

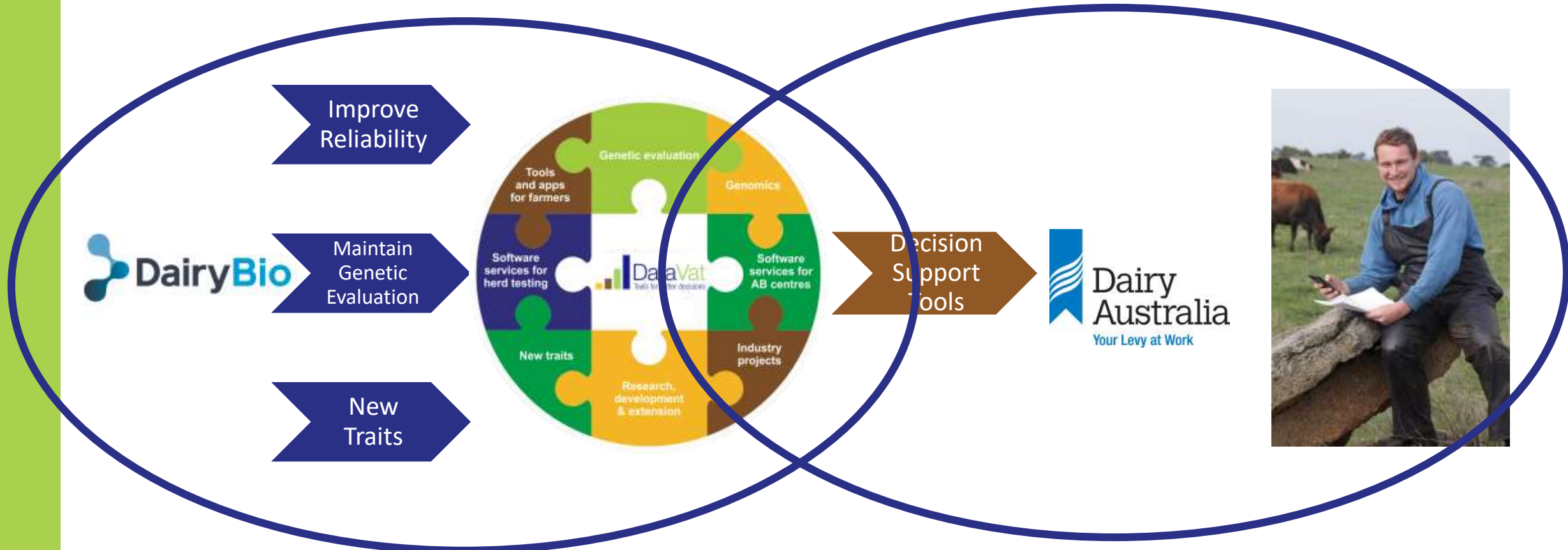


# 2020 World Ayrshire Conference

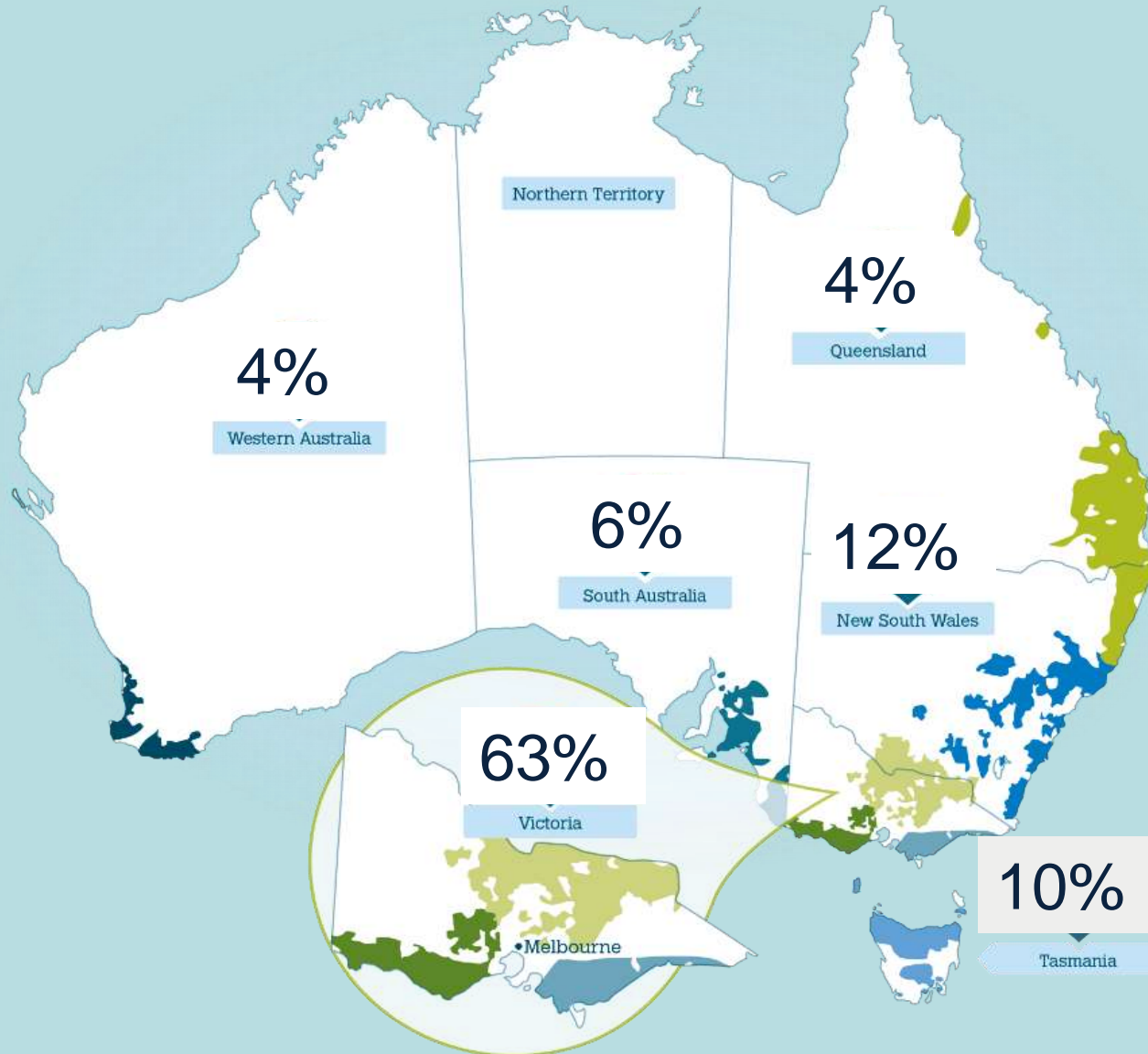
**Michelle Axford**

**Group Leader: Genetics and Delivery**

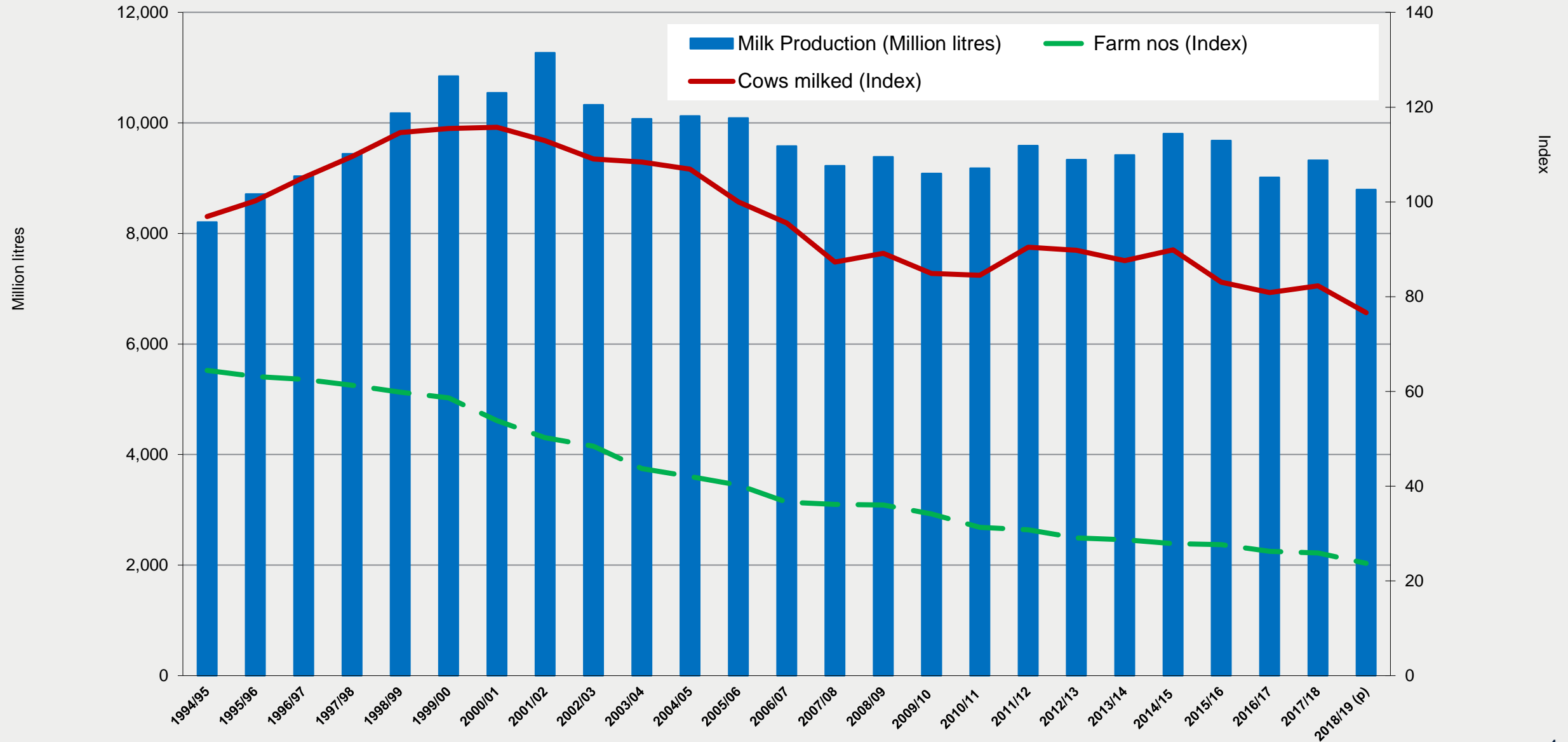
# Bridging Science and the Field



# AUSTRALIAN MILK PRODUCTION



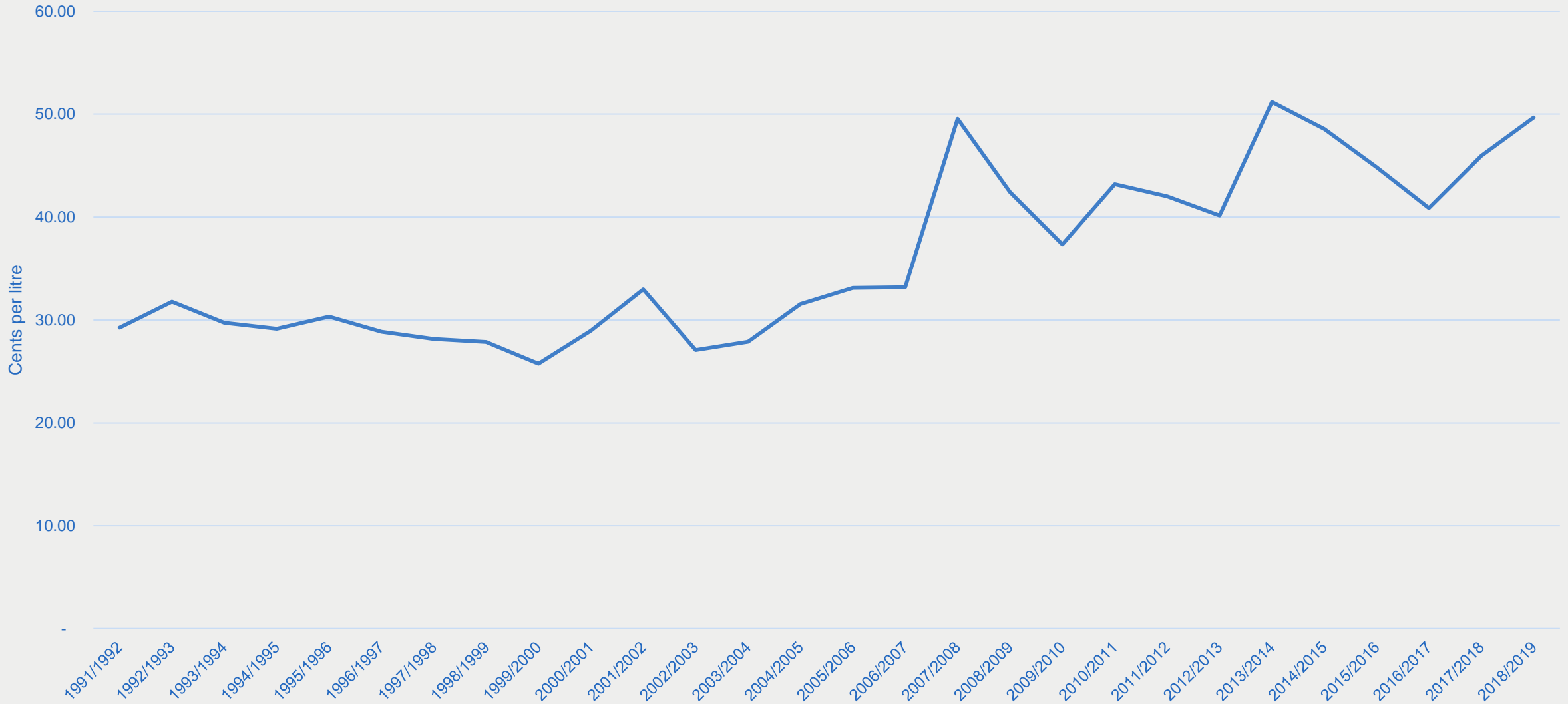
# MILK PRODUCTION HISTORY



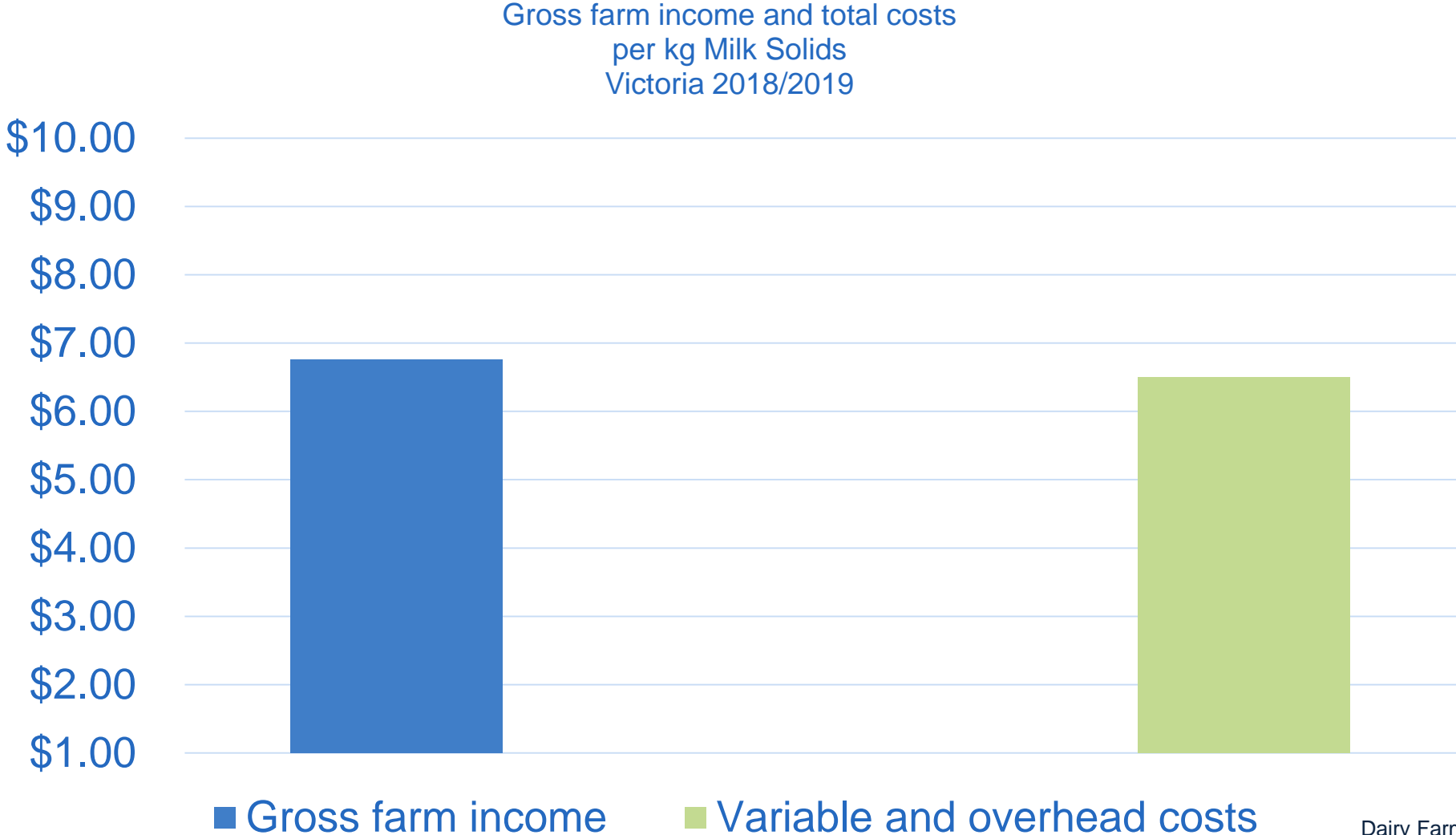
Source: Dairy manufacturers, ABS, State Authorities and Dairy Australia

# FARMGATE MILK PRICE

Indicative farmgate milk price



# Income and costs on Victorian farms (2018-2019)



# THE AUSTRALIAN DAIRY INDUSTRY

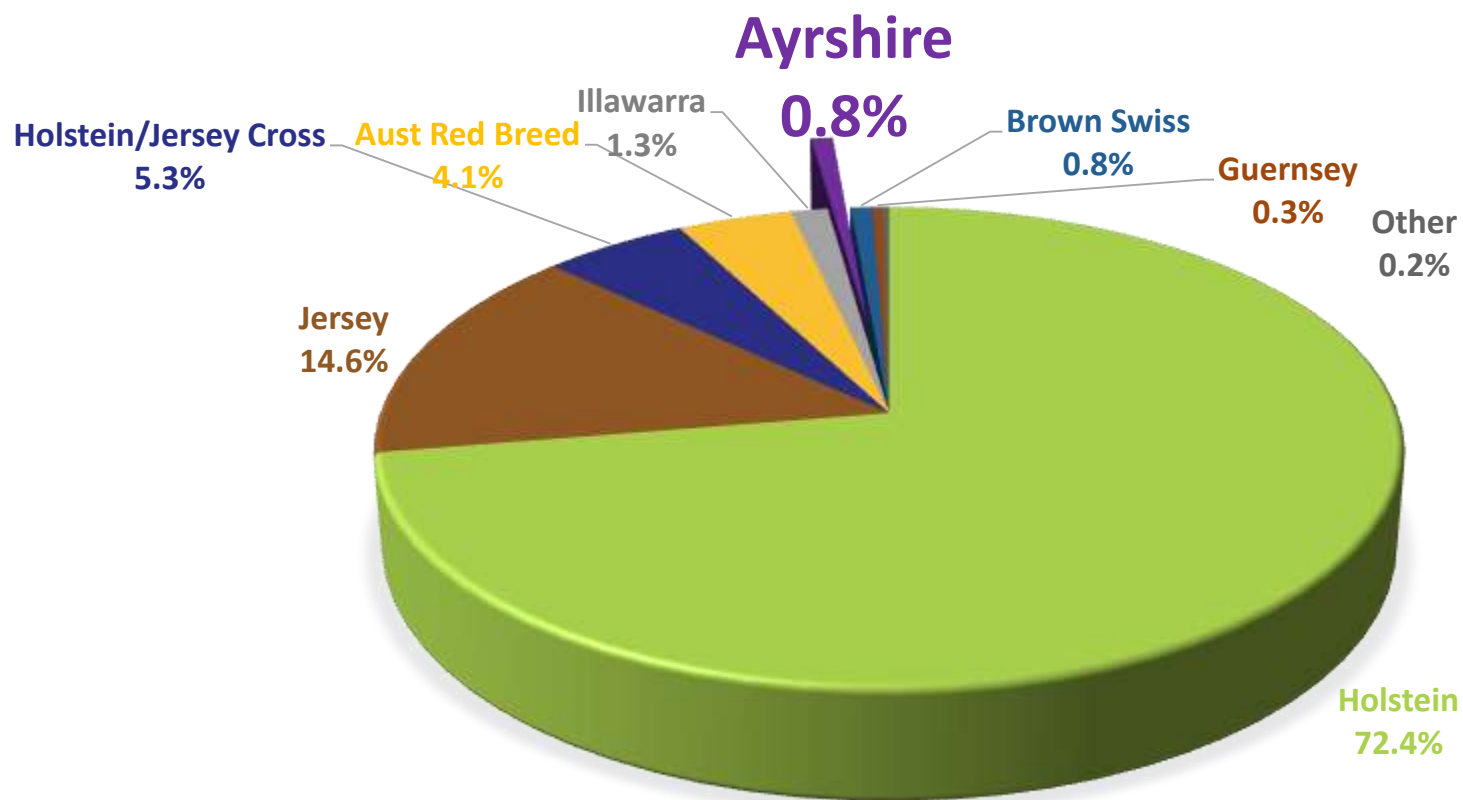
- **Australia ranks 4<sup>th</sup> in the world trade of dairy**
- **Australia holds a 6% share of the world dairy trade**
- **36% of production is exported**
- **Export revenue of A\$3.2 billion**



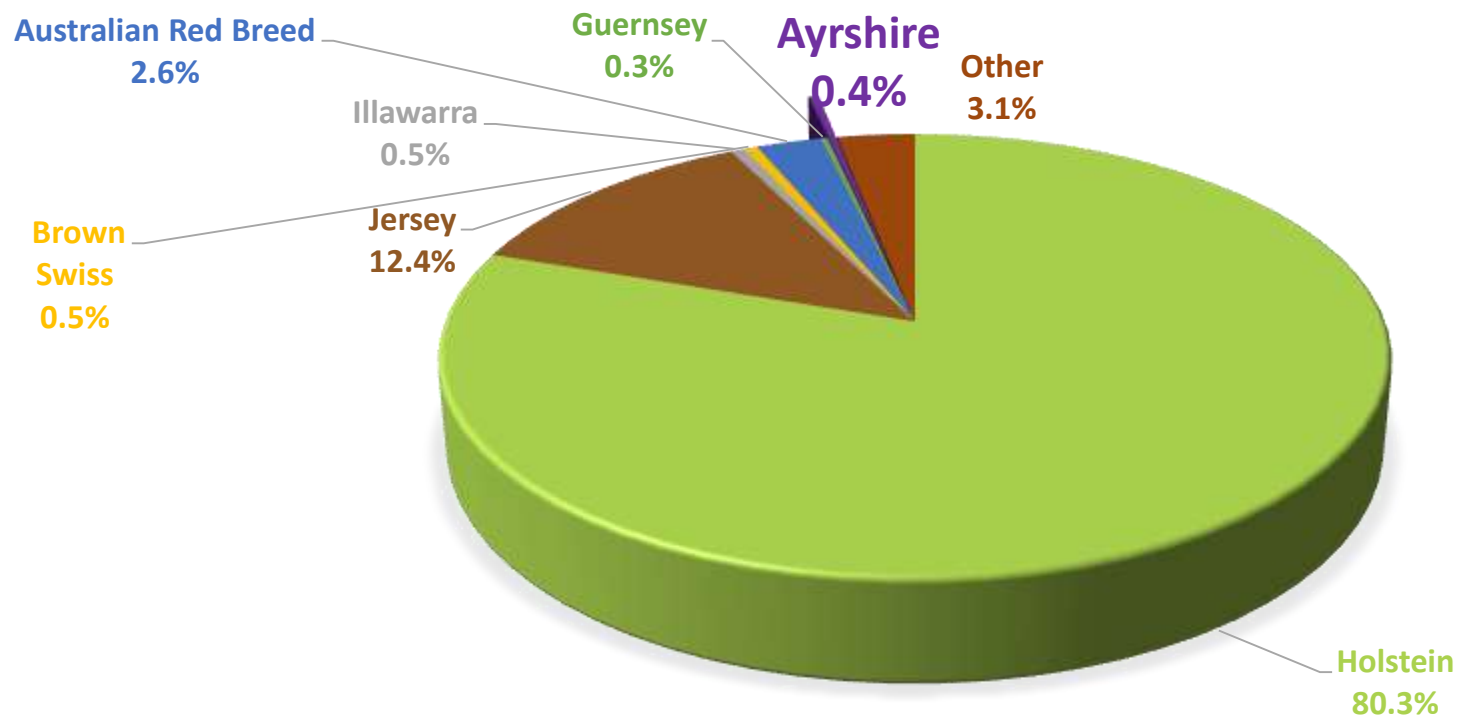
# Herd Improvement in Australia



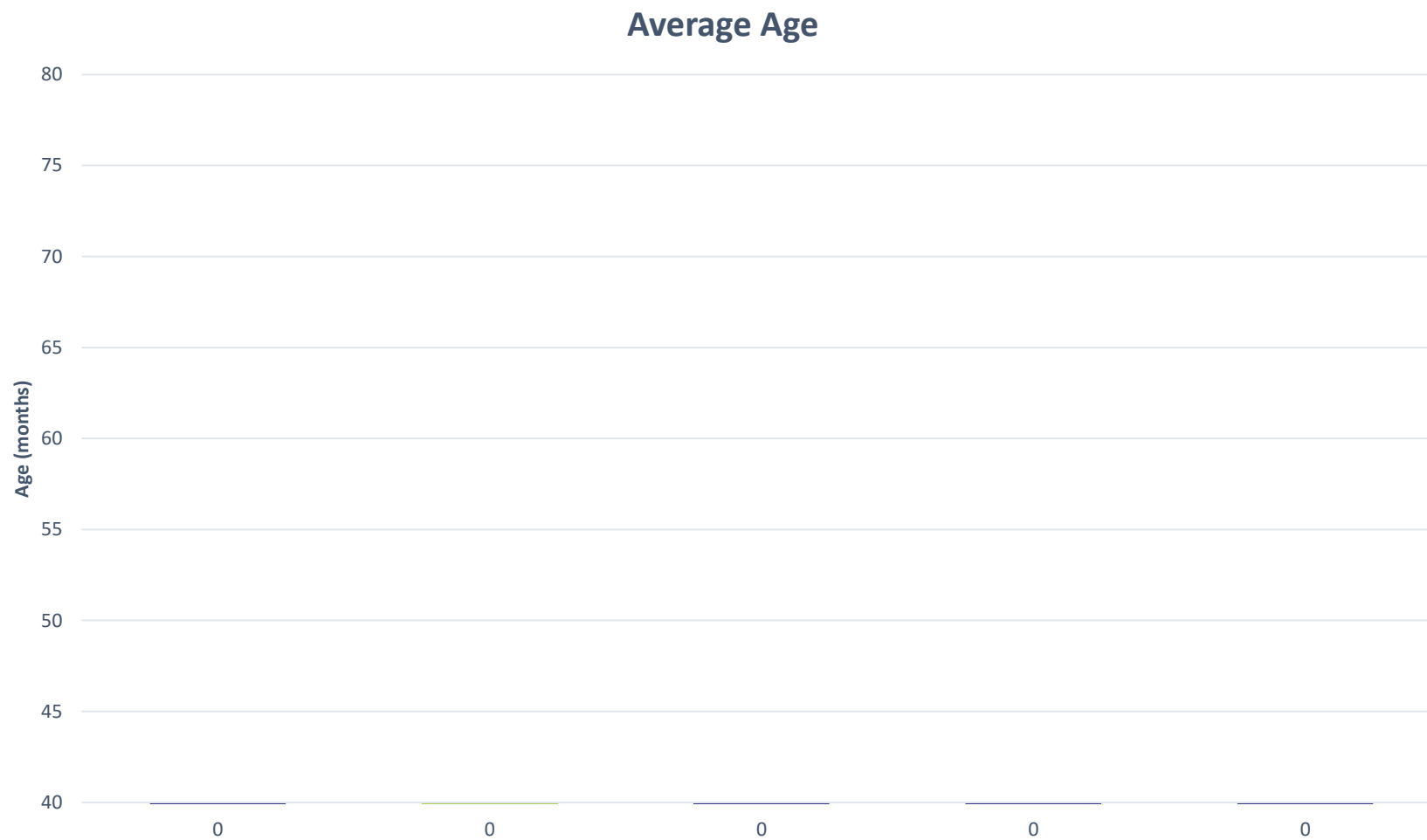
# Australian herd recorded cows



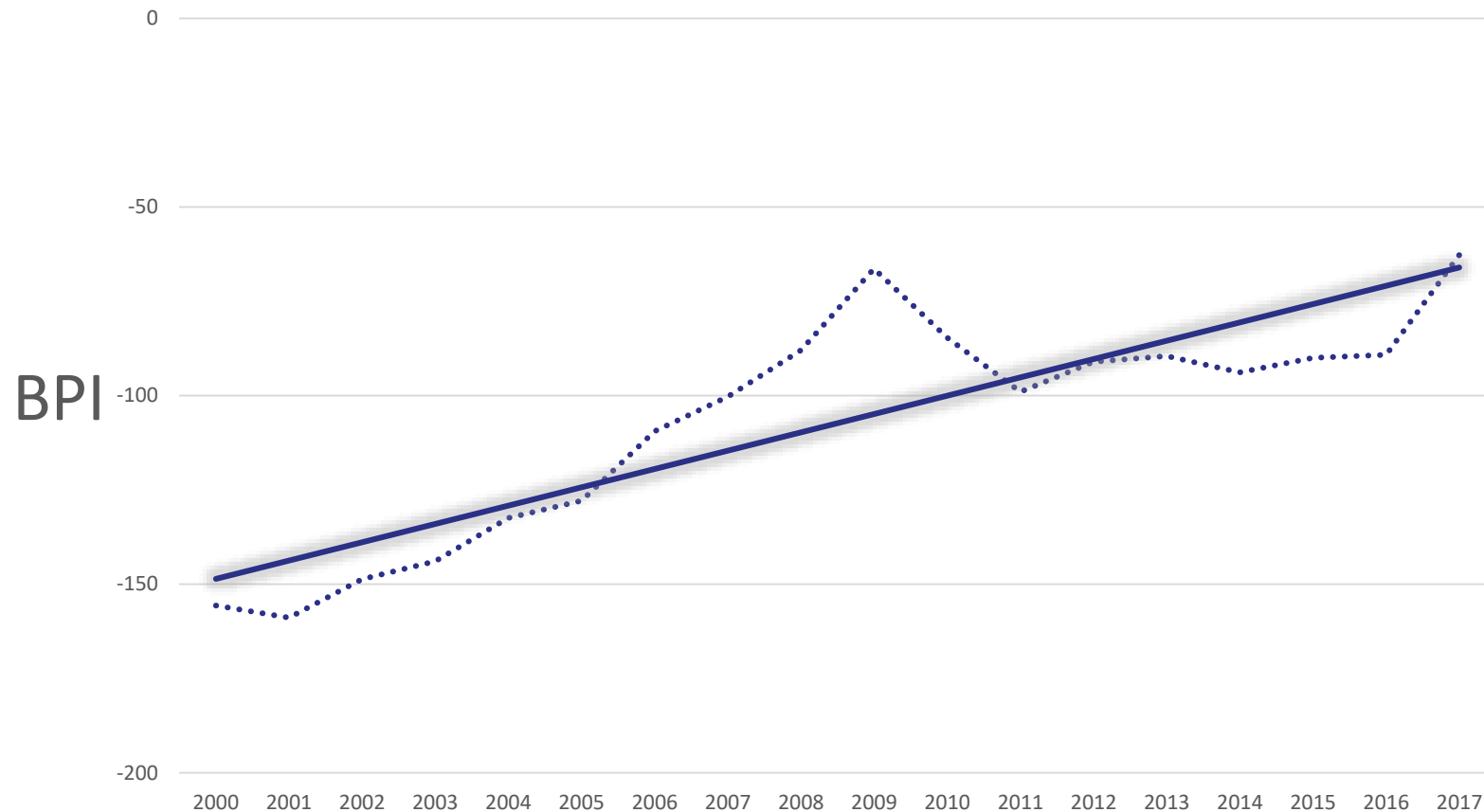
# Australian semen sales



# Longevity of Australian cows



# Genetic trend of Australian Ayrshire cows for Balanced Performance Index



# ABVs available for almost 40 traits

Production Feed Saved	Type Traits	Management Traits
Kg % fat and protein L milk Kg feed saved	100 SD5	100

**Eg. Protein ABV of 40 kg**  
This animal is 40kg greater for protein than average. The average is 0.

**Eg. Overall Type ABV of 105**  
This animal is 1 standard deviation above average for overall type. The average is 100.

**Eg. Daughter Fertility ABV of 103.**  
This animal is 3% greater than average for fertility. The average is 100.

# *Three Indices...*

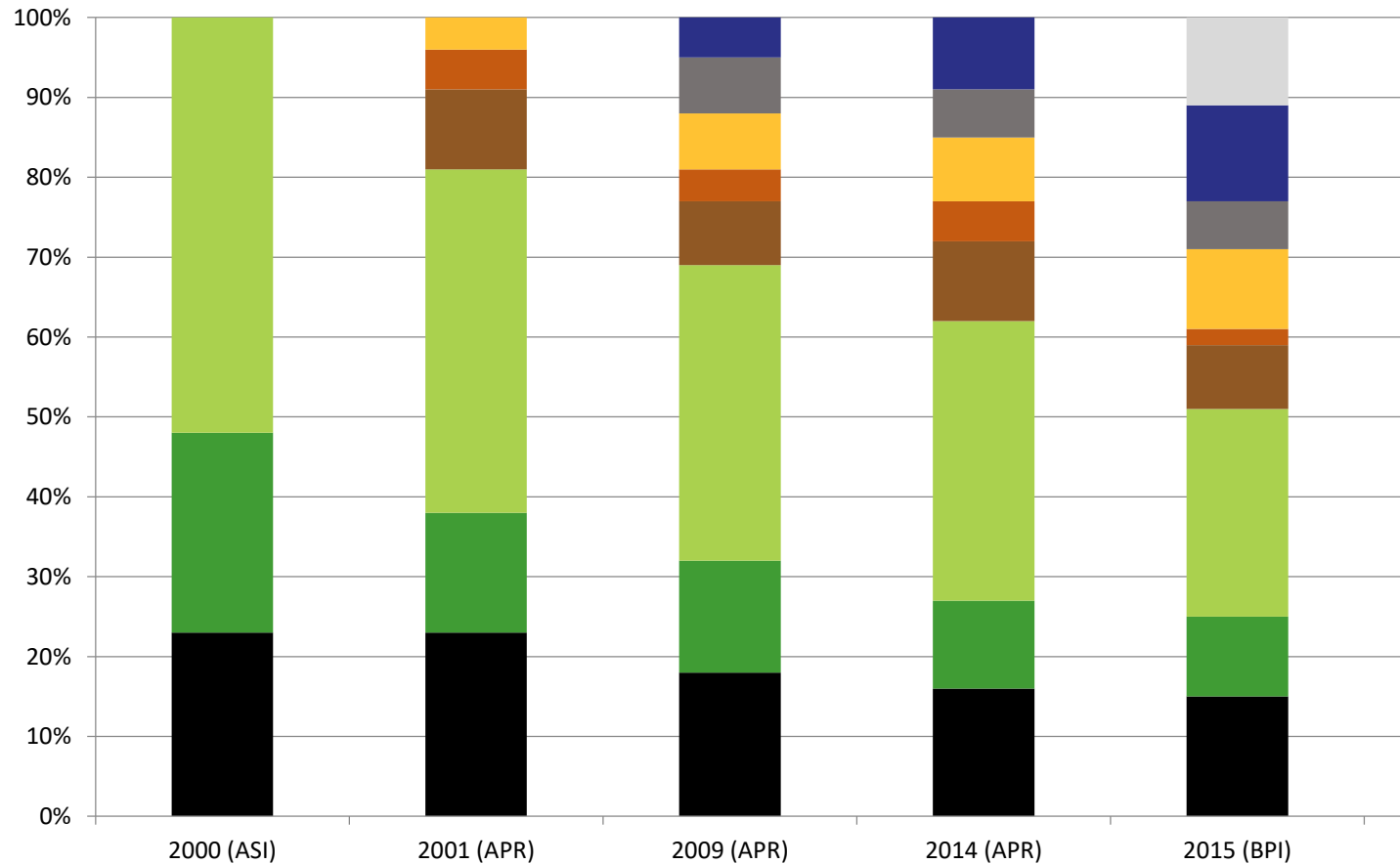
**Balanced Performance  
Index (BPI)**

**Health Weighted  
Index (HWI)**

**Type Weighted  
Index (TWI)**

*Because farmers 'had their say' in 2014.*

# Indices evolve over time



- Type
- Fertility
- Workabilities
- Cell Count
- Maintenance/Feed Saved
- Survival
- Protein
- Fat
- Milk

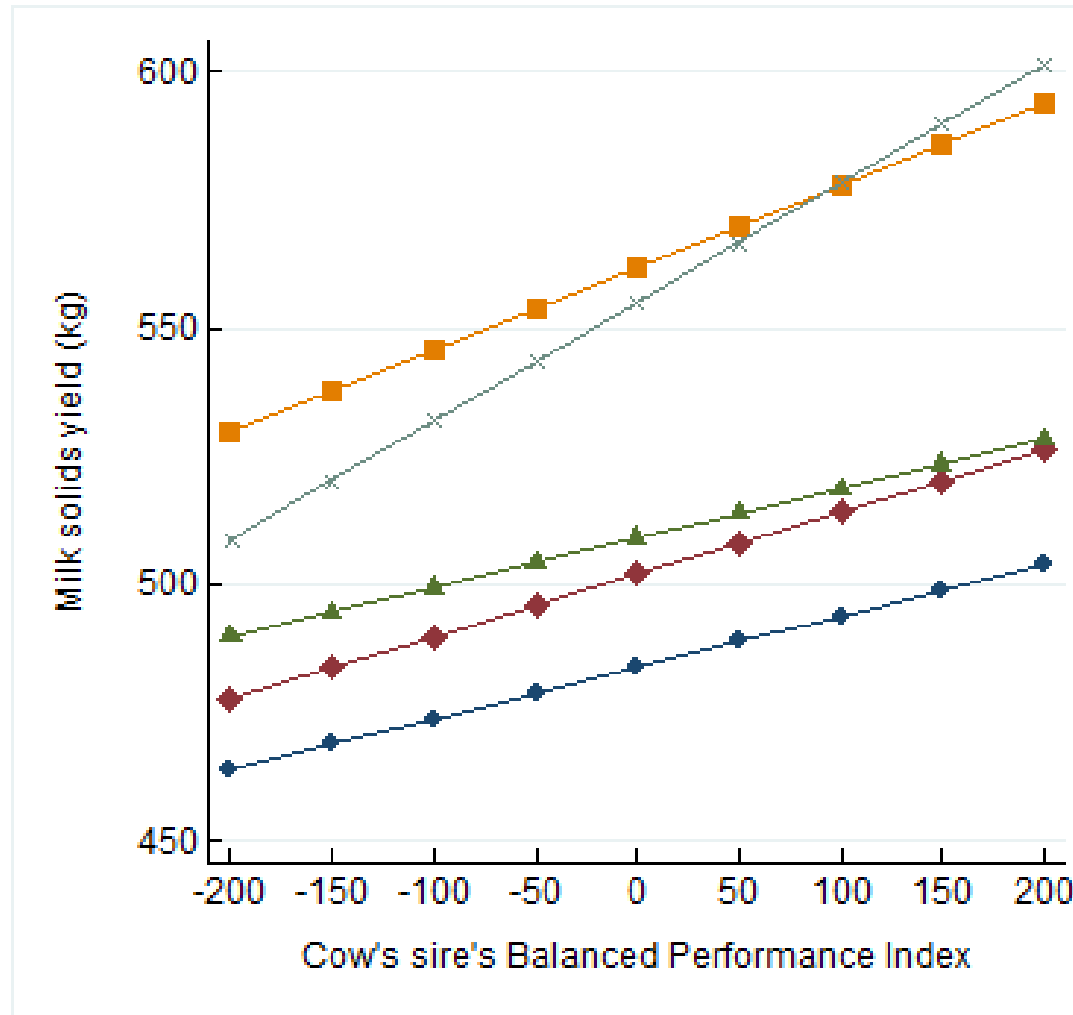
# The five main feeding systems



<b>Low bail</b>	Grazed pasture 0-1 tonne concentrate
<b>Moderate – High bail</b>	Grazed pasture 1 plus tonnes of concentrate
<b>Partial mixed ration</b>	Grazed pasture PMR fed on feedpad
<b>Hybrid</b>	PMR fed on feedpad 3+ mths with no pasture access
<b>Total mixed ration</b>	No pasture. Cows fed TMR



# In all feeding systems, the daughters of high Balanced Performance Index sires produce more milk solids

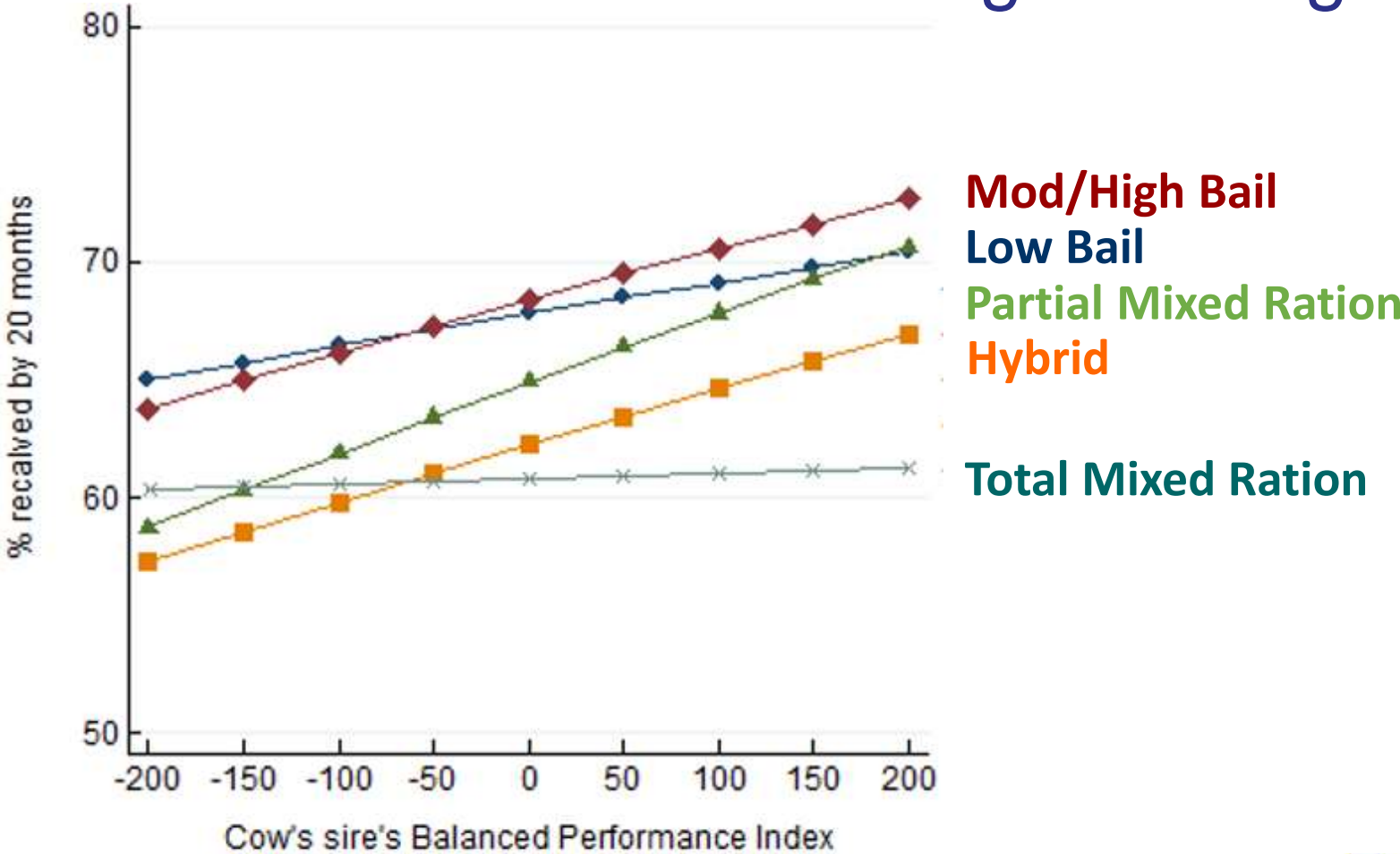


Total Mixed Ration  
Hybrid

Partial Mixed Ration  
Mod/High Bail

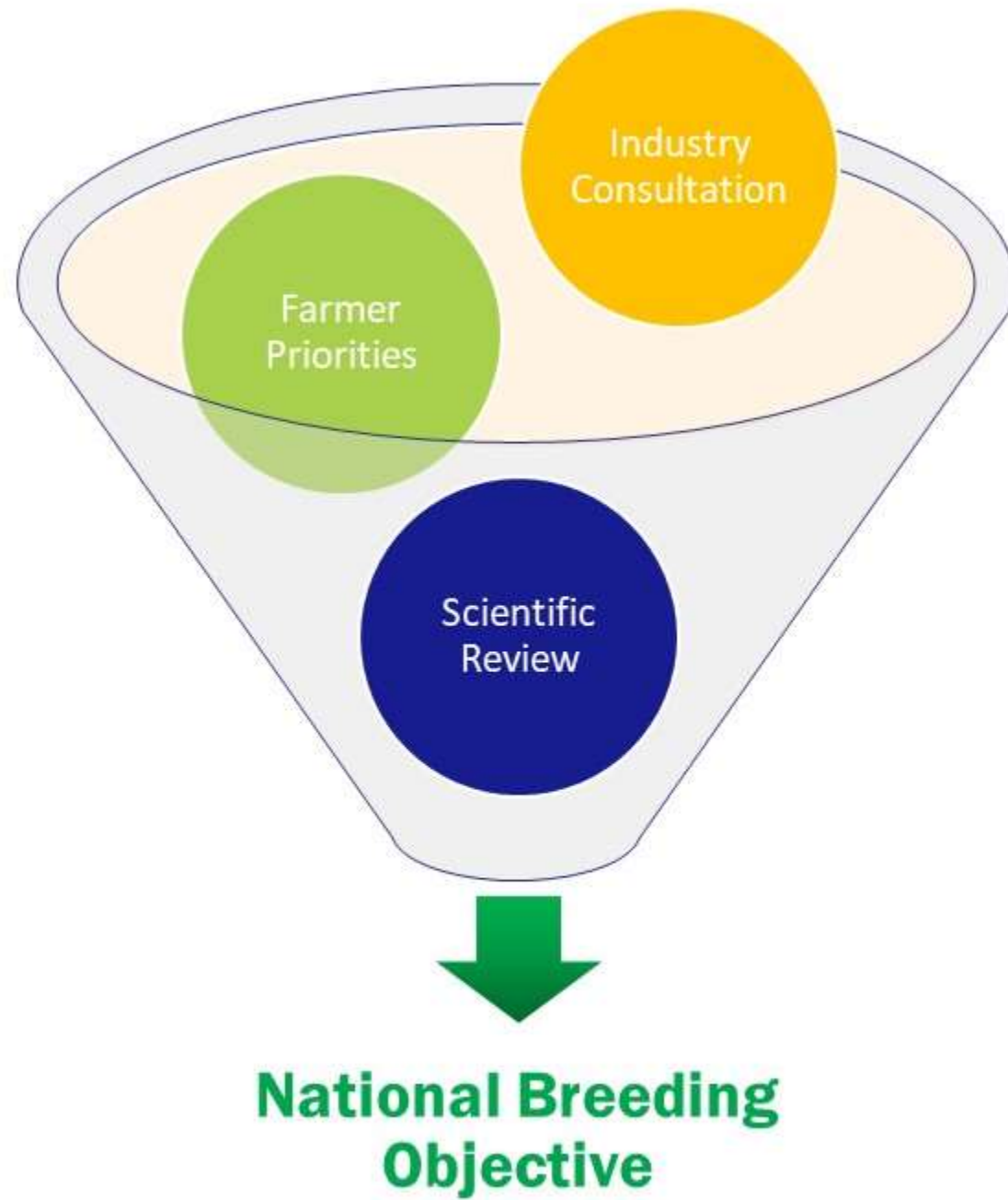
Low Bail

In all feeding systems, the daughters of high Balanced Performance Index sires last as long – or longer



# Making change

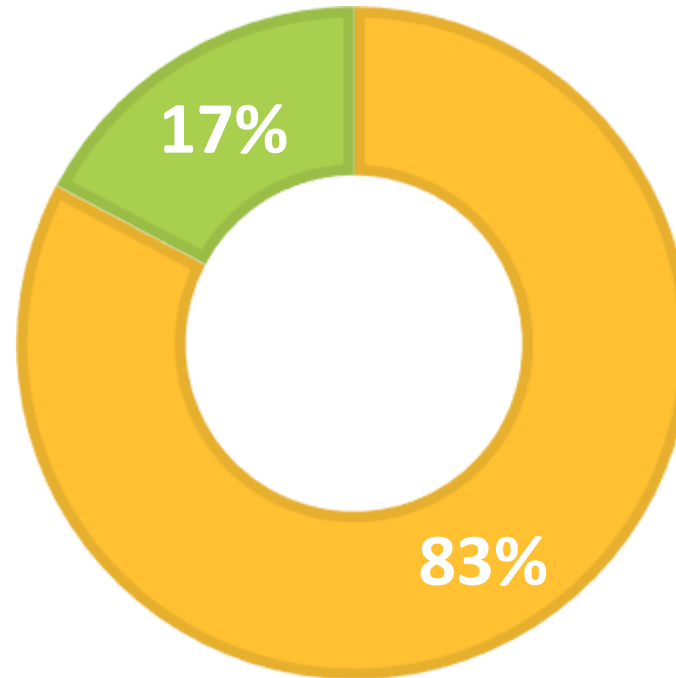






# Is there potential for more Ayrshire recording?

■ Estimate of heifers born   ■ Heifers recorded



## Animal Search

Bull  Cow

ABV Release:

Breed:

Date of Birth:  To:

ID:

Name:

Herd Owner:

[Clear](#) [Search](#)

Clickable  
Searchable  
Filterable

[Export](#) [Print](#) 2,097 results returned 0 record selected

10 [Columns](#)

<input type="checkbox"/>	View	National ID	Long Name	Short Name	Within Herd ID	Herd Owner	Birth Date	Sire	Dam	BPI
<input type="checkbox"/>		914008117	KARRABELL ULLIMULLI KADYCHA	ULLIMULLI KADYCH	3141	PENFOLD DA & VE	10/07/2014	A00020112	809018256	160
<input type="checkbox"/>		415109066	CHER-BAR BURDETTE SECRET	SECRET	1862	BOLDVIEW FARMS (EMAIL TD)	04/03/2013	A00018614		134
<input type="checkbox"/>		813027962	KARRABELL FOSKE KIRSTY	K FOSKE KIRSTY	2926	PENFOLD DA & VE	03/07/2013	A00019829	811007125	118
<input type="checkbox"/>		813028091	KARRABELL FOSKE ZINBESS	FOSKE ZINBESS	3056	PENFOLD DA & VE	25/07/2013	A00019829	811010521	103
<input type="checkbox"/>		914008264	KARRABELL ULLIMULLI CHADETH	ULLIM CHADETH	3288	PENFOLD DA & VE	31/07/2014	A00020112	809018247	101
<input type="checkbox"/>		811044392	BRODY JELLY	1308	1308	ROSS D & R	14/09/2011	A00018982	808041176	99
<input type="checkbox"/>		812026401	KARRABELL BRODY DORPHINE	BRODY DORPHINE	2748	PENFOLD DA & VE	11/07/2012	A00018982	811004806	90
<input type="checkbox"/>		T14044822	CORAVILLE EMILY 3RD		9351	Johns TD & BB	22/03/2012	A30024089	T08001796	73
<input type="checkbox"/>		N12923264	FRISKY GIRL	FRISKY GIRL	554	EAGLES PARTNERSHIP	11/11/2012	A30024169	N10808963	68
<input type="checkbox"/>		G02026463	RDCDNKF003665301915			Overseas Cow Herd	19/05/2011	A00034596	G02021260	65

< 1 2 3 4 5 ... 210 >

## Genetic Futures Report

Select herd - breed



### Your Herd's Genetic Snapshot

ABV Release : August 2019

Cows Currently in Herd : 149

Farmer :

National Herd ID :

Report Breed code :

Holstein

The bulls you have selected over the last ten years produced Holstein cows with genetic trends that have

**Profit**   **Production**   **Overall type**   **Fertility**   **Longevity**   **Mastitis Resistance**

**Rank**

Milk recording herds for BPI

**BPI**

Herd's average BPI

**Good Bulls Guide**
**2%**

of the cows born in 2016 were bred from the Good Bulls Guide or by Progeny Test

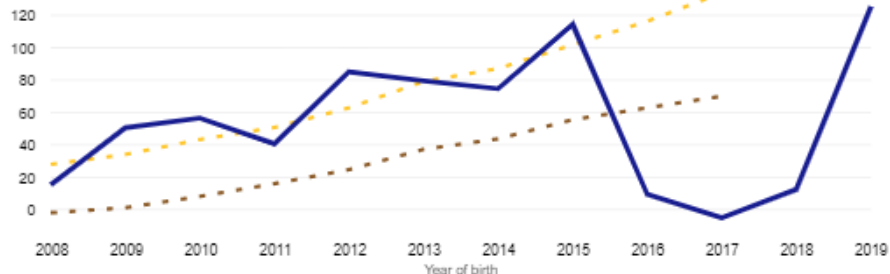
This is the performance of the top and bottom BPI cows in your herd



### Genetic Progress for Balanced Performance Index

The Balanced Performance Index (BPI) achieves more profitable cows through a balance of longevity, health, type and efficient production

● Avg of top 10% of National Breed   ● National Avg   ● Your Herd   ● Your Herd X Breed



Choose trait

**Production**

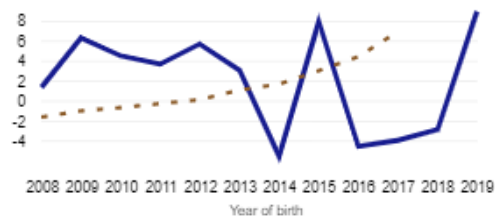
Management

Type

Fat kg

Genetic Progress for Production - Fat

● National Avg   ● Your Herd   ● Your Herd X Breed



# What if....

- Doubled the number of herds that are participating in herd recording
- Recorded all AI bulls that are used
- Used the tools that are available to drive breed improvement
- Had strong involvement in the National Breeding Objective Review