

# Fertility on the ground (genetic trends in fertility in Australian dairy herds)

John Morton

Veterinary Epidemiological Consultant

Geelong

Paul Koh

Michelle Axford



Steph Bullen



**Sire daughter  
fertility ABVs**



**Cow daughter  
fertility ABVs**



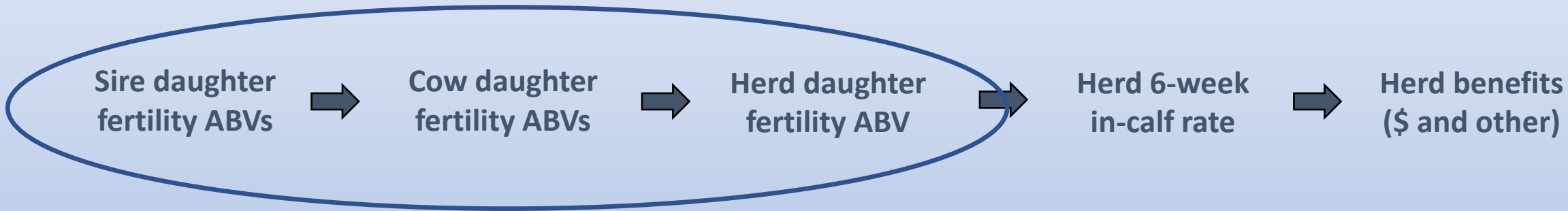
**Herd daughter  
fertility ABV**



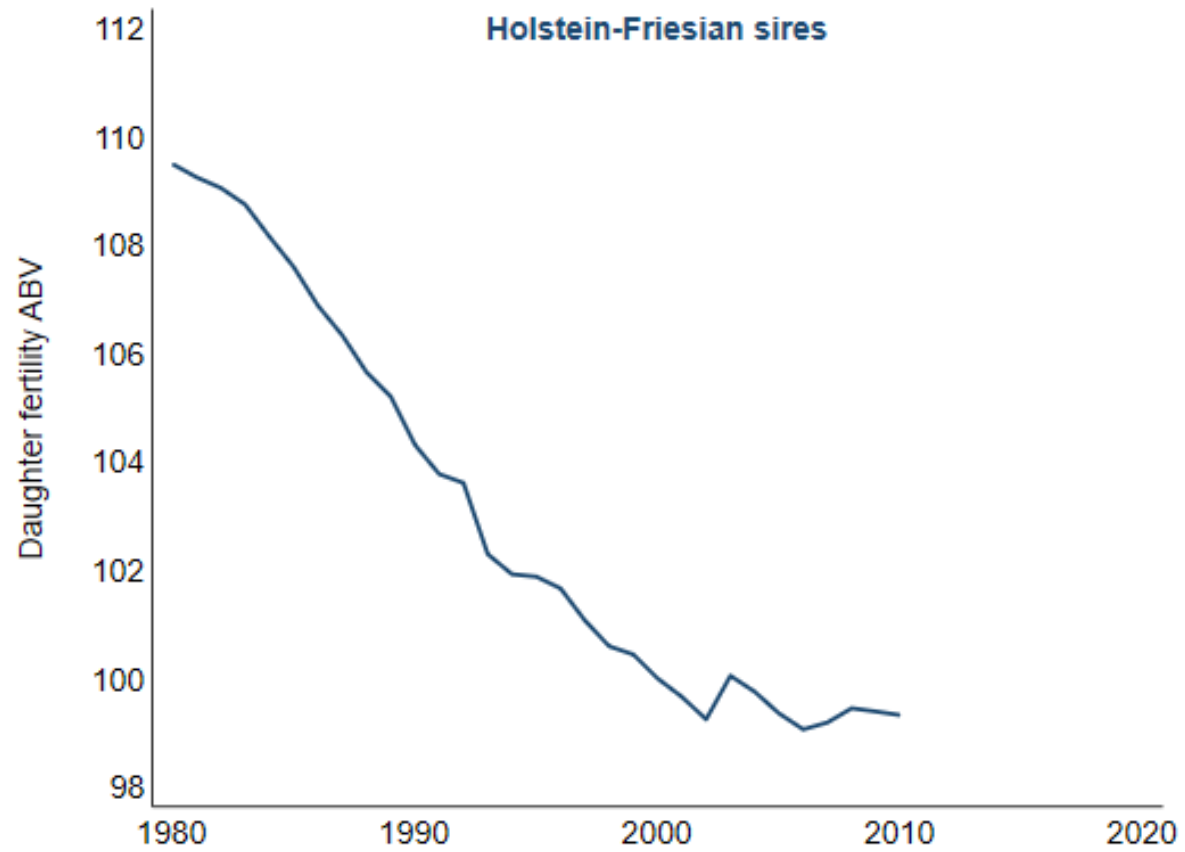
**Herd 6-week  
in-calf rate**



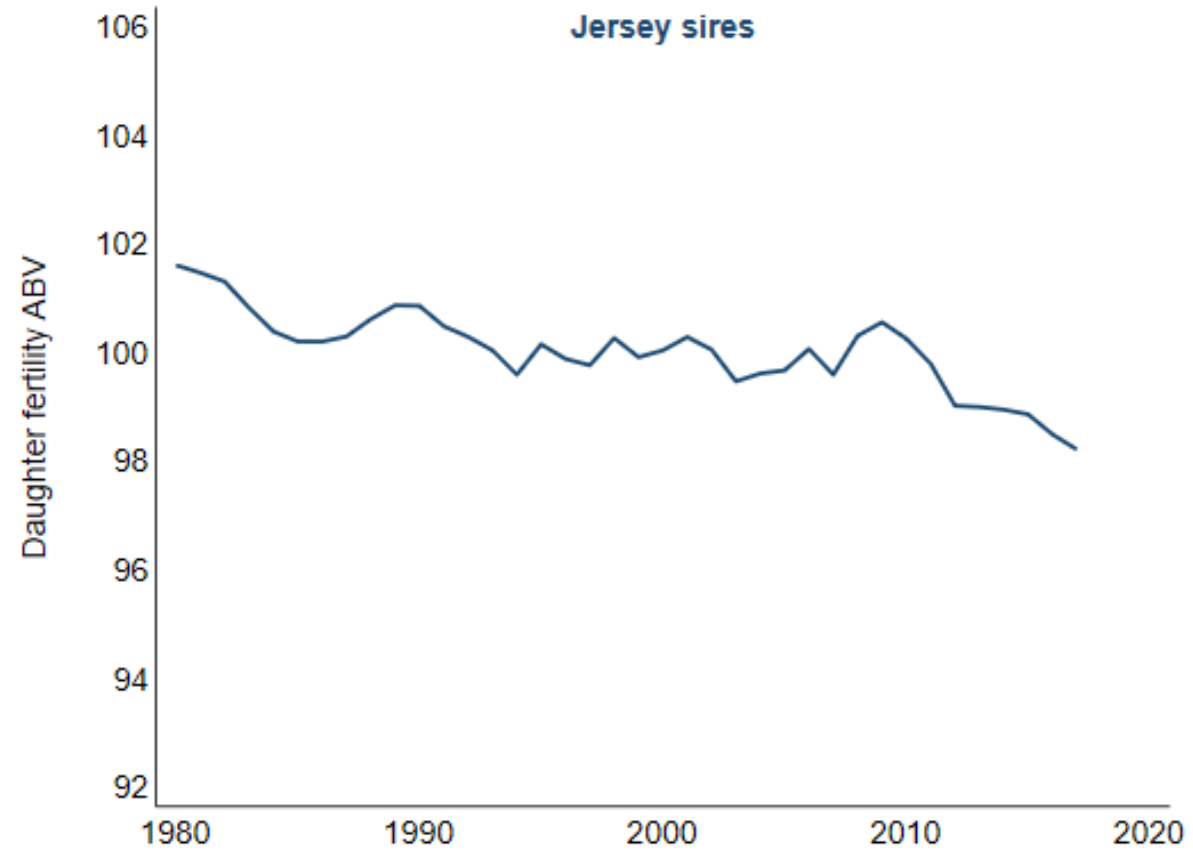
**Herd benefits  
(\$ and other)**



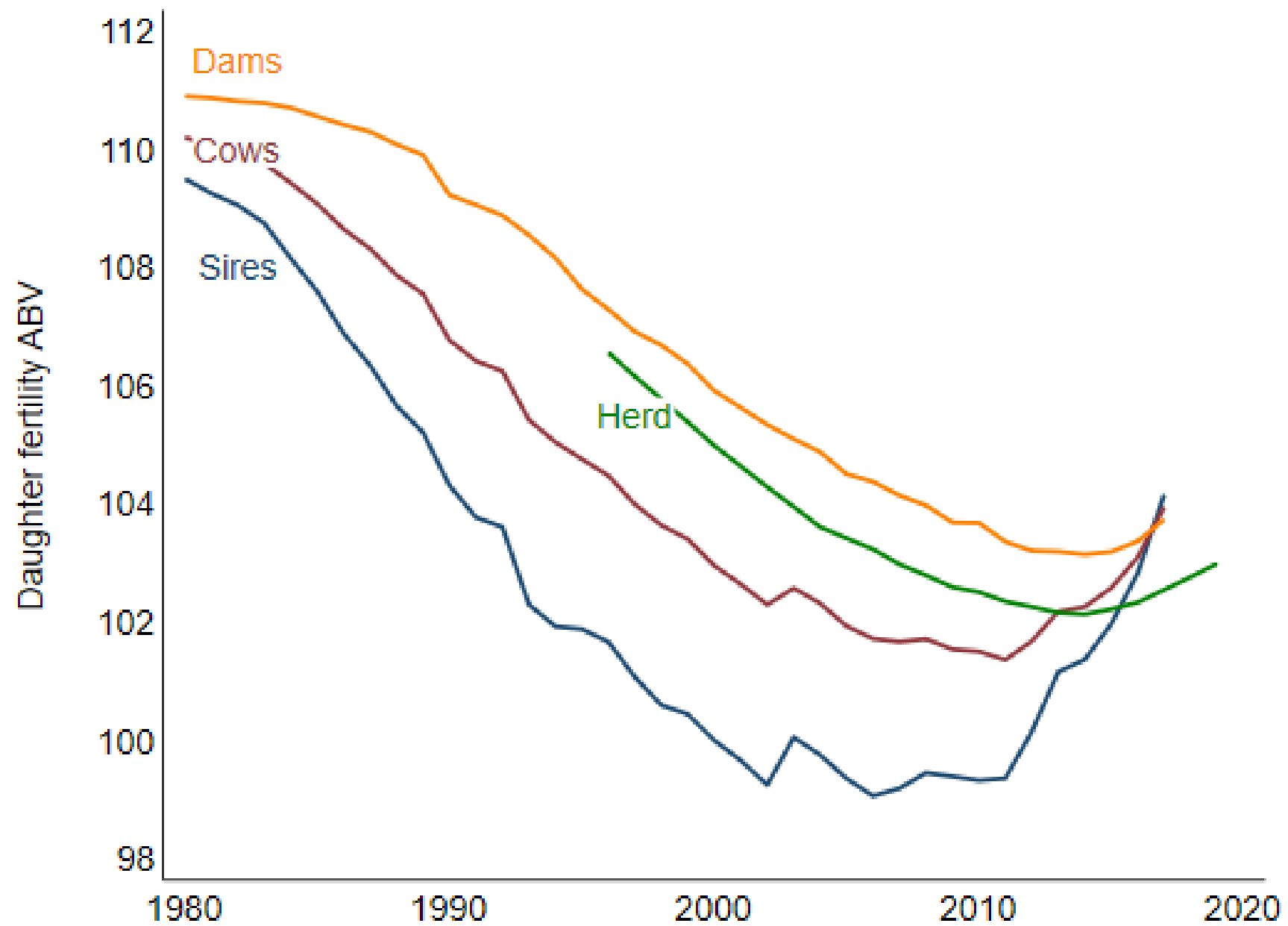
**Holstein-Friesian sires**



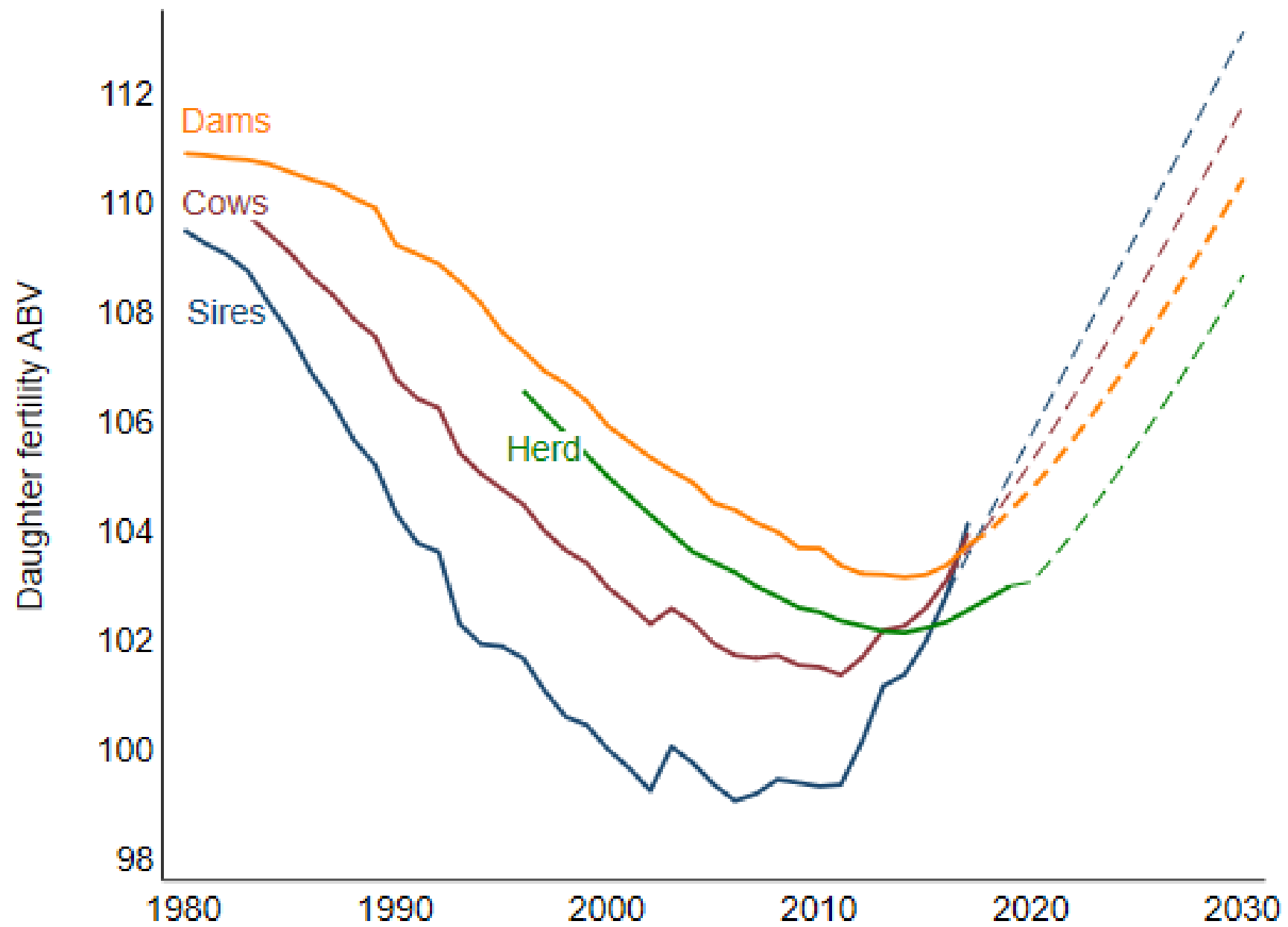
**Jersey sires**



By cow's year of birth  
(for herd, by year of calvings)

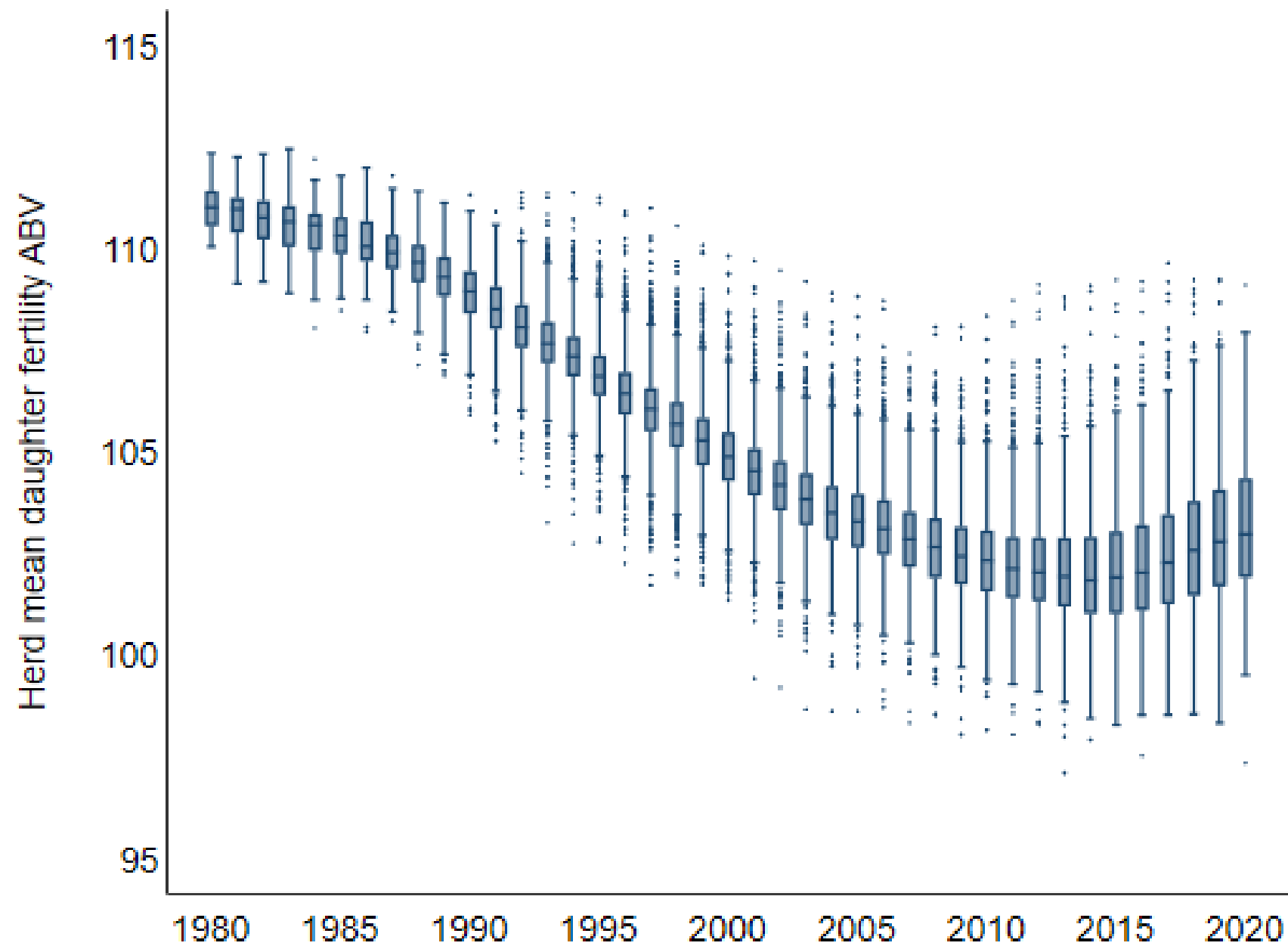


Estimated increase in 'herd' mean:  
6.3 units from 2018 to 2030



## Herd means by calving year

(≥100 calvings in year)



# GENETIC PROGRESS REPORT



Print date: 27/03/17

National herd ID:

Cows currently in herd: 706

Breed code for this report is:  
Holstein and Holstein X

## Your Herd's Genetic Snapshot

Rank **2XX** out of 1759 Holstein milk recording herds for BPI

BPI **40** herd average Balanced Performance Index

The bulls you selected over the last 10 years produced Holstein cows with genetic trends that have:

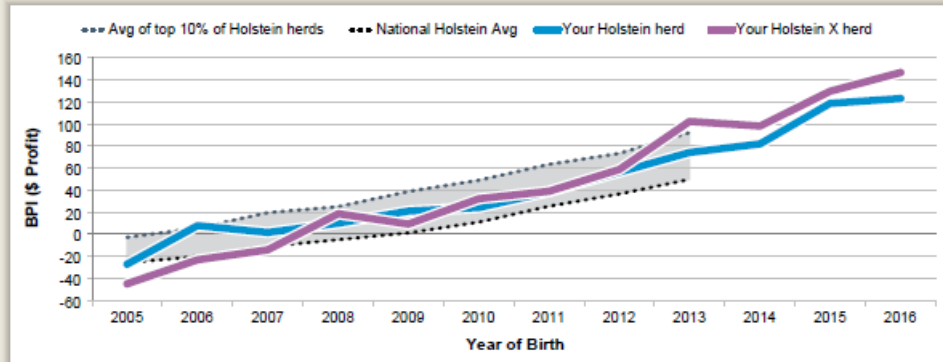
↑ Profit | ↑ Overall Type | ↑ Fertility  
 ↑ Production | ↑ Longevity | ↑ Mastitis Resistance  
 Genetic Trend: ↑ Increased | ↓ Decreased | ∅ No clear trend



Do you want to improve your herd's genetic performance for one or more of these traits? Use the Good Bulls Guide to choose bulls that perform well in your highest breeding priority areas.

**BIG** 100% of the cows born in 2014 were bred from the Good Bulls Guide or by Progeny Test.

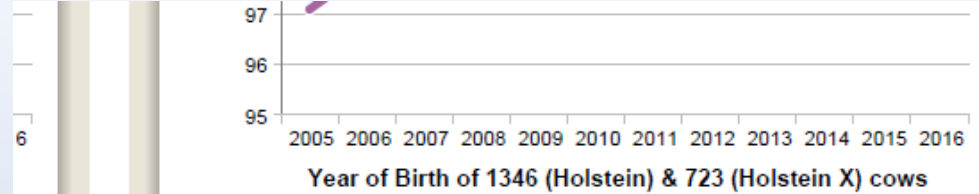
## Genetic Progress for Balanced Performance Index



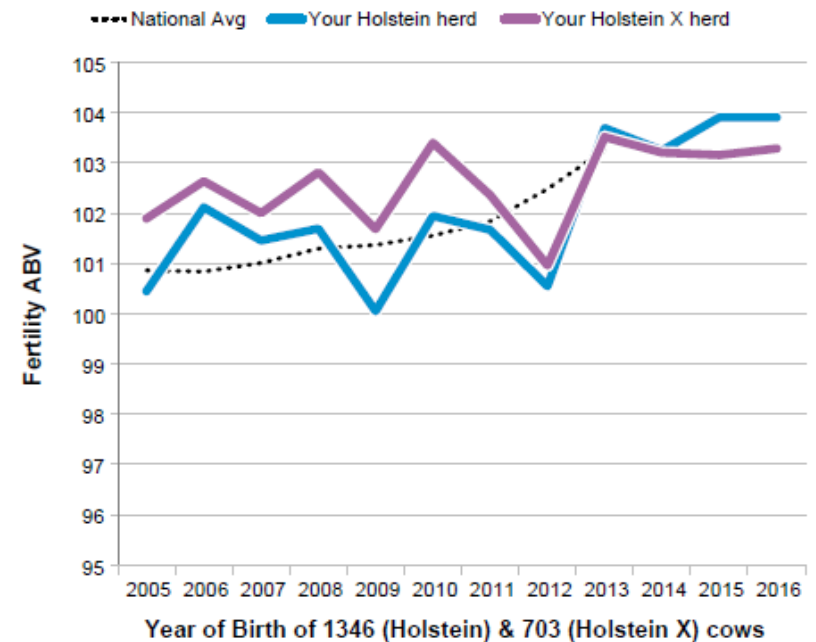
The Balanced Performance Index (BPI) reflects the economic drivers of net profitability for the range of dairy farming systems in Australia. Traits include production, survival, type, mammary, milking speed, temperament, cell count, fertility and feed efficiency.

## Number of Cows (current and sold/culled)

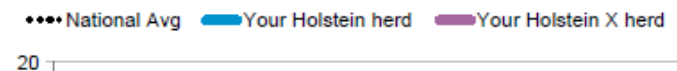
Year of Birth	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Holstein	89	184	81	63	128	88	107	138	133	112	123	101	1347
Holstein X	64	40	36	29	68	55	58	86	71	76	74	66	723



## Genetic Progress for Fertility



## Genetic Progress for Production - Protein





# Variation within herd by calving year

(≥100 calvings in year)





Sire daughter  
fertility ABVs



Cow daughter  
fertility ABVs



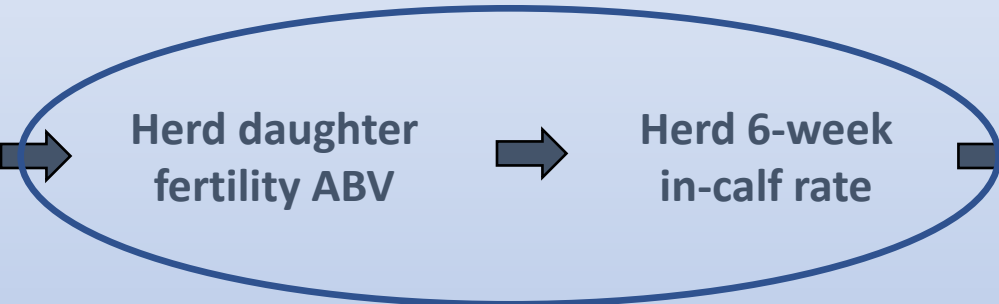
Herd daughter  
fertility ABV



Herd 6-week  
in-calf rate



Herd benefits  
(\$ and other)



**Calving system:**

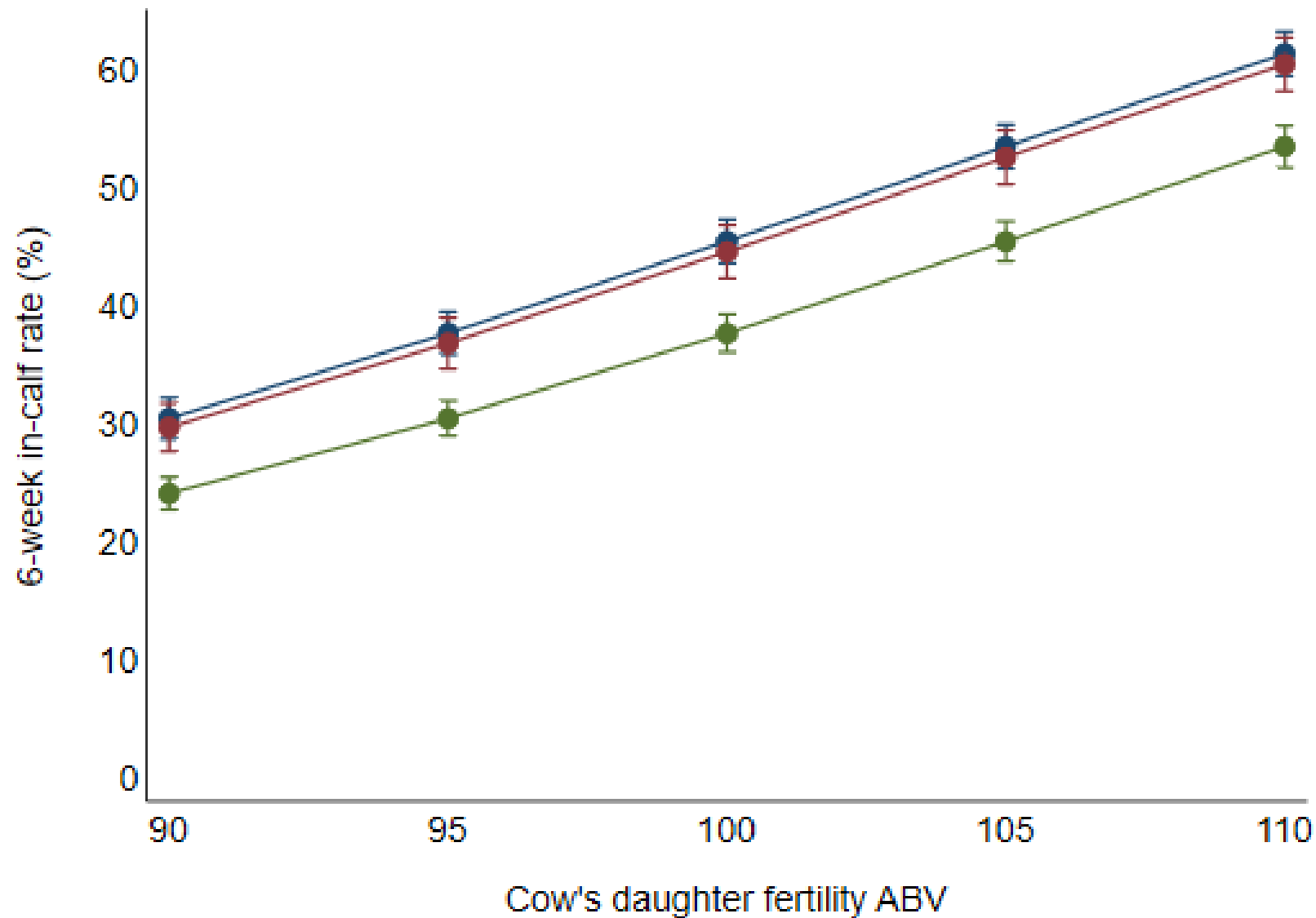
Seasonal calving

**Split calving**

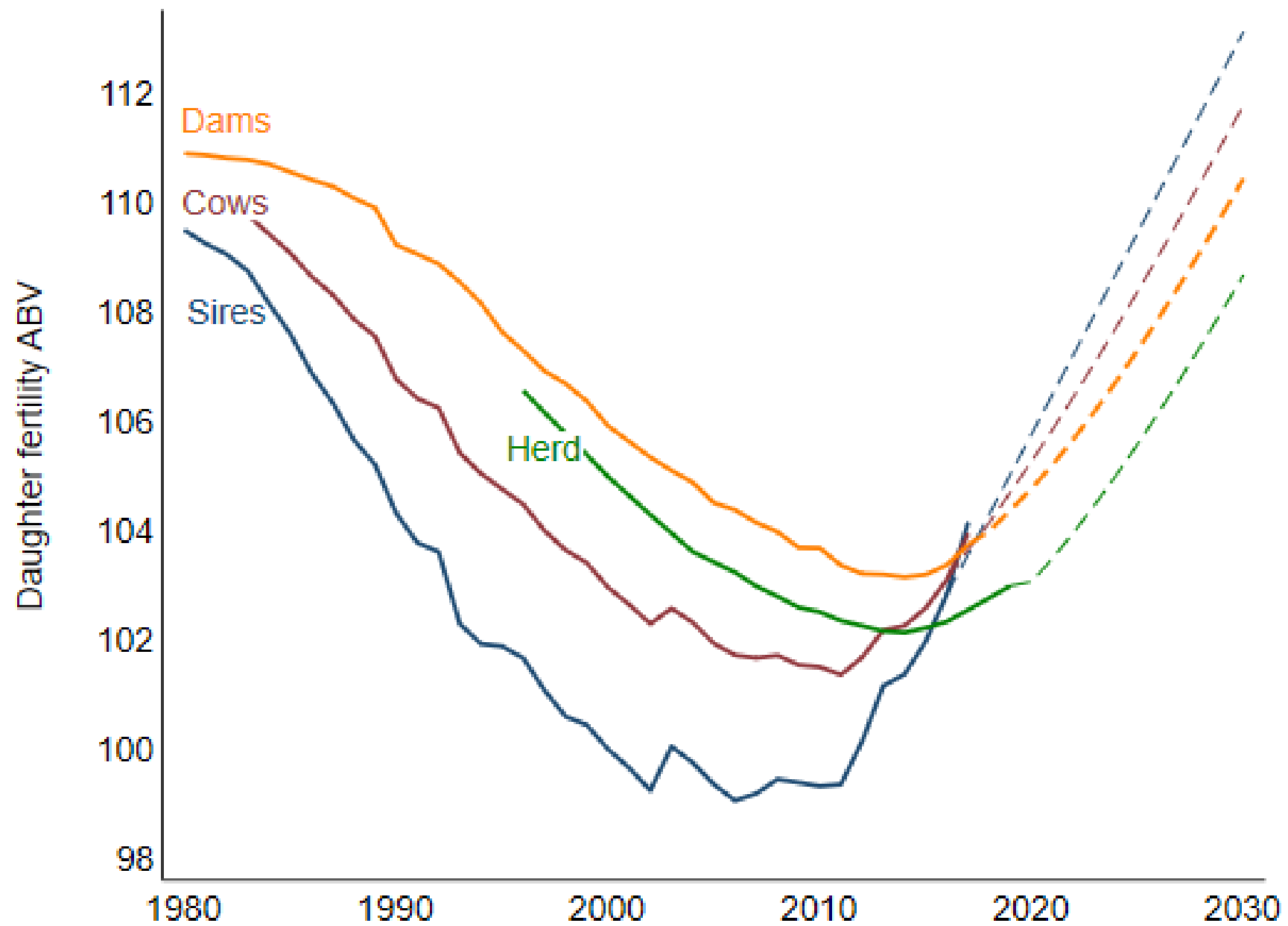
**Year-round calving**

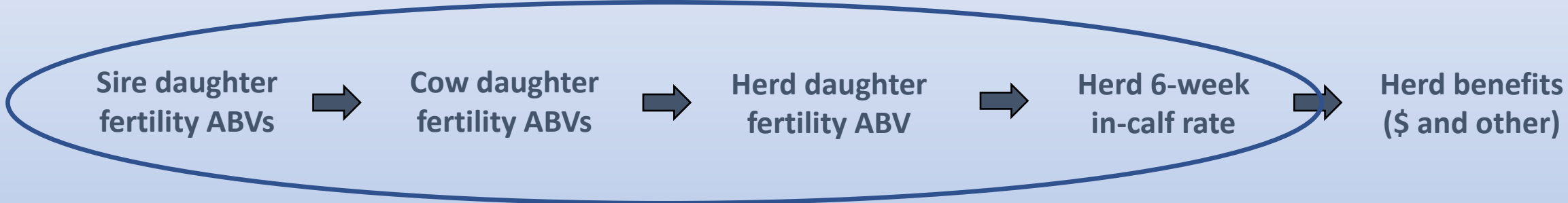
**1.3-1.6% increase per 1 unit  
increase in cow's daughter  
fertility ABV**

**= 8% increase per 6.3 units  
increase in herd's daughter  
fertility ABV**



Estimated increase in 'herd' mean:  
6.3 units from 2018 to 2030





- 1. Important to monitor genetic trends for non-production traits**
- 2. Daughter fertility ABV is working well**
- 3. ??8% increase in 6-week in-calf rate from 2018 to 2030 across industry due to genetic change**
- 4. More is possible in currently low ABV herds, and in younger herds**  
**(Check Genetic Progress Report)**
- 5. There is a need to apply this same process to production ABVs, especially for feeding system 1 and 2 herds**





Sires of Holstein-Friesian cows by cow's year of birth

