

# Introduction to KIDPLAN

*Genetic improvement within your goat herd*

Are you getting the most bang for buck with  
your selection program?

*Hamish Chandler – Manager of Sheep Genetics*

*Will Chaffey - LAMBPLAN Development Officer*



SHEEP GENETICS



# Who are SHEEP GENETICS ?



**Hamish Chandler**  
Manager



**Caris Jones**  
Development  
Officer



**Nicole Williams**  
Project  
Administrator



**Will Chaffey**  
Development  
Officer



**David Rubie**  
Database Manager



**Fiona McLoughlin**  
Project  
Administrator



**Stephen Field**  
Database Manager



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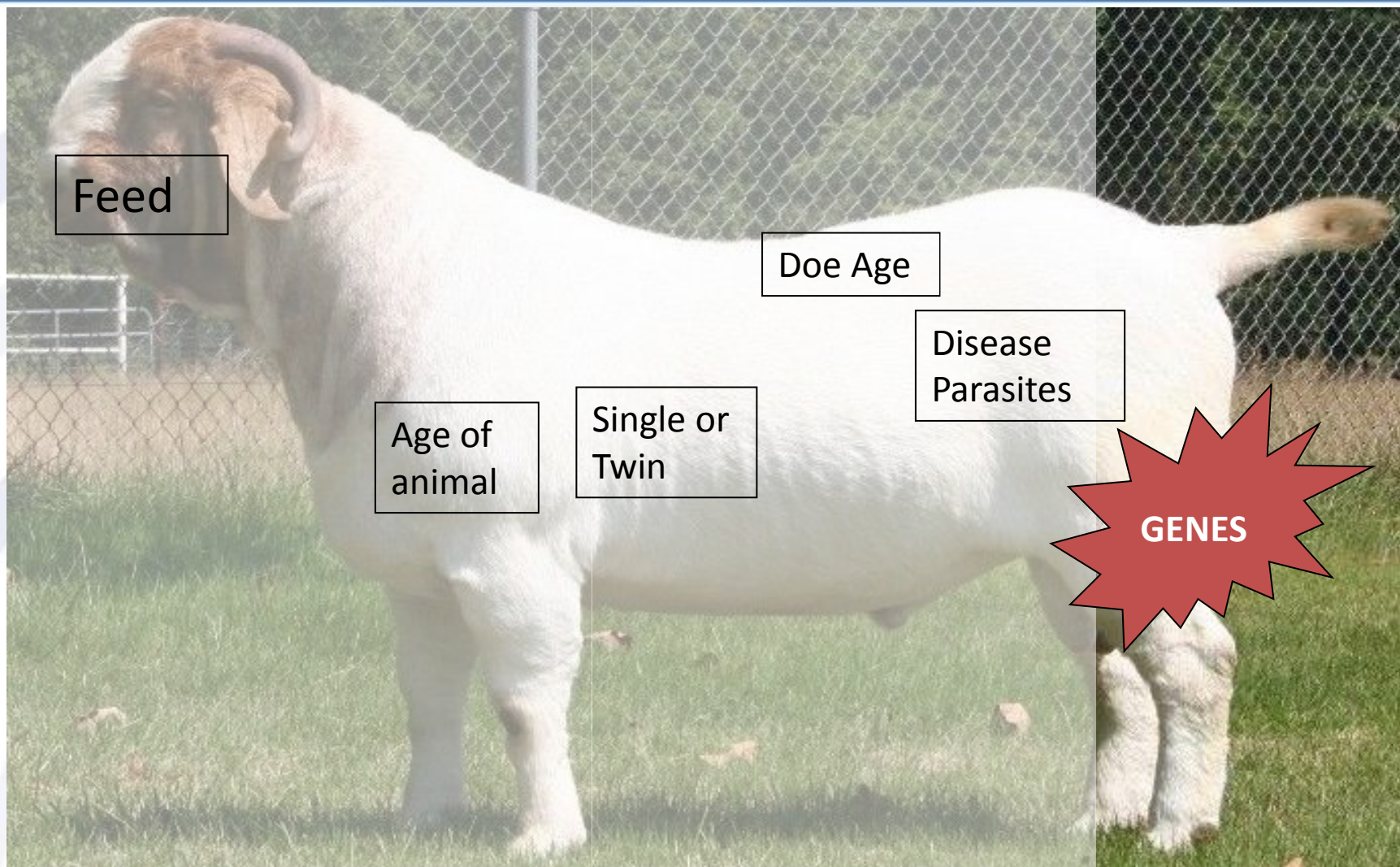
# The long and short of Farm production

- Farm production is an interaction of Genetics and Environment

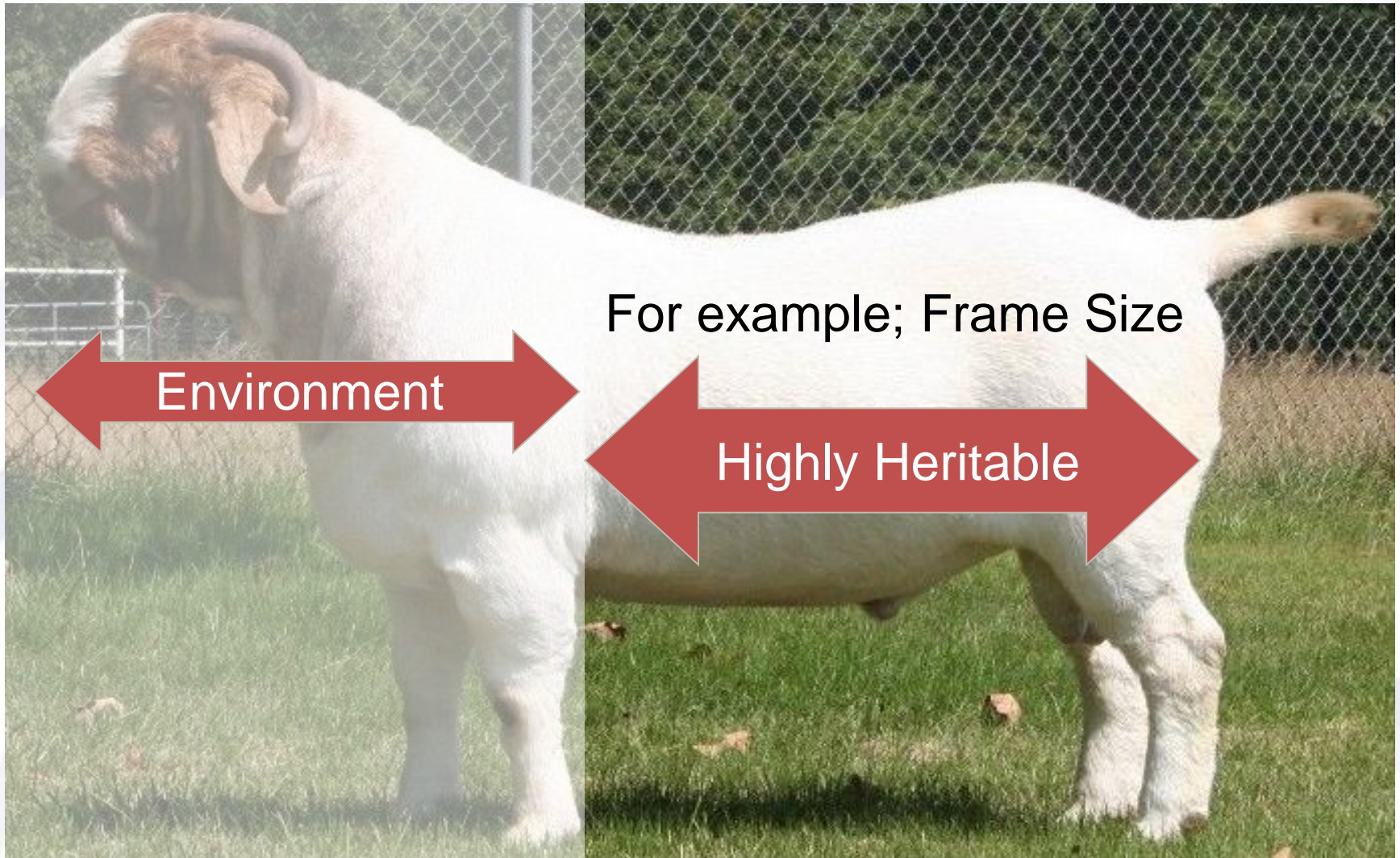
Performance = Genetics X Environment



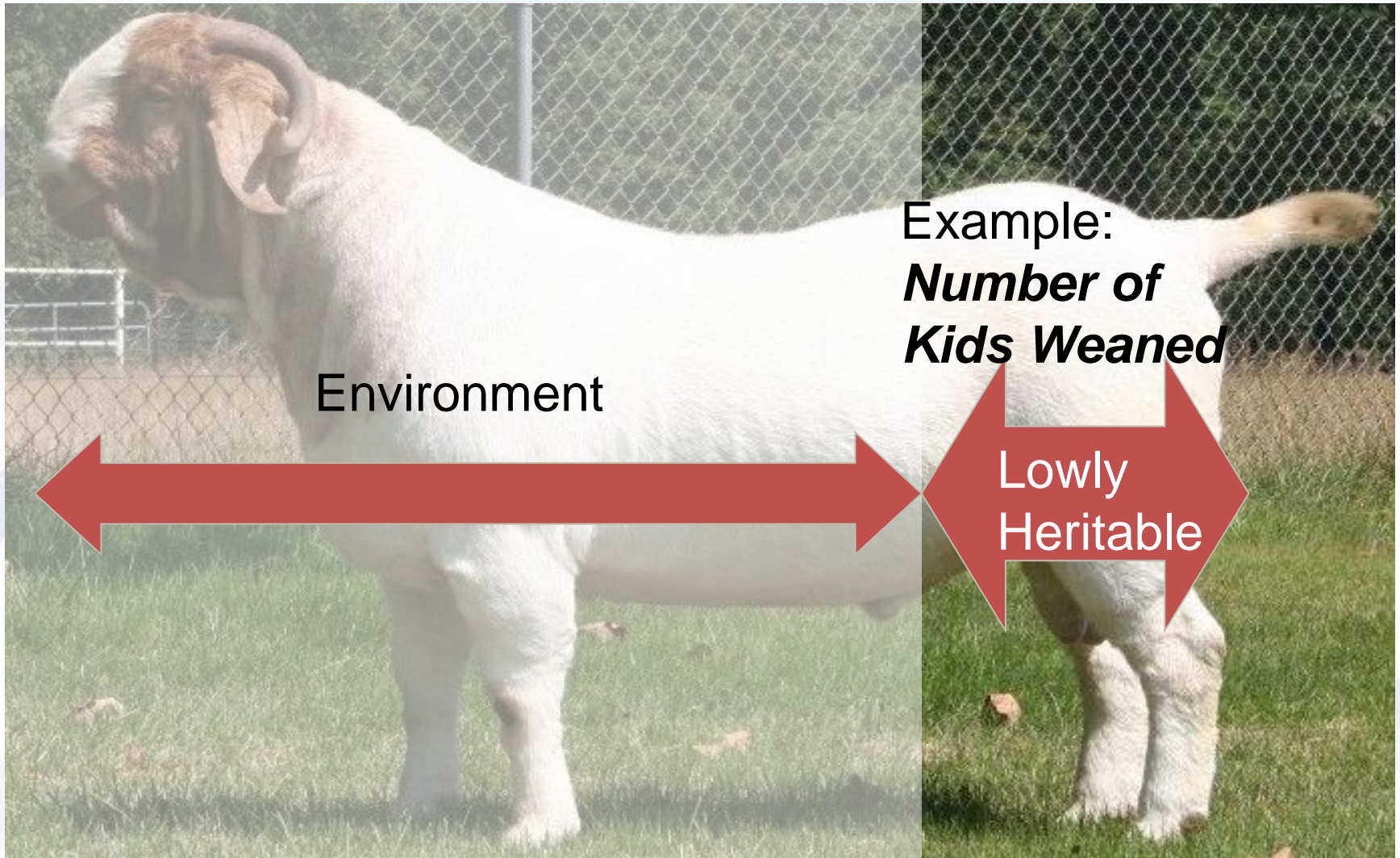
# What influences an animal's performance?



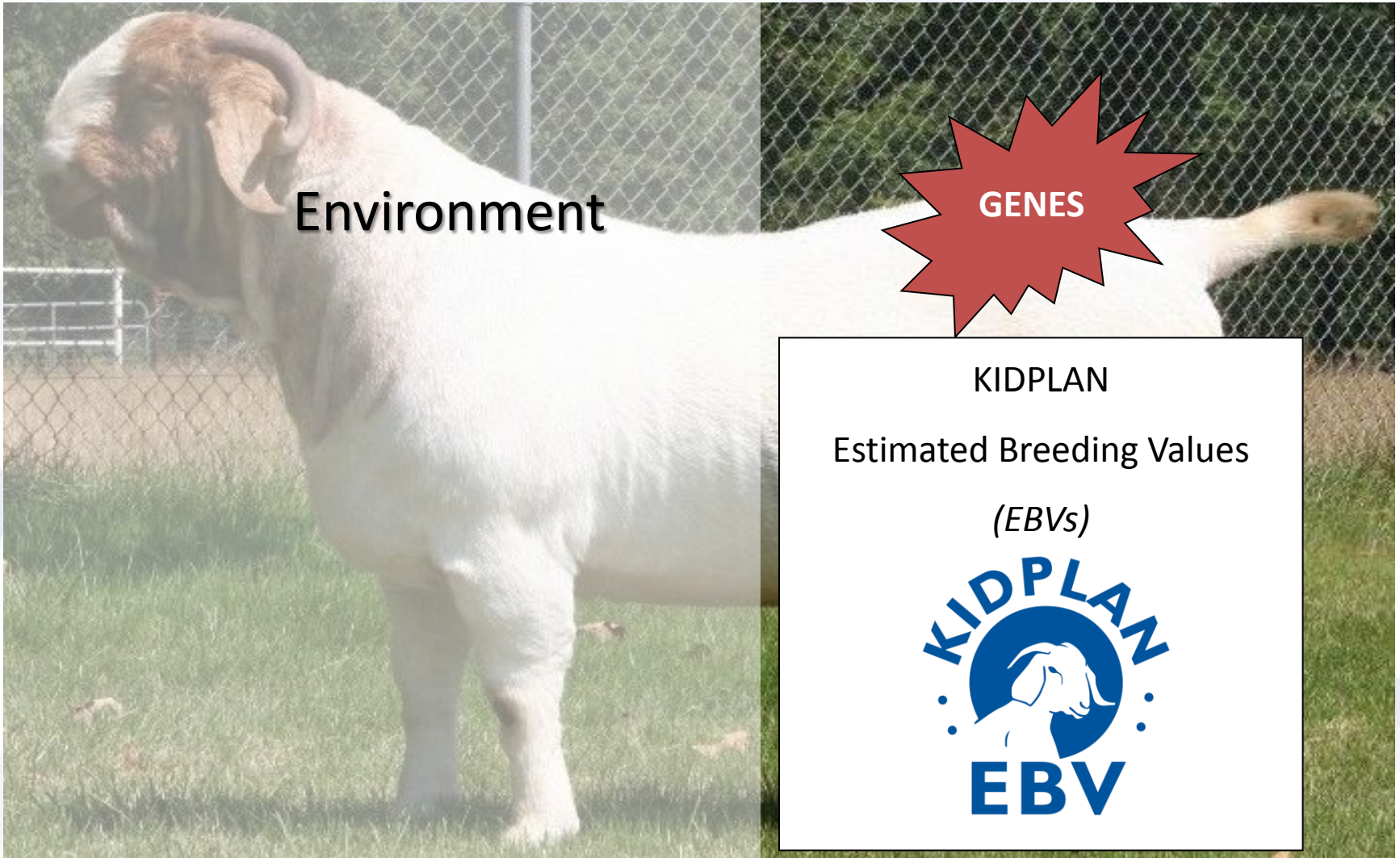
# What influences an animal's performance?



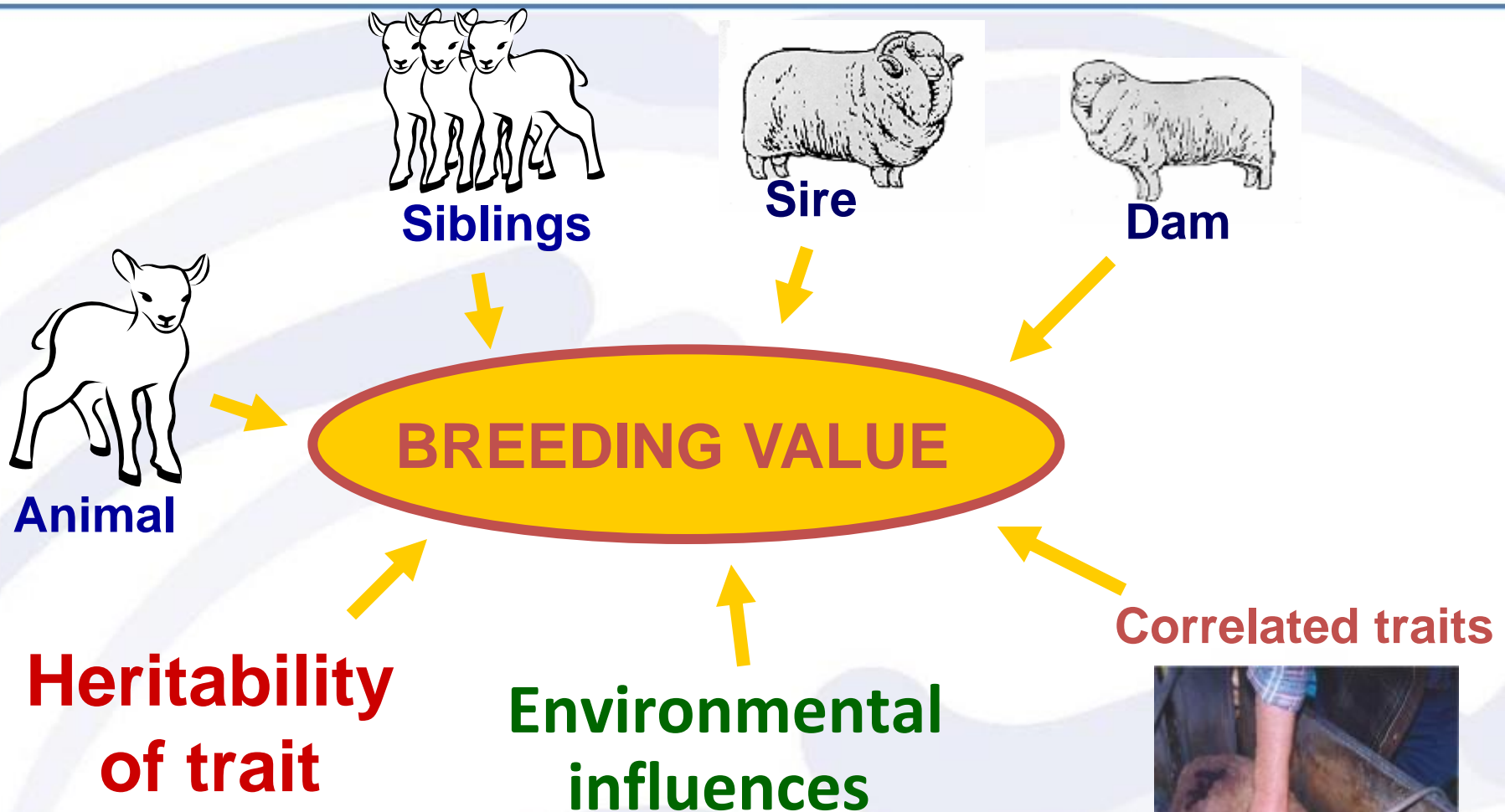
# What influences an animal's performance?



# How can we *predict* an animal's performance?



# Calculating Breeding Values





# Accuracy of breeding values

Accuracy of a breeding Value is affected by:

- The proportion of the herd being recorded.
- How many records are collected.
- How much information is available on the relatives.
- Heritability of the trait.

# What EBVs are available?

- EBVs for major production areas
  - Weight - wt
  - Carcase – emd, fat
  - Fertility – nkb, nkw
  - Fleece – gfw, cfw, fd, sl, ss (Angora).
  - Parasite Resistance - wec

# What EBVs are available?

- EBVs for a number of ages
  - Birth - **B**
  - Weaning – **W** (42-120 Days)
  - Post-weaning – **P** (120 – 300 Days)
  - Yearling – **Y** (300 – 400 Days)
  - Hogget – **H** (400 – 540 Days)
  - Adult – **A** (>540 Days)

e.g. PWT = Post-Weaning Weight

PEMD = Post – Weaning Eye Muscle Depth

# Some Common Traits for you:

- **WWT**: Weight of animal at Weaning age stage.
- **PWT**: Weight of animal at Post Weaning age stage.
  - Unit: KG
- **PEMD**: Post Weaning Eye Muscle Depth.
  - Unit: mm, on the 12<sup>th</sup>/13<sup>th</sup> rib
- **PFAT**: Post Weaning Fat Depth.
  - Unit: mm, on the 12<sup>th</sup>/13<sup>th</sup> rib
- **NKW**: Number of Kids Weaned
  - Unit: %

# Percentile Band

- Accessible from Sheep Genetics Website.
- Helps you benchmark what is better for each trait.
- Doesn't necessarily have to be the same animal across each row.

	BWT	WWT	PWT	YWT	HWT	AWT	PFAT	PEMD	PWEC	NKW	Carcase Plus	SRC
Top value	-0.28	4.3	7.6	9.1	10	9.3	0.9	2.3	-45	7%	157	123
Top 1%	-0.19	3.3	5.7	7.1	8.3	8	0.8	2	-32	5%	144	117
Top 5%	-0.12	1.6	3.5	4.7	6	6	0.6	1.5	-14	1%	118	108
Top 10%	-0.08	1.2	2.5	3.6	4.3	4.8	0.3	1	-8	0%	113	105
Top 20%	-0.03	1	1.8	2.6	3.1	3.7	0.1	0.1	-4	-1%	109	103
Top 30%	-0.01	0.8	1.4	2.2	2.5	2.8	0.1	0.1	-1	-2%	107	102
Top 40%	0.02	0.6	1.1	1.7	2.1	2.3	0.1	0	2	-3%	105	100
Top 50%	0.04	0.5	0.8	1.4	1.7	1.9	0	-0.1	5	-4%	103	99
Top 60%	0.06	0.3	0.5	1	1.3	1.6	0	-0.1	10	-5%	101	99
Top 70%	0.08	0.2	0.2	0.5	0.9	1.2	-0.1	-0.2	13	-6%	99	97
Top 80%	0.11	-0.1	-0.3	0.1	0.4	0.6	-0.3	-0.3	18	-8%	97	96
Top 90%	0.15	-0.4	-1	-0.8	-0.4	0	-0.6	-0.3	23	-9%	93	94
Bottom value	0.43	-1.5	-3.6	-3.5	-3.7	-3.7	-0.9	-0.7	122	-17%	79	86

# Dollars and cents on PWWT.

- Two bucks, A and B:
  - Buck A. = EBV for PWWT of **3.5 kg**
    - » Top 5 % for KIDPLAN
  - Buck B. = EBV for PWWT of **0.8 kg**
    - » Trait Average for KIDPLAN

# Buck A. vs Buck B.

Buck	A. (top 5%)	B. (avg)
PWWT <i>EBV</i>	<b>3.5kg</b>	<b>0.8kg</b>
PWWT passed onto Progeny	1.75kg	0.4kg
Dressing percentage	48%	48%
Kg of added Carcase	0.84kg	0.2kg
\$/KG of Carcase	\$3.00	\$3.00
Value in \$/hd =	\$2.52 per Kid	\$0.6 per Kid
60 Kids per Year	\$151.2	\$36
60 Kids per year for 4 years	<b>\$604.8</b>	<b>\$144</b>

- Assumptions: *Dressing % = 48%* and *\$/KG of Carcase = \$3.00*

# What is NKW worth?

Top of drop has NKW of 7% compared to a buck at 0%.

7% difference

3.5% improvement for every daughter sired

Average Buck gets 60 progeny per year  
(Half females, means 30 Does per year)  
Over 4 year lifetime is 120 Daughters

**20 extra Kids or \$900 per buck**  
*over his daughters lifetime (4 years each)*



# Putting them together makes a difference!

1000 Does herd using av.  
Bucks ↓

Marking 1200 Kids



Average carcasse wt 15kg



Total value \$54,000

1000 Does herd using top  
Bucks ↓

Marking 1242 Kids



Average carcasse wt 16.75kg



Total value \$62,410



**Added value \$8,410**

# Indexes

- Breeding values on many traits can be combined into one figure – a ‘selection index’
- The index gives the overall merit, or score, to achieve a certain production goal
- The emphasis put on each trait depends on the breeding objective

# Indexes, and how to use

- Identify the most appropriate index for **you**.
  - » SCR
  - » Carcase Plus
- Rank Animals on an index
- Look at EBVs within the index
- Look at other traits important to you which may not be in that index

# SRC Index

- SRC
  - Self Replacing Carcase index.

Trait	<u>Relative</u>	<u>Gain over 10</u>
	<u>Emphasis</u>	<u>years</u>
BWT (Kg)	11%	0.2
WWT (Kg)	23%	3
MWWT (Kg)	5%	0.4
PWT (Kg)	26%	4.3
PFAT (mm)	5%	0.1
PEMD (mm)	10%	0.6
NKW (%)	14%	9%
PWEC (%)	6%	-13

# Carcase Plus Index

- C+
  - Carcase Plus.
  - No WEC, BWT, NKW or MWWT.

Trait		
	<u>Relative Emphasis</u>	<u>Gain over 10 years</u>
WWT (Kg)	30%	2.2
PWT (Kg)	35%	3.4
PFAT (mm)	5%	0.2
PEMD (mm)	30%	1.2

# Sheep Genetics KIDPLAN database search

## SHEEP GENETICS

[Search home](#) [LAMBPLAN](#) [MERINOSELECT](#) [DOHNE MERINO](#) [KIDPLAN](#)

KIDPLAN



KIDPLAN 1 Aug, 2015

### KIDPLAN ASBV enquiry

Stud/Flock  Animal Id



Basic search: search ASBVs by flock, ID, breed, sex and drop.  
Advanced search: search ASBVs for individual traits, indexes, breeder location and other options..  
Mating predictor: Percentile bands: All percentile bands for this analysis.

### KIDPLAN Elites...

- [Elites page](#)



### KIDPLAN Other Sire Lists...

- [Current drop bucks](#)

### Sales and semen catalogues

There are currently 0 sales and 5 semen catalogues

[List and manage your sales and semen catalogues](#)

### Dashboard

The dashboard can be used to view genetic trends, download your results to be loaded into management software, upload a data file for analysis or grab the latest reports [Tools](#)

### Find a KIDPLAN breeder

Stud  or breeder name

[Advanced breeder search \(breed/location/etc\)](#)

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[KIDPLAN](#)

Stud  Id   -or-

**More options** (breed, drop, etc), accuracies, ASBVs

Displaying results for BWT accuracy  $\geq$  45% and Carcase Plus accuracy  $\geq$  45% and SRC accuracy  $\geq$  45% and NKW accuracy  $\geq$  45% and PFAT accuracy  $\geq$  45% accuracy  $\geq$  45% and WWT accuracy  $\geq$  45%

<u>Animal ID</u>	<u>BWT</u>	<u>WWT</u>	<u>PWT</u>	<u>PFAT</u>	<u>PEMD</u>	<u>NKW</u>	<u>Carcase Plus</u>	<u>SRC</u> ↓
TERRAWEENA-077132	0.00 85%	<b>1.3</b> 89%	2.4 91%	0.5 73%	0.9 78%	-1% 54%	<b>120</b> 87%	104 66%
DUDAUMAN PARK-007000	0.08 65%	-0.1 82%	0.7 84%	-0.7 55%	-0.4 62%	0% 54%	100 78%	99 63%
DUDAUMAN PARK-009089	0.14 62%	-0.2 75%	0.3 77%	-0.5 49%	-0.2 55%	-2% 48%	100 71%	99 57%
DUDAUMAN PARK-099167	-0.01 93%	0.7 95%	1.7 96%	0.1 75%	0.0 83%	-6% 51%	107 92%	98 67%
DUDAUMAN PARK-006001	-0.15 61%	-1.6 78%	-0.5 80%	0.0 45%	0.0 52%	-3% 46%	94 72%	97 57%
TERRAWEENA-977542	0.04 76%	-0.4 82%	-0.1 83%	-0.1 70%	0.3 74%	-5% 48%	103 81%	96 60%
DUDAUMAN PARK-009045	0.12 56%	0.0 70%	0.4 74%	-0.6 48%	-0.3 54%	-5% 48%	101 68%	96 56%
DUDAUMAN PARK-009046	0.12 59%	-0.2 72%	0.0 75%	-0.6 46%	-0.1 52%	-5% 47%	100 69%	96 56%
DUDAUMAN PARK-009093	0.13 57%	-0.6 72%	-0.9 75%	-0.6 48%	-0.3 54%	-7% 47%	95 69%	93 56%
DUDAUMAN PARK-006009	0.31 77%	0.1 91%	0.4 92%	-0.6 61%	-0.3 68%	-7% 67%	100 84%	92 74%



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# Where to find more information?

- Sheep Genetics website,
  - <http://www.sheepgenetics.org.au>
- Will Chaffey
  - LAMBPLAN (KIDPLAN), Development Officer.
- Sheep Genetics office
  - 02 6773 2948
  - [info@sheepgenetics.org.au](mailto:info@sheepgenetics.org.au)