

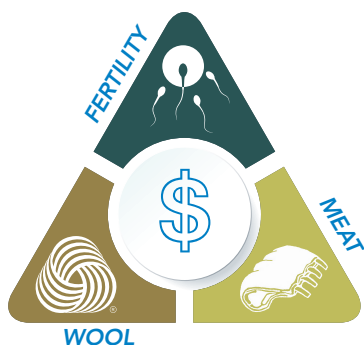
DOHNE



A practical guide



Third Edition 2023



DOHNES EXCEL IN AMSEA EVALUATION

Trait Leading Balmoral Sires

Dohne sires have achieved impressive results in an Australian Merino Sire Evaluation Association (AMSEA) Evaluation, including in the current Merino Lifetime Productivity project at Balmoral in Victoria.

The Dohne breed has been evaluated alongside Merinos and Poll Merinos for many years, with 22 Dohne sires from across Australia used in five sire evaluations across five sites, beginning in 2002.

The Australian Wool Innovation funded and AMSEA delivered project is one of five sites that will host 134 sires and 5500 ewes and collect close to two million pieces of data to be analysed, focusing on the

traits that drive lifetime productivity – growth, carcase yield and quality, wool production and quality, and reproduction data.

The Dohne has performed where expected in the Balmoral Merino Lifetime Productivity Project, trait leading in:

- Weaning weight and post weaning weight
- Pre-joining condition score
- Eye muscle and fat
- Conception
- Reproduction – Litter size and number of lambs weaned
- Fleece rot resistance
- Breech wrinkle and breech cover
- Leg conformation

AMSEA	YWT	YEMD	YFAT	YWEC	YCFW	YFD	YDCV	YSS	YSL	EBWR	WR
Dohne Average	8.1	1.7	0.8	-18	0	-0.3	-1.3	-0.3	3.7	-0.8	0.23
All Merino Average	2.5	0.0	-0.1	4	11	-1.2	-0.3	0.0	2.9	0.1	0.02



FOREWORD

Sheep versatility and profitability at its best

Australian Dohnes are a well balanced and versatile breed producing a stylish white apparel wool and a fast growing prime lamb.

Red meat requirements are increasing globally due to the improved living standards in areas such as Asia and the Middle East. Enterprises previously focussed on prime lamb production that have seamlessly converted over to Dohnes have found financial success because the breed delivers exceptional returns from its combined wool and red meat income, bolstered by its outstanding breeding performance.

In **Australia** the **Dohne** is a proven economic achiever due to its fertility and early growth rates, which leads

to rapid product turn off and **better gross margins per hectare**.

Modern objective breeding techniques coupled with stringent subjective classing to maintain breed standards have been the foundation of the **Dohne's** success.

The Dohne's influence over the national sheep flock during the last 25 years has been profound. The Dohne is responsible for the change in the make and shape of the Australian Merino.

This handbook explains how the Dohne was developed, the Dohne advantages and the Dohne breeding system and philosophy.

HISTORY OF THE DOHNE

1938 - 2023

Dohne sheep have been ticking all the boxes since their inception in South Africa in 1938 and introduction to Australia in 1998. The aim of the Dohne has been well defined, with the breeding objective to improve meat, wool and reproductive traits.

The initial cross was between a Peppin Merino and the German Mutton Merino. This was a "one-off" cross and progeny were interbred and selected for high fertility, rapid lamb growth, mothering abilities and the production of quality Merino wool.

In Australia the Dohne presented a perfect alternative for sheep producers. With an emphasis on meat and wool traits, the true dual-purpose sheep had arrived. It provided an alternative to the fine or medium wool Merinos, and specialist prime lamb breeds or composites that have been traditionally used in sheep enterprises.

The maternal qualities of the Dohne ewe proved perfect for Australian conditions. They are survivors; resilient and fertile. They are natural mothers who rear high performance lambs and produce quality apparel Merino wool.

Full pedigree and modern, objective breeding techniques, coupled with stringent subjective classing to maintain breed standards have been the foundation of the Dohne's success. The following economic traits are recorded:

- Body weight at weaning and post weaning.
- Wool weight and fibre diameter at post weaning.
- Eye muscle depth and fat depth at post weaning.

Ethically, as an apparel wool producer, the Dohne stands alone with a natural bare breech eliminating the need for mulesing.

The Australian breed society, formed in 2000, has overseen the breed's recognition as a modern, mules-free, plain-bodied, productive, profitable and adaptive sheep breed for the Australian farmer.

The Dohne is known for its subjective and objective benefits, high fertility, rapid growth rates, hardiness, quality apparel wool, bare breech and ASBV's.

The popularity of the breed has seen the Dohne spread to South America, New Zealand, Russia, North America and China.

DOHNE ADVANTAGES

Dohne: the best path to a self-replacing mules-free flock, with high performance of meat and wool productivity.

- Bare breech / mules free
- Self replacing polled flock
- Early maturing prime lambs
- Quality apparel Merino wool
- High fertility
- Plain bodied / open faced
- High fecundity and exceptional mothering ability
- High weaning percentages and survival rates
- Adaptable to varied environments, including harsh conditions and pastures low in protein
- Non seasonal breeders / up to 70% will rejoin with lambs at foot
- Full pedigree and performance recording
- Longevity



“*The Dohne sheep presents a very different alternative to sheep producers than previously available sheep genetics in Australia. With emphasis on both meat and wool traits, it presents the potential to have a true dual purpose sheep, which provides an alternative to the fine or medium wool Merinos and specialist prime lamb breeds or composites that have been traditionally used in sheep enterprises.*”

Dr Graham Lean, Agrivet Business Consultancy
Hamilton, VIC
www.agrivet-business-consulting.business.site

MEAT

- Lean and high yielding carcasses
- Even fat distribution
- Lambs with gains of up to 450 grams per day make the Dohne popular with grass finishers and lot feeders
- Market flexibility - trade or export weight carcasses



EXCEPTIONAL QUALITY: Lamb dishes feature on the Woolshed Restaurant menu at **Rawnsley Park** Station, with diners happy with the flavour, texture and tenderness of Dohne lamb

“*It's a really nice meat – good flavour and really good texture too.*”

Tony Smith, Rawnsley Park Station, Woolshed Restaurant, Hawker, South Australia
www.rawnsleypark.com.au/location-and-facilities/woolshed-restaurant

WOOL

- Dohne wool is AWEX accredited and categorised as Merino wool
- The Dohne averages 5-6kgs of 18-21 micron quality apparel AAAM
- Dohne wool has exceptional coefficient of variation and comfort factor
- Staple length 90-110mm with some Dohne producers shearing every 8 months



“
I am classing more and more Dohne and Dohne cross clips. Dohnes produce high quality wool... they are the “Titans” of the sheep world.
”

Charmaine Cacciola, Master Classer
South Shear, Katanning Western Australia

FERTILITY & MOTHERING ABILITY

Exceptional mothering abilities of the Dohne make them capable of rearing multiple progeny under all production systems, with maiden ewes lambing in the autumn achieving up to 120%.

- Fecundity
- Excellent milk production
- Non seasonal breeders
- Lambing ease
- High libido



“Everyone would agree that the maternal qualities of the Dohne ewe are perfect for Australian conditions. They are survivors – resilient and fertile. They are natural mothers who produce and rear high performance lambs. Our challenge is to manage them more effectively to get the optimal results using their exceptional mothering abilities.”

Wayne Hawkins
JBS Swift producer of the year 2015.

DISTRIBUTION

The variation in Australian climates from the mild wetter regions of the southeast to the hot and dry outback interior provides the perfect platform to display the adaptability and durability of the Dohne breed.

- The Dohne has the ability to convert inferior vegetation into sustainable products
- The Dohne has the ability to perform well above the average of species under adverse conditions
- The Dohne has been used extensively over Merino and Corriedales in New Zealand, Uruguay, Chile, Argentina, Peru, Falkland Islands and Russia



The variation in Australian climates from the mild wetter regions of the southeast to the hot and dry outback interior provides the perfect platform to display the adaptability and durability of the Dohne breed.

VERSATILITY

How the Dohne complements other breeds...

DOHNE EWE

+ Dohne Sire

- Self replacing
- High fertility
- High fecundity
- Apparel Merino wool
- Prime lamb

DOHNE EWE

+ Terminal Sire

- Prime lamb dam
- High fertility
- High fecundity
- Apparel Merino wool
- Prime sucker lamb

MERINO EWE

+ Dohne Sire

- Self replacing
- Improved fertility
- Faster growth rates
- Apparel Merino wool
- Quality lamb carcass
- Progeny become prime lamb dams

COMPOSITE EWE

+ Dohne Sire

- Prime lamb dam
- Reduction in micron by 8-10
- High fertility
- High fecundity
- Prime sucker lamb
- Leaner carcass
- Self replacing

AUSTRALIAN SHEEP BREEDING VALUES (ASBV_s)

The Dohne: Embracing modern up to date performance breeding strategies

- ASBV_s are a projection of how the traits of an animal's **progeny** will perform
- The ASBV_s are derived from recording the full pedigree and performance of an animal
- The national database allows Dohne sheep from large and small registered stud flocks to be directly compared



As a commercial breeder, how can I use a ram's ASBV_s to improve my flock's performance?

- Define your breeding objectives for each trait for your flock
- Use the ASBV_s to complement the visual assessment of a sheep
- Select rams with ASBV_s that enhance your breeding objectives

ASBVs – Continual genetic improvement

With the use of ASBVs and subjective (visual) classing the Dohne has continued to improve.

Registered Dohne Breeders are continuing to strive for increased profitability on a commercial basis.

Since coming to Australia, Dohne

rams have improved 30% (New South Wales DPI independent evaluation).

Through compliance of all compulsory recordable traits, Registered Dohne Breeders will continue genetic improvement into the future.



• Tom Bowen and Roy Addis, Nutrien Ag Solutions Katanning WA, eye muscle scanning seven month old Dohne ewe lambs.

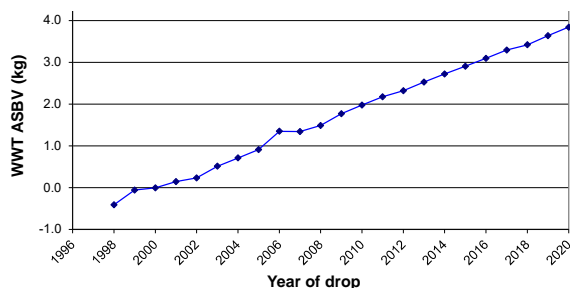
Dohnes compared favourably to every other breed or crossbreed on gross margin returns. Significant improvements in wool and trade lamb prices over the past 12 months have placed the Dohne into pole position.

Geoff Duddy, Consultant, Sheep Solutions, Omanama QLD
www.sheepsolutions.com.au

ASBVs – What does it all mean?

Weaning Weight (WWT): heritability : moderate 20%

- All lambs are weighed between 42 and 120 days of age (ideally 100 days).
- This weight reflects the mothers' milking ability and maternal characteristics.
- A higher WWT will highlight the early maturing lambs and give a commercial breeder the opportunity to reach target weights earlier.

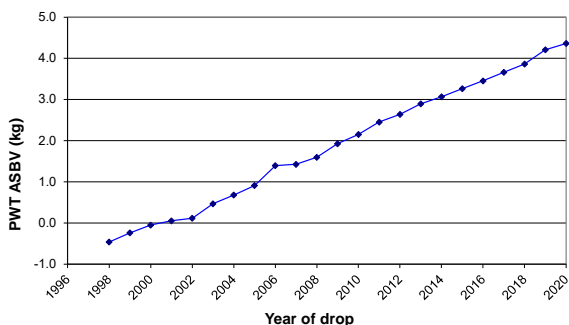


***faster growth
=
increase in profit***

Post Weaning Weight (PWT): heritability : moderate 30%

- Lambs are weighed between 210 and 300 days of age to achieve commercial objectives of turning lambs off earlier, indicating a better feed conversion ratio.
- This weight is representative of the lamb's ability to grow without their mother's influence.
- Lambs that reach target slaughter weights as quickly as possible are more profitable.

***earlier maturity
=
greater profitability***



ATTRIBUTES OF THE

MUZZLE

- masculine
- open & soft
- free of blemishes

POLLED

TOPLINE

- long & straight
- body weight

BODY

- plain body
- free of wrinkle

SHOULDERS

- wedge shape body
- ease of lambing

SPRING OF RIB

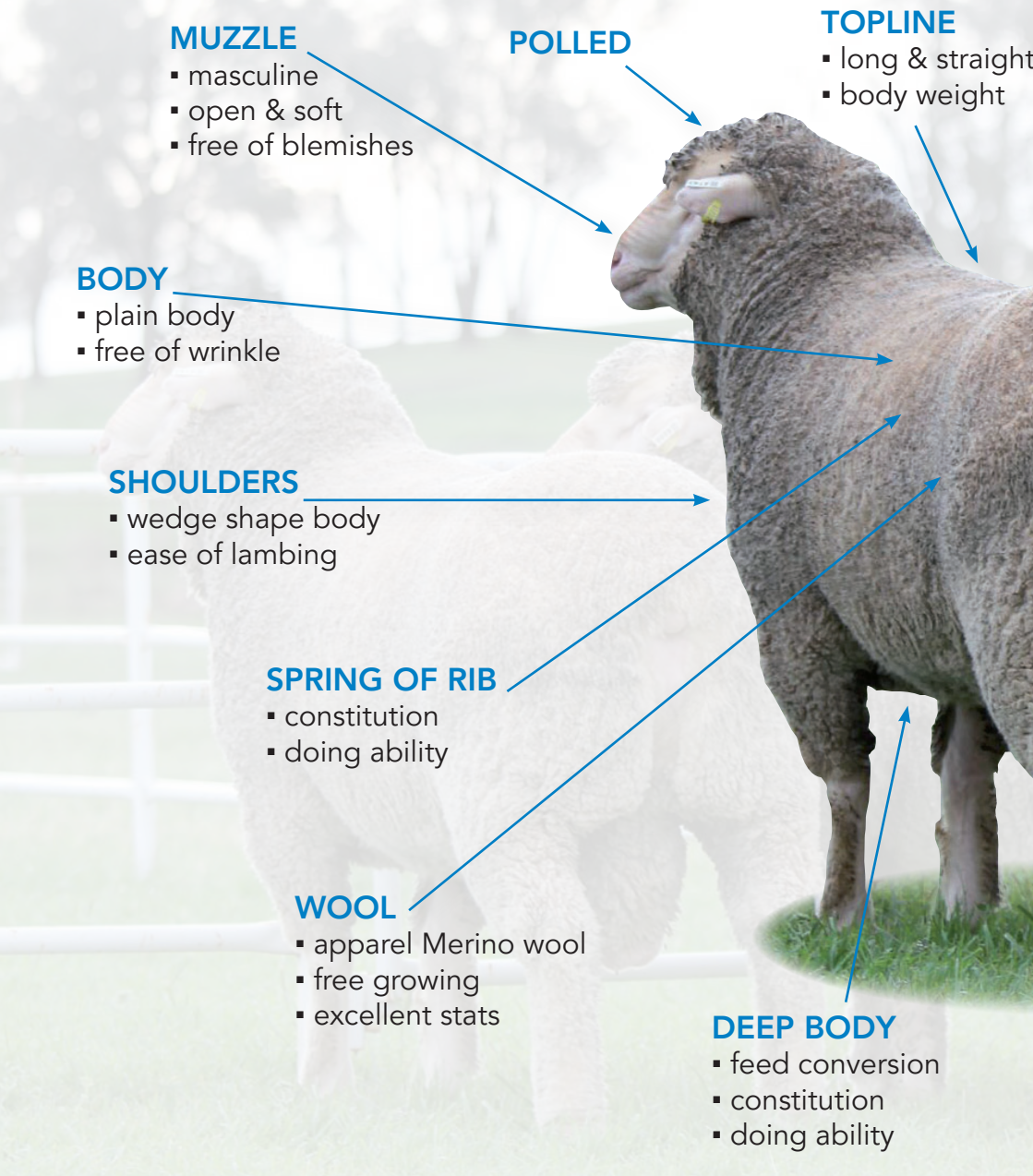
- constitution
- doing ability

WOOL

- apparel Merino wool
- free growing
- excellent stats

DEEP BODY

- feed conversion
- constitution
- doing ability



TYPICAL DOHNE

LOIN / EYE MUSCLE

- eating quality
- even fat distribution
- fertility

RUMP

- wide hips
- fertility
- ease of lambing
- weight

NATURAL BARE BREECH

- no mulesing required

TWIST

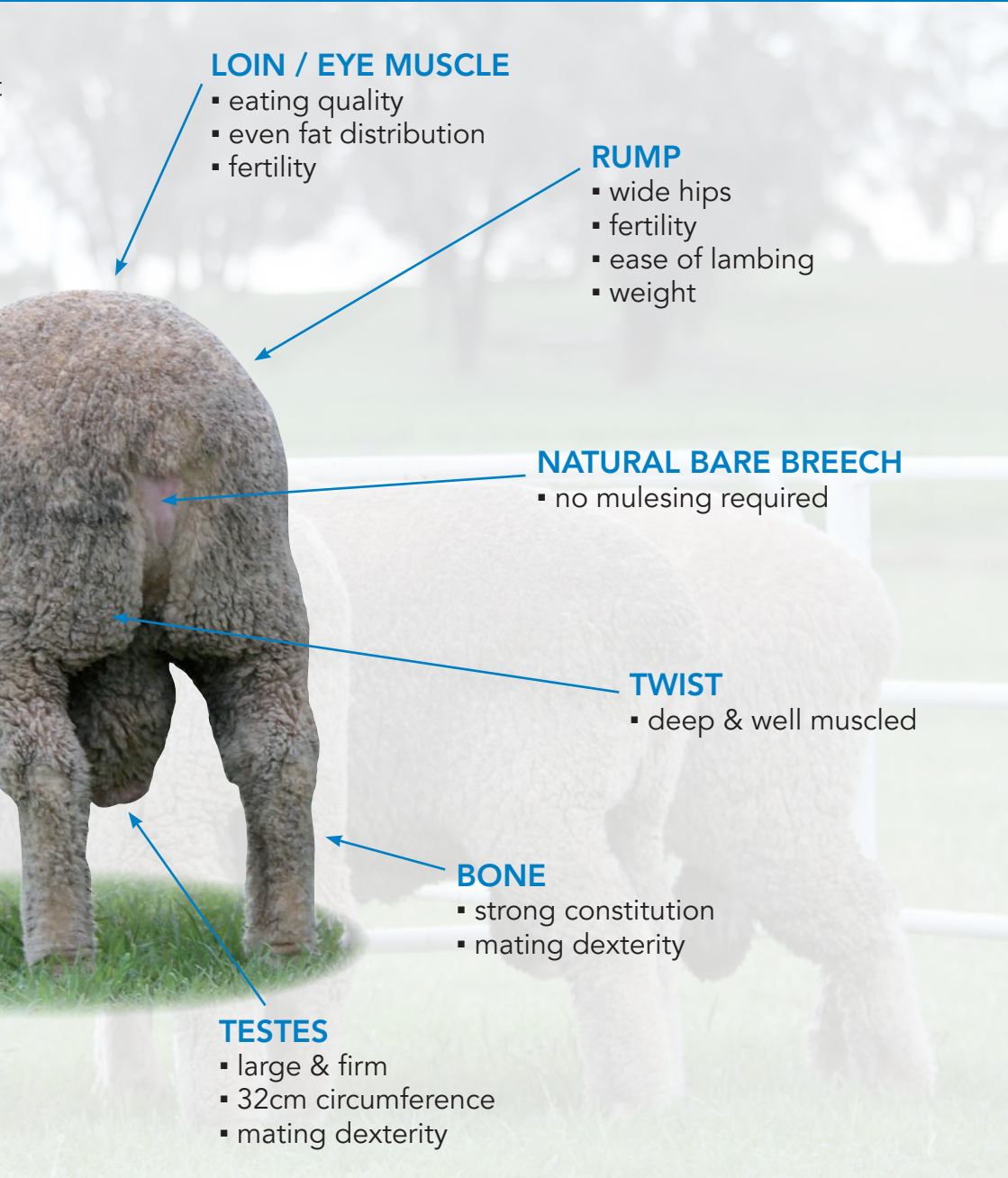
- deep & well muscled

BONE

- strong constitution
- mating dexterity

TESTES

- large & firm
- 32cm circumference
- mating dexterity



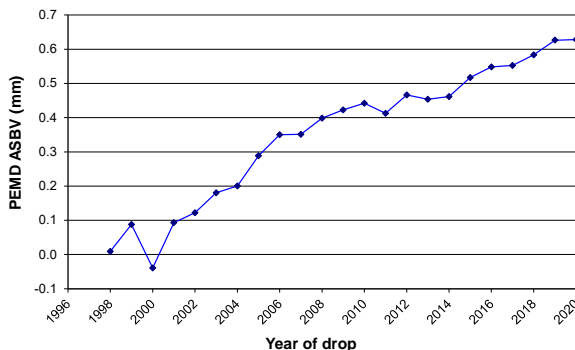


The Dohne produces an award winning, high yielding (up to 49 per cent) prime lamb carcass with attributes being equal to the commonly known terminal breeds with one exception – less fat.

ASBVs – What does it all mean?

Post Eye Muscle Depth (PEMD): heritability : moderate 20%

- Lambs are scanned between 210 and 300 days of age.
- High yielding carcasses.
- High priced cuts.
- High muscle to bone ratio.

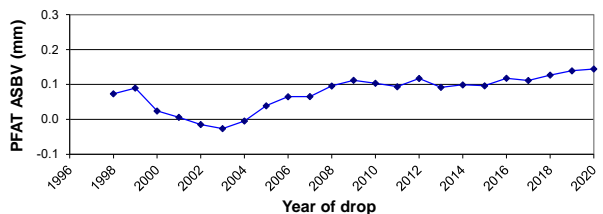


**positive PEMD
=
increased meat yield**

Post Fat (PFAT): heritability : moderate 20%

- Measured at the same time as PEMD.
- Relates to better ewe fertility, higher lamb survivability and doing ability.
- Improves meat eating qualities.

***intrinsic to fertility,
survivability &
meat quality***



ETHICALLY GROWN WOOL



VICTORIAN SUPPLY CHAIN: Dohne wool produced at Coonong Station, Urana, NSW, is scoured at Geelong, combed at Bacchus Marsh, spun at Wangaratta, and knitted at Melbourne.

Crimp and definition characteristics of wool produced by Dohne Merinos is on par with Merino wool and there is no price differentiation.

For even the most discerning wool enthusiast, separating a quality Dohne fleece to that of a Merino is a near on impossible task; test results speak for themselves.



ETHICAL OUTBACK WOOL IS THE ONLY CERTIFIED HUMANE WOOL IN AUSTRALIA, CERTIFIED BY HUMANE FARM ANIMAL CARE USA: The range includes jumpers, baby blankets, scarves, gloves and ponchos, with its most popular line being the undyed, non carbonized, chemical free garments showcasing the beautiful characteristics of Dohne wool, with Dohne wool garments sold internationally.

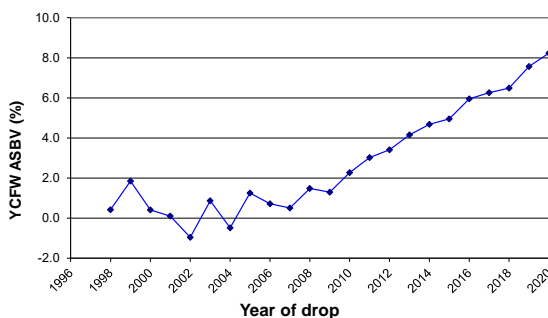
“**Ethical Outback Wool is a showcase of what the Dohne can do. Dohnes will handle anything that you throw at them and still produce magnificent wool.**”

Brand Owner & Woolgrower Sophie Holt, Coonong Station, ETHICAL OUTBACK WOOL, Urana NSW
www.ethicaloutbackwool.com.au

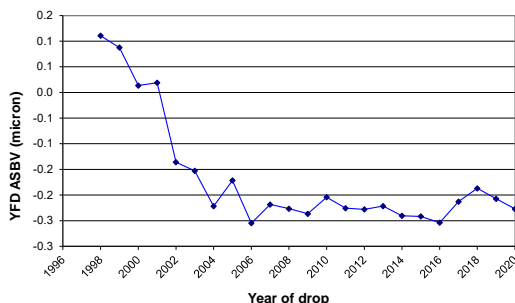
ASBVs – What does it all mean?

Yearling Clean Fleece Weight (YCFW): heritability : moderate 30%

- Fleece measurements are taken between 240 and 500 days of age, when the animal has a minimum of 180 days of wool growth.
- Being a dual purpose breed the aim to maintain a meat to wool ratio that does not impede fertility.



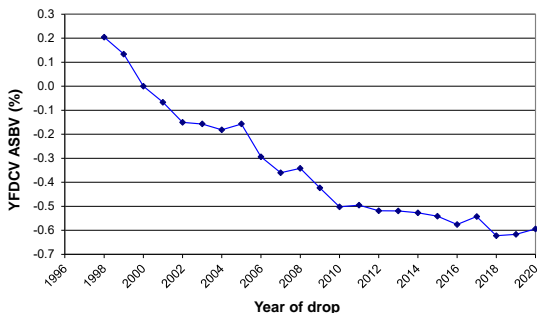
Yearling Fibre Diameter (YFD): heritability : high 55%



- Mid side samples are taken at the same time as Clean Fleece Weight.
- The aim is to maintain Fibre Diameter between the medium to fine wool range.

Yearling Fibre Diameter Coefficient of Variation (YFDCV): heritability : moderate 35%

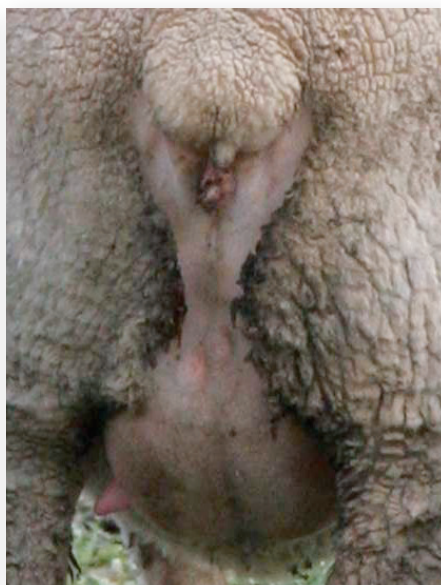
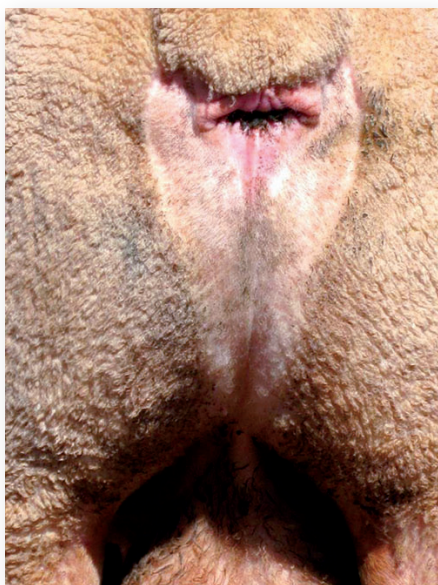
- Mid side samples are taken at the same time as YCFW.
- Selecting for a lower YCV will produce progeny that have less variation in YFD.
- Lower YCV results in improved staple strength and better processing.



DOHNE PRODUCTIVITY

Dohne productivity versus other breeds

Profit Driver	Dohne	Merino	Crossbred	Composite
Fertility	✓	✓	✓	✓
Fecundity	✓	✗	✓	✓
Growth Rate	✓	✗	✓	✓
Quality Wool	✓	✓	✗	✗
Prime Lamb Carcass	✓	✗	✓	✓



Self-replacing mules-free flock with high performance meat and wool productivity.

DOHNE PRODUCTIVITY

Dohnes: The Ethical and Sustainable Future of Food and Fibre Production

Dohnes are not just the Merino for the present but also for the future; proving they can be an ethical and sustainable source for the world's food and fibre needs. The world needs protein and clothing, however not at the expense of environment or animal welfare. Dohnes can match this challenge.

Dohnes are beating the need for breech surgery or chemicals to control breech fly strike. While there are treatment options and chemicals to assist in prevention of flystrike, increased genetic resistance is a valuable tool.

While Merino breeders struggle to breed for this modern world need, this ability is part of the Dohnes natural make up.

Dohnes are leading performers in a pastoral environment, both high and low rainfall, but in a grain farming system they contribute to lower chemical use and higher productivity.

The Dohne's truly outstanding performance for the current and future sheep industry is dramatically presented in independent and

comprehensive Merino Superior Sires (MSS) trials, a showcase for the cutting edge genetics of the sheep industry.

Given the industry's toughest test, Dohnes have proven themselves, with high weaning rates (WR), higher growth with better yearling weights (YWT), better carcase performance with eye muscle depth (YEMD) and fat (YFAT), low worm egg count (WEC), higher staple length (YSL), less breech wrinkle (EBWR) and cover, and overall wool and meat performance with the Dual Purpose index (DP+).

Australian Merino breeders have become very experienced in evaluating the relevance of different types of Merinos by comparing their ASBVs (Australian Sheep Breeding Values), however, Merino and Dohne ASBVs cannot be directly compared except in Merino Superior Sire trials.

The Dohne breed has been evaluated alongside Merinos and Poll Merinos for many years, with 22 Dohne sires from across Australia used in five sire evaluation sites, beginning in 2002.

COMPLIANCE

The objective of the Dohne Breeding System is to optimize the performance of Dohne commercial flocks through improved breeding methods.

Compliance in measuring the traits in the table below is part and parcel of that process.

Minimum measurement requirements for Registered Dohne Ram Breeders

Compulsory Recording	Trait	Age
Birth	Pedigree	Birth
Weaning	Body Weight	42–120 days
Post Weaning	Body Weight	210–300 days
Yearling	Fibre Diameter, Coefficient of Variation	210–500 days (min. 150 days wool growth)
Yearling	Independent Visual Classing	240–500 days (min. 120 days wool growth)
Yearling	Greasy Fleece Weight	240–500 days (min. 180 days wool growth)

To become and remain a registered Dohne stud, breeders must maintain valid Brucellosis Accredited free status and be a member of Sheep Genetics.

CONTACT DETAILS

Australian Dohne Breeders Association:

www.dohne.com.au

08 8210 5229



For the most current ASBVs
go to Sheep Genetics:

www.sheepgenetics.org.au



To find a registered Dohne breeder near you:

www.dohne.com.au/australian-breeders/

For upcoming sales and events:

www.dohne.com.au/events/upcoming/

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