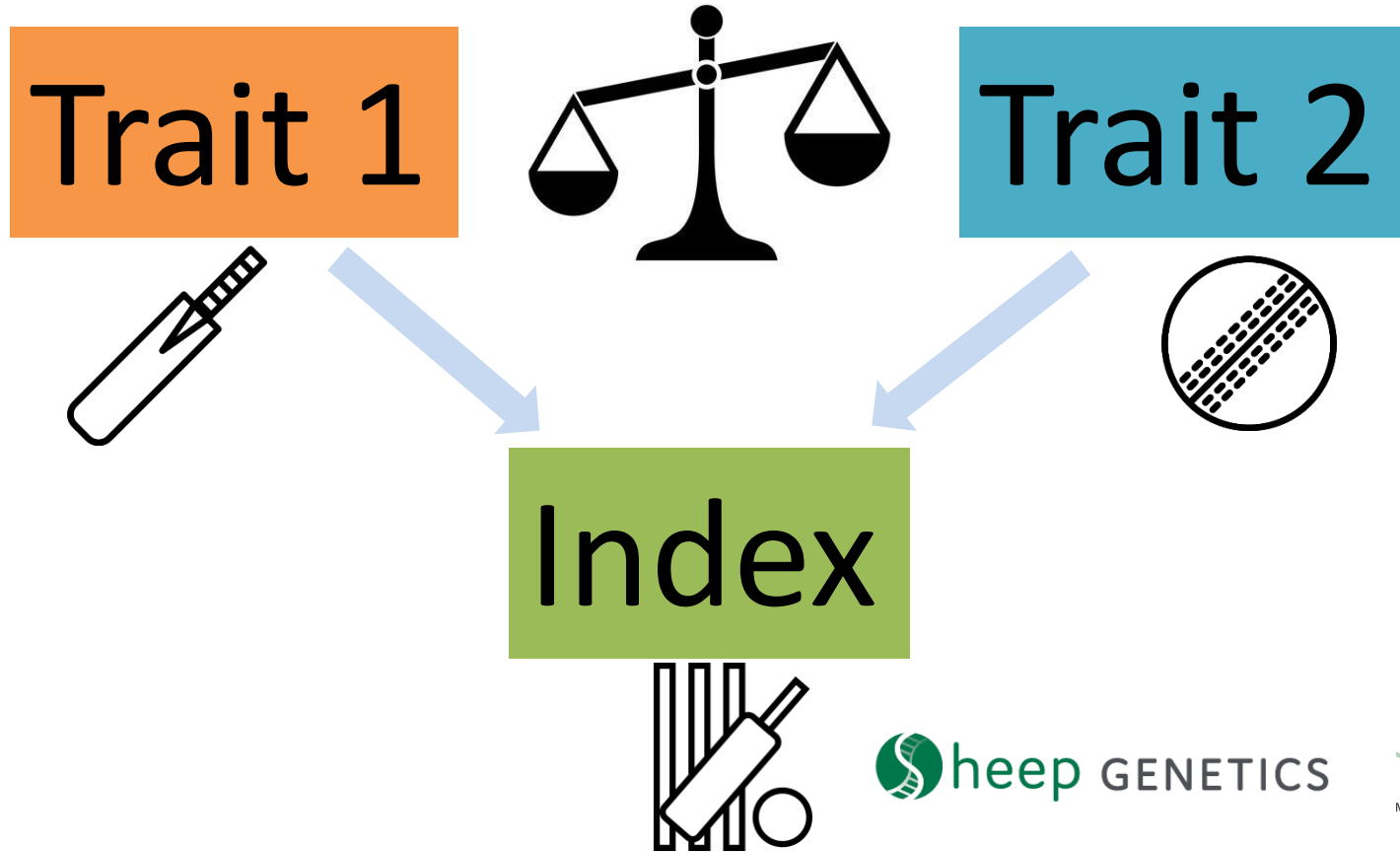
Understanding Key Eating Quality ASBVs

- Negative ASBVs are not always bad

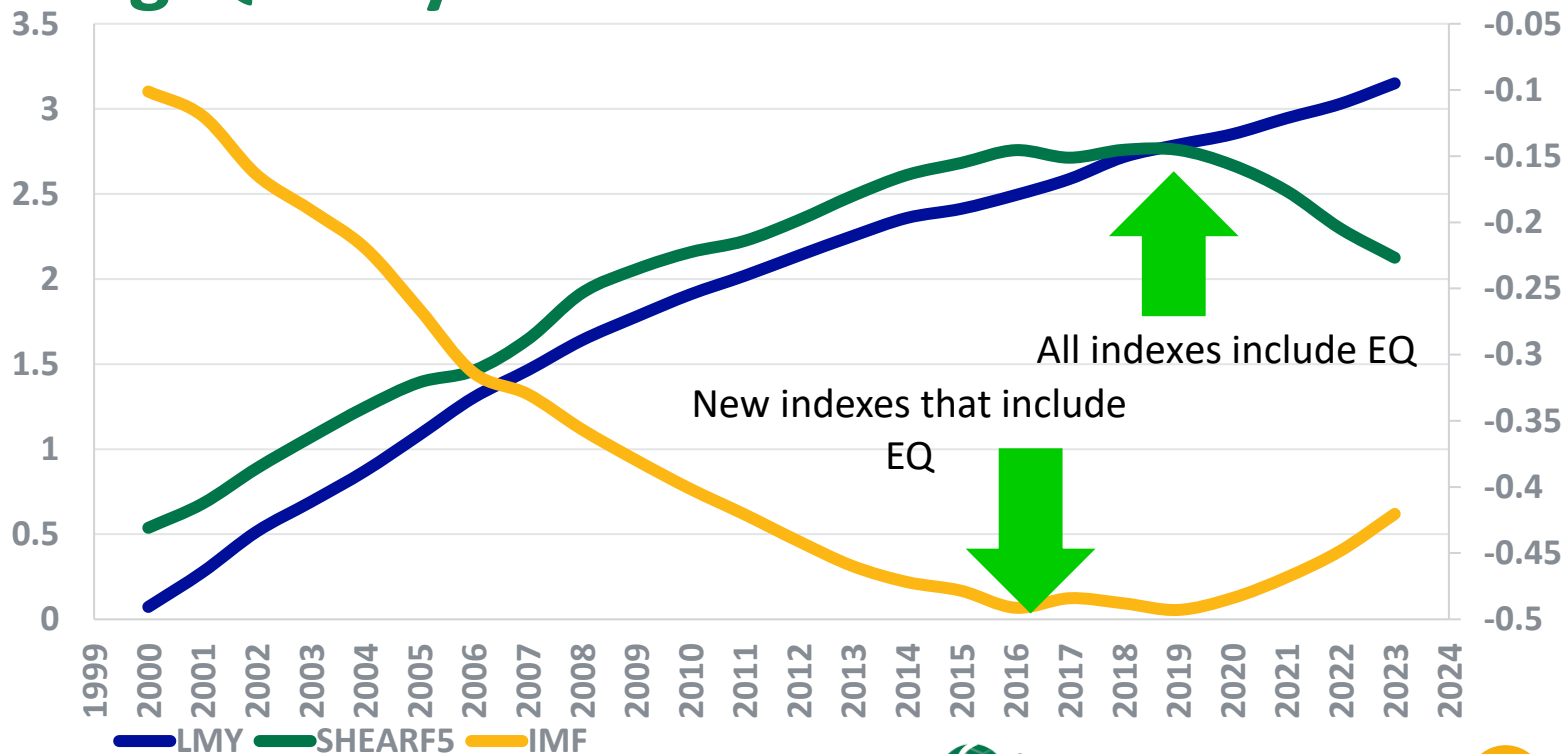
ASBV snapshot



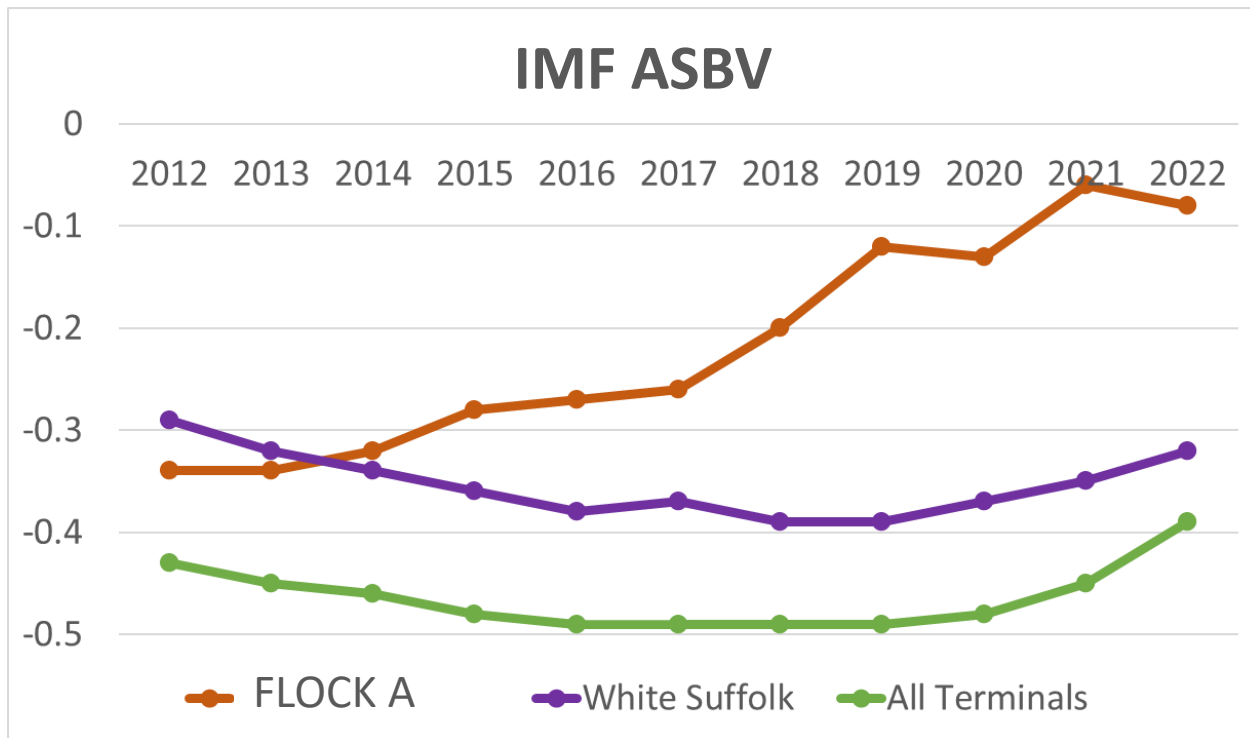
Selection Indexes have enabled this



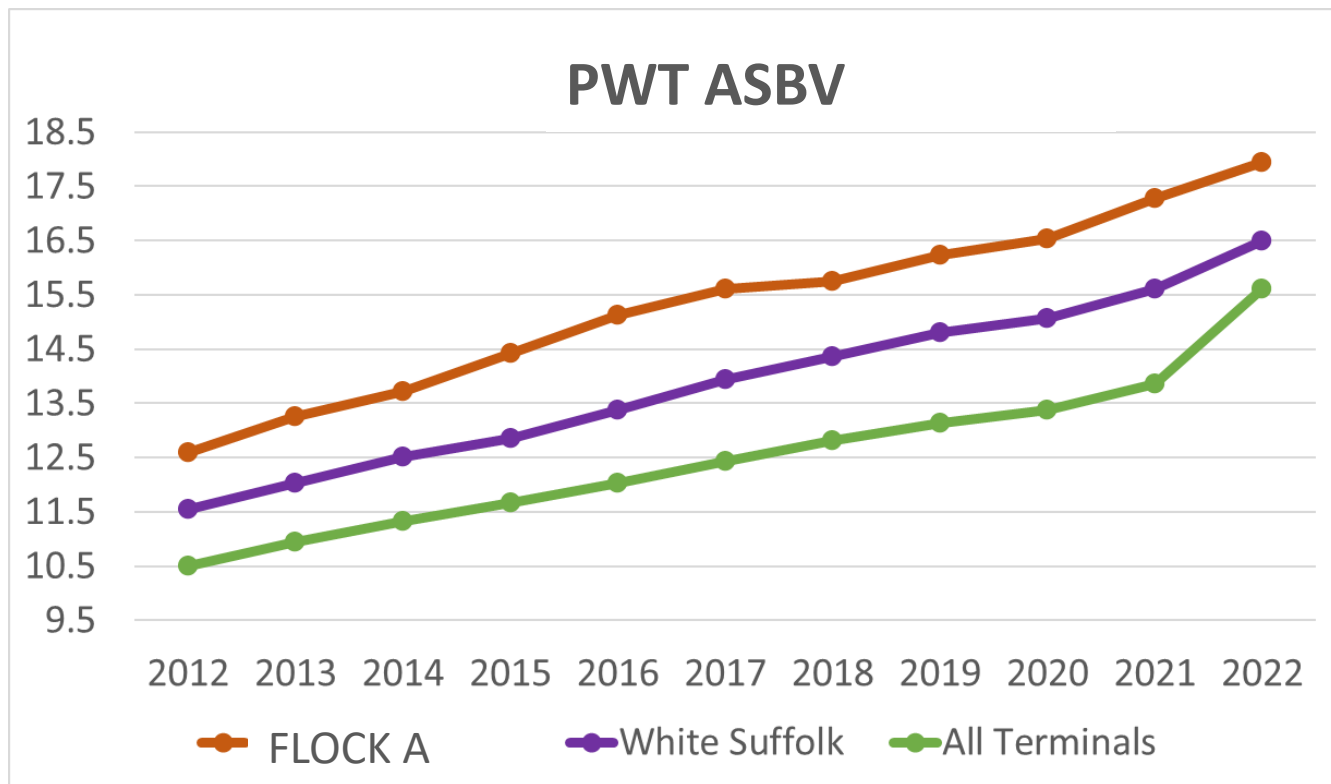
What have we been able to do with ASBVs for Eating Quality?



What is possible with breeding values



What is possible with breeding values



Summary – The Australian Eating Quality Journey

1. Eating Quality breeding values have been available for 9 years

2. Breeders have been future focused on what markets will look like

3. Breeding values have enabled genetic progress to be made