

Daughter Fertility ABV

Fact Sheet 3: Results preview

HIGHLIGHTS

- Daughters of sires with higher ABVs for daughter fertility have markedly better reproductive performance than daughters of sires with lower Daughter Fertility ABVs.
- Continual selection of high BPI sires regardless of their ABVs will result in small but ongoing improvements in herd reproductive performance.
- To maximise genetic gain for herd fertility, select high BPI sires that have high ABVs for daughter fertility.

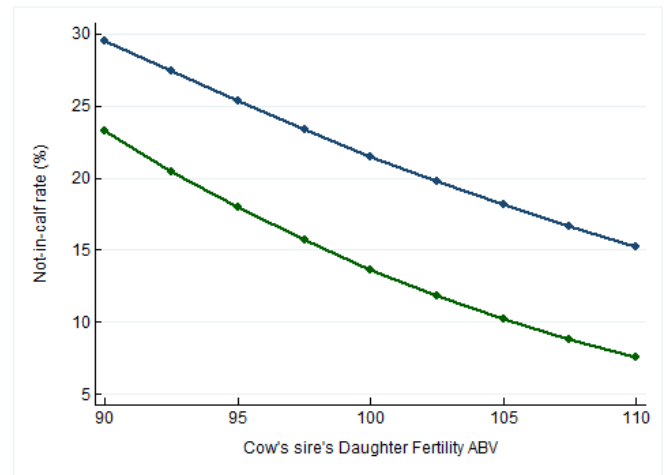
The study

This study investigated the impact of a sire's Daughter Fertility ABV and Balanced Performance Index (BPI) on his daughters' reproductive performance.

The study drew upon the data from 74 seasonal and split calving commercial Australian dairy herds with high quality reproductive data. These data were first used for the InCalf Fertility Data Project 2011. Data from more than 60,000 lactations from Holstein cows and almost 3,000 lactations from Jersey cows were used.

Daughter Fertility ABV

The results indicate the Daughter Fertility ABV is working well in both Holstein and Jersey cows. The Daughter Fertility ABV is driving fertility gains more through improved conception rates than through improved submission rate. These improvements flow through to quite marked increases in 6-week in-calf rate (the % of cows becoming pregnant in the first six weeks of the mating period) and decreases in not-in-calf rate.

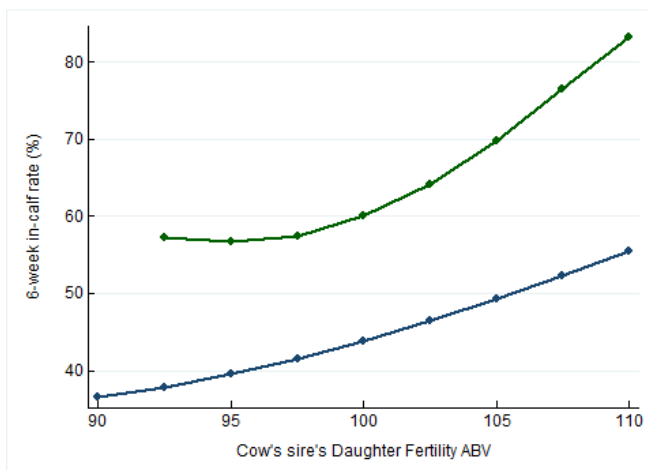


Not-in-calf rates for Jersey (lower line - green) and Holstein (upper line - blue) cows by cow's sire's Daughter Fertility ABV

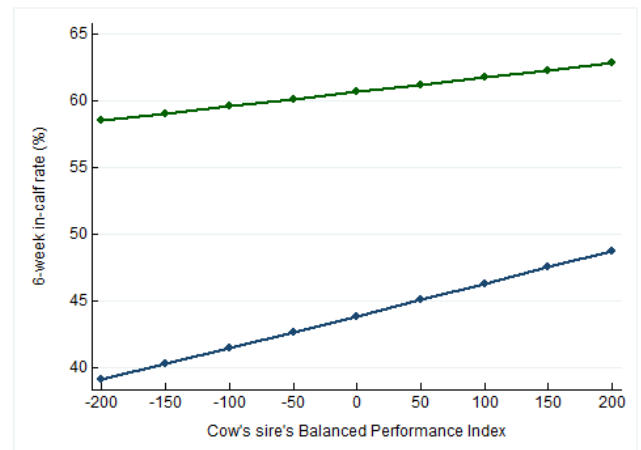
BPI and fertility

The study findings show that continual selection of high BPI sires regardless of their ABVs will result in small but ongoing improvements in herd reproductive performance in both Holstein and Jersey cows.

Remember, marked improvements in herd reproductive performance are only achieved through a combination of breeding and other management strategies. Dairy Australia's InCalf program is



6-week in-calf rates for Jersey (upper line - green) and Holstein (lower line - blue) cows by cow's sire's Daughter Fertility ABV



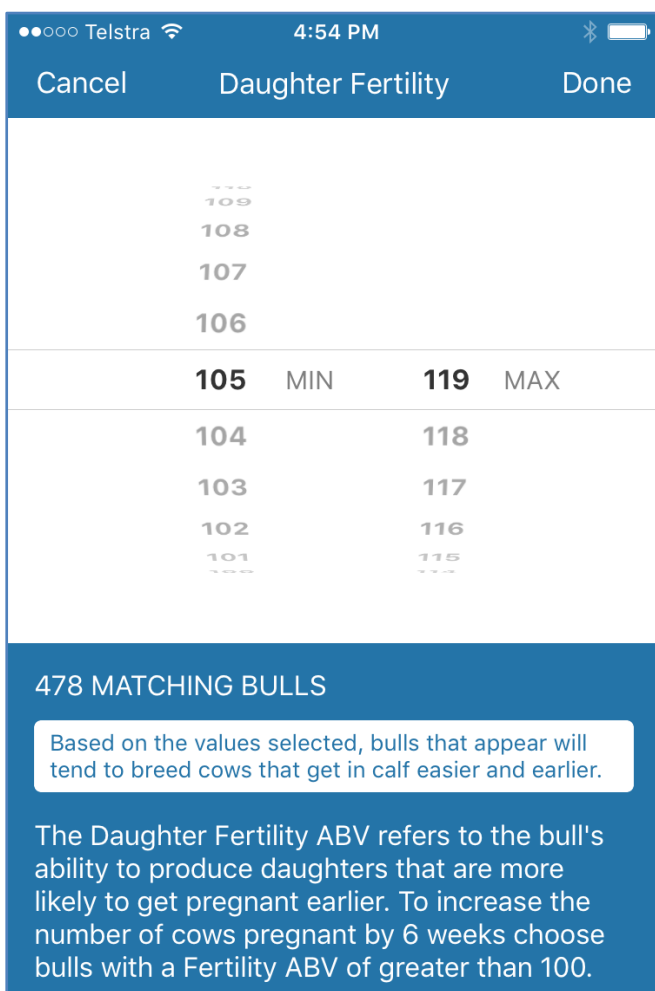
6-week in-calf rates for Jersey (upper line - green) and Holstein (lower line - blue) cows by cow's sire's Balanced Performance Index

focused on the key management areas critical to achieving high herd reproductive performance.

What's next?

The easiest way to select high BPI sires with additional emphasis on daughter fertility is to use the Good Bulls Guide and App.

The Good Bulls Guide Fertility list includes bulls that are above average for BPI and are rated very highly for Daughter Fertility ABV. The Good Bulls App enables farmers to filter bull lists to only show high BPI sires with a specified minimum Daughter Fertility ABV. For example 'add a filter' to show only bulls with an ABV at least 105 for Daughter Fertility.



The Health Weighted Index (HWI) index puts more emphasis on Daughter Fertility than BPI and can be used as an alternative to the BPI. When using the HWI, it is still a good idea to check the specific ABVs for traits of importance using tools like the Good Bulls App.



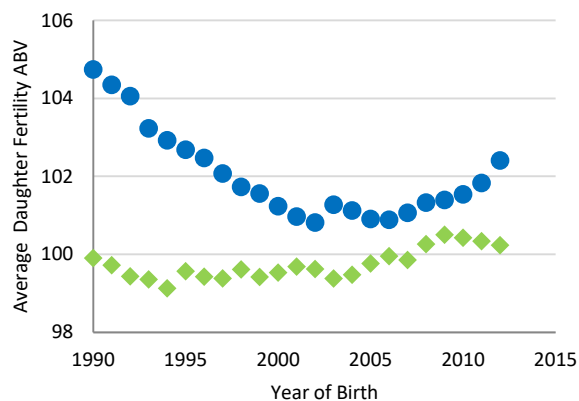
With many more high Daughter Fertility bulls now available than in 2011, it is easy to select high BPI sires with above average Daughter Fertility ABVs (see the following table).

	April 2011	April 2016
Number of Holstein bulls in the Good Bulls Guide/App with a Daughter Fertility ABV of at least 105	16	478

In recent years, farmers have selected higher Daughter Fertility ABV bulls and these choices have reversed the declining genetic trend for fertility (see the following graph). The average Daughter Fertility ABV of cows born in 2012 is similar to that of cows born in 1996 and is improving each year.

As a herd consists of older and younger cows, the rate at which herds can capitalise on genetic gains for fertility will depend on making good sire choices and having enough replacements.

This improved genetic trend for fertility is a terrific result from the ongoing collaboration between research, industry and bull breeders that has produced new models, improved genomic ABV(g)s and a new generation of bulls with better genes for fertility.



Genetic trend for Daughter Fertility ABV in Jersey (lower line - green) and Holstein (upper line - blue) cows by the cow's year of birth

For more information

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