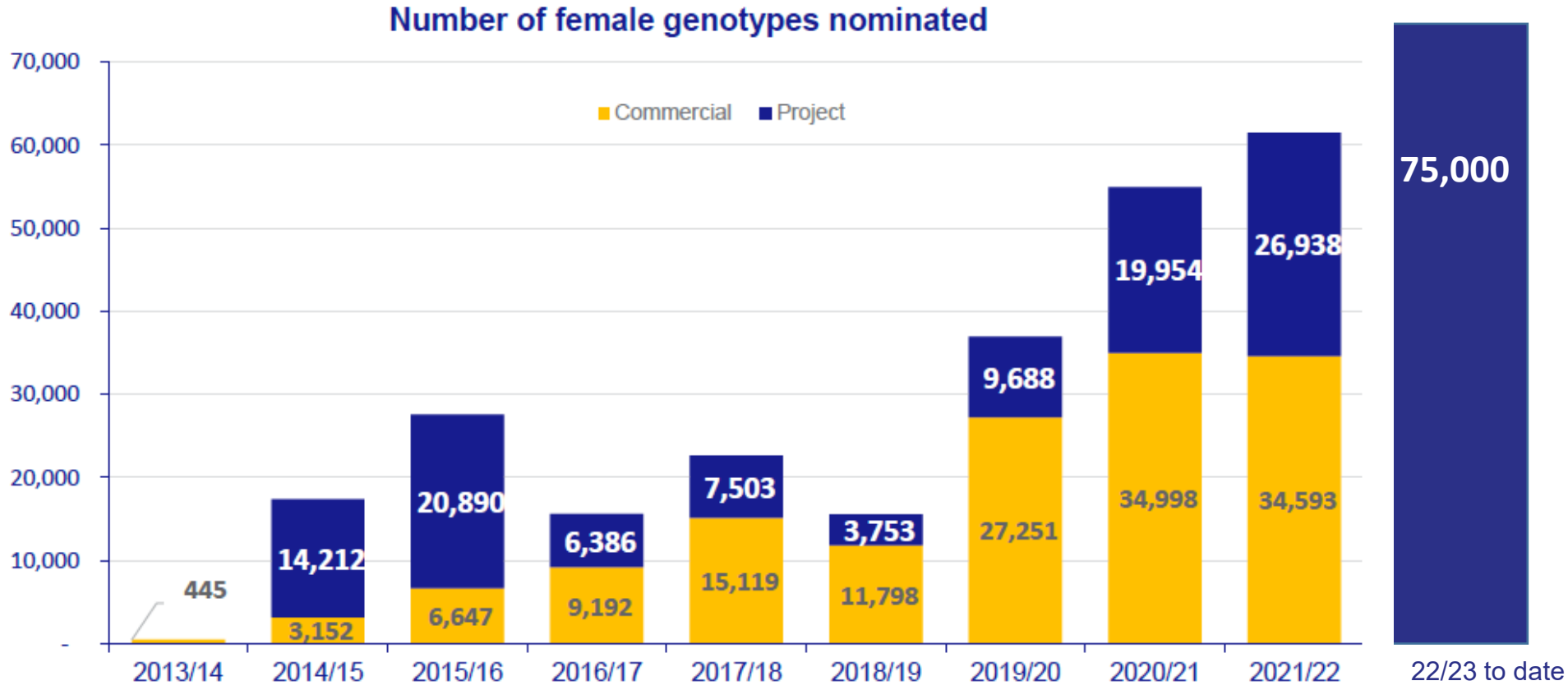
Accelerating Heifer Genomics

DataGene
Solutions for Herd Development

Metrics



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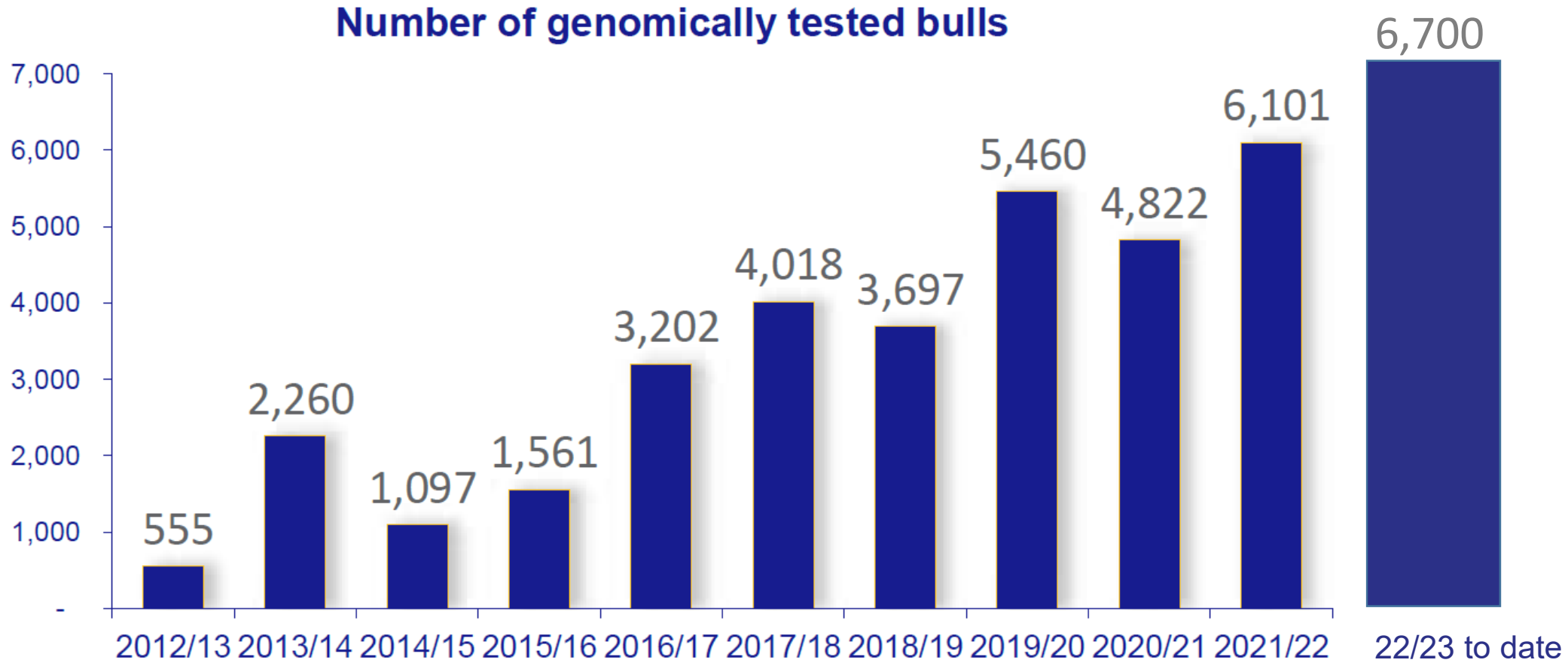
Metrics



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Accelerating heifer genomics

Faster results

Collaboration

Coms & extension

Dairy Australia

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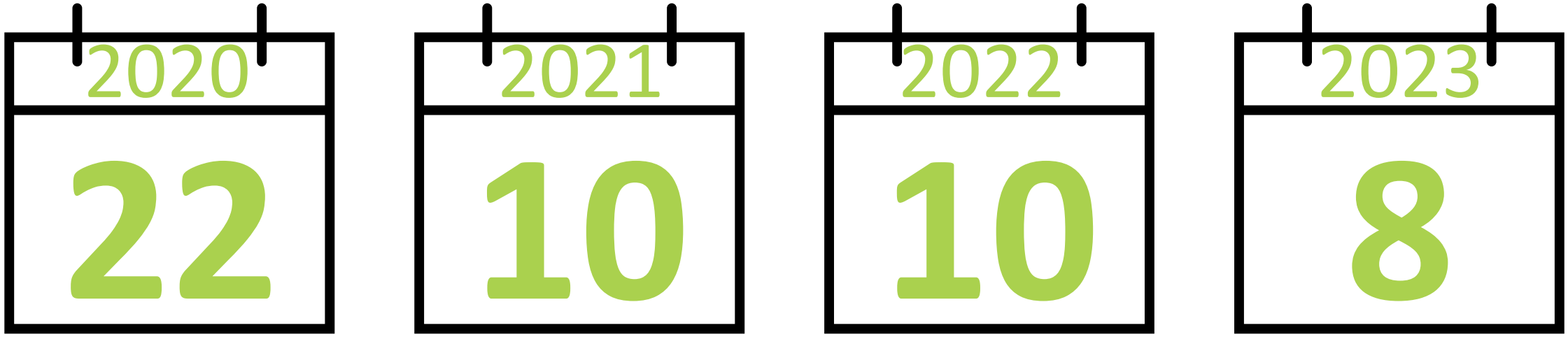
Average days between genotype loading and result delivery



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Why don’t animals receive results?

- 4% animals had an unresolved sire issue
- 2% animals had an unresolved dam issue
- 1% had an unknown breed

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Dairy Australia animal husbandry genetics survey

2022 survey with 400 randomly selected participants

Aware genomics or genomic testing	93%
Currently genomically test heifer calves	17%
Not currently using genomically testing but have in the past	7%
Plan to genomically test heifer calves in the next 12 months	20%
Do not genomically test heifer calves and unlikely to do so	63%

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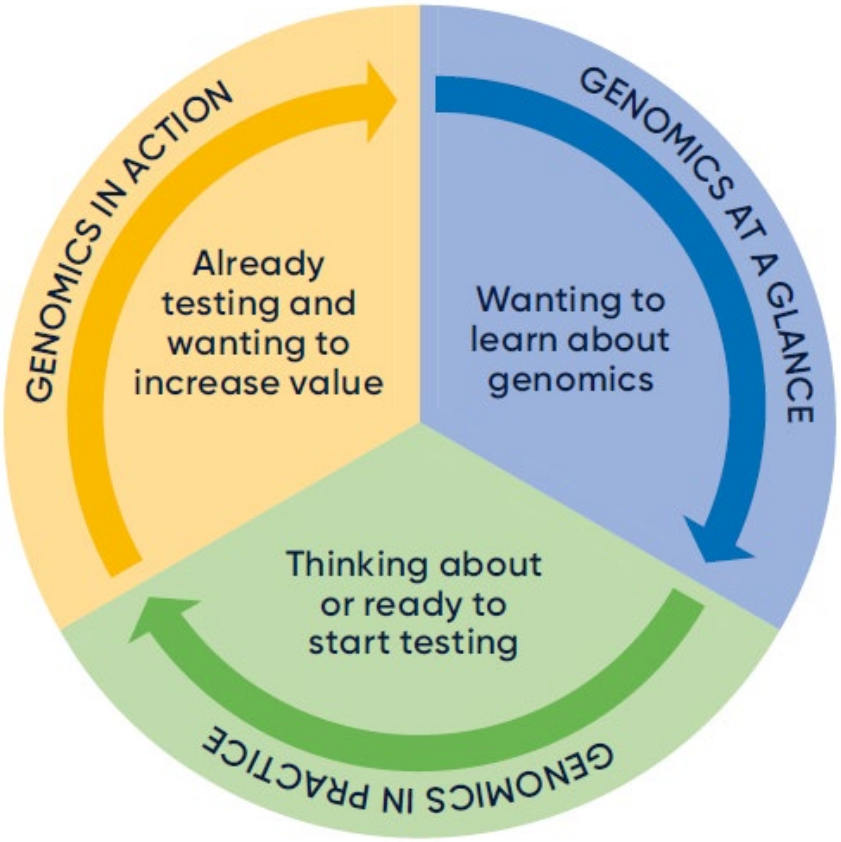
Extension activities

Extension activities

- 97% likely to take action (target >8)
- 9/10 would recommend to others

- *'We are seriously thinking about doing testing on our heifers'*

- *'I will be genomic testing my heifers as soon as possible to get the full advantage of it.'*



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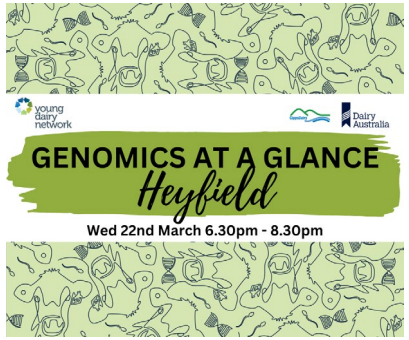
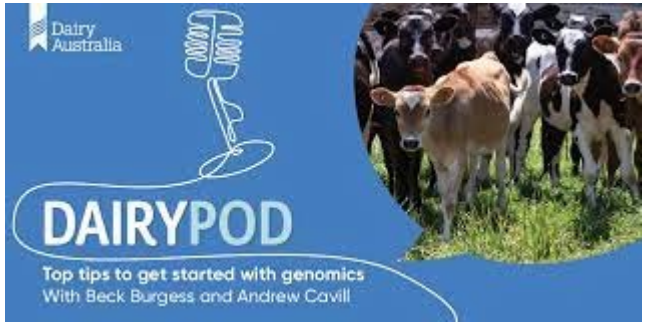
Make sure your customers don’t miss out.

People, resources, support are available

- Rob Cooper
- Kristen Davis
- Debbie Twiss
- Shane Gardiner
- Peter Williams
- Peter Thurn





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90,000

Stillbirth and pre-weaning mortality in Australian dairy cattle

M. M. Axford

M. Khansefid, M. Haile-Mariam, M. Goddard,

A. Chamberlain, J.E.Pryce,

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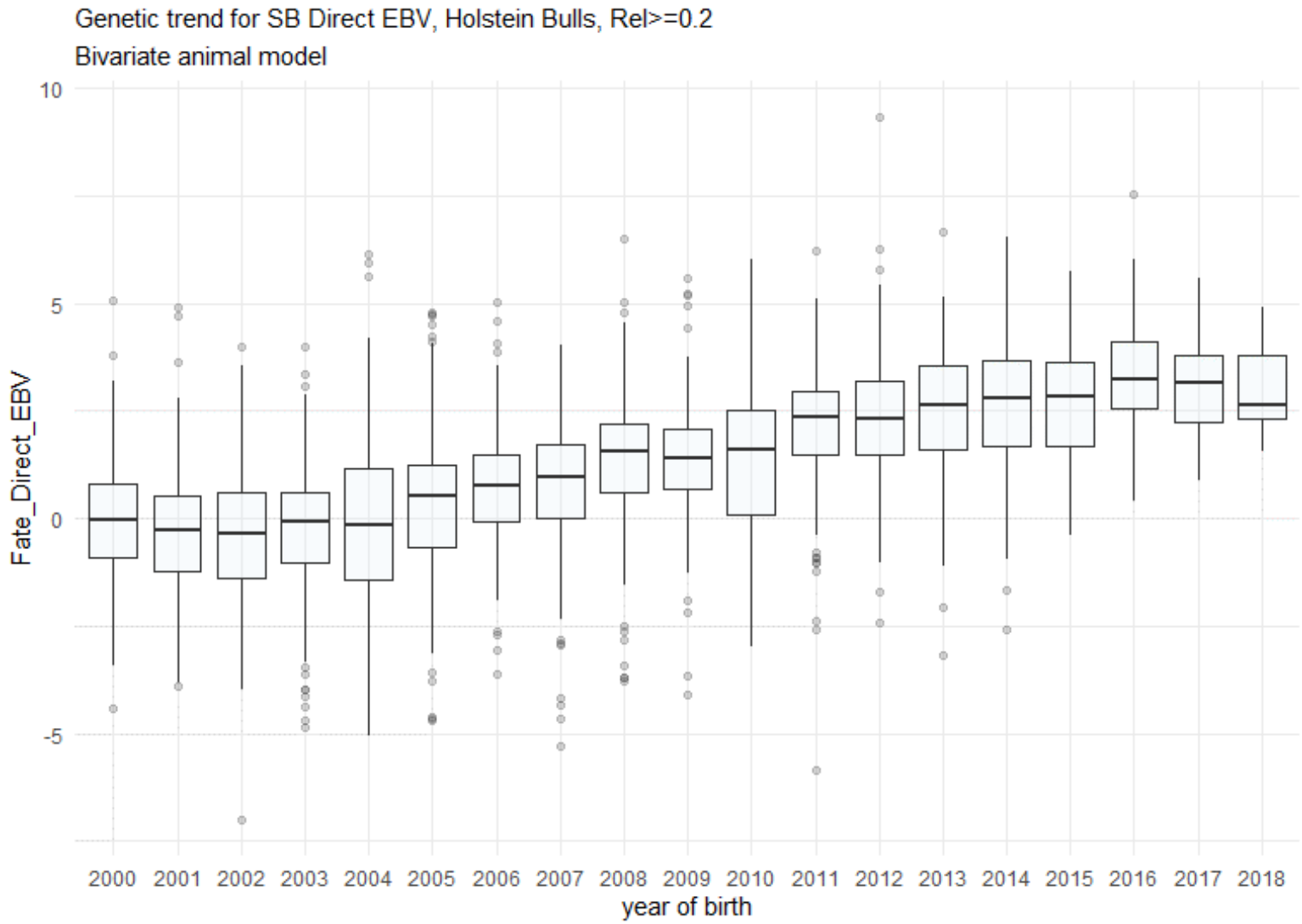
Calf traits

- Fate
  - Dead
  - Alive
- Calf Size
  - Tiny
  - Small
  - Average
  - Big
  - Huge
- Calving Ease
  - No difficulty
  - Slight difficulty
  - Moderate difficulty
  - High difficulty
- Calving Date
- Gestation Length

Pre-weaning mortality

Genetic trend for Stillbirth Direct 2.5% improvement in 20 years



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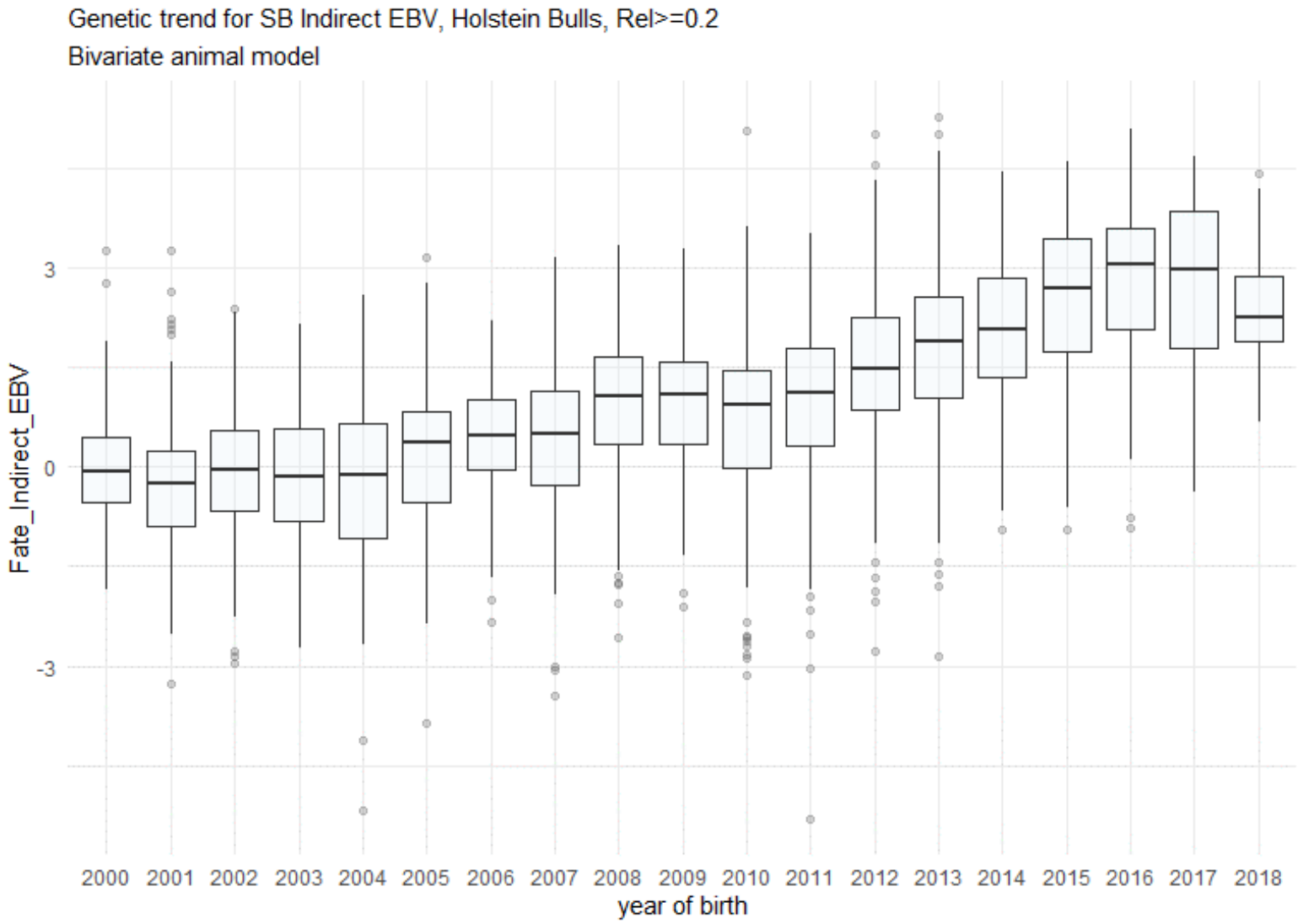
Genetic trend for Stillbirth Maternal ~3% improvement in 20 years



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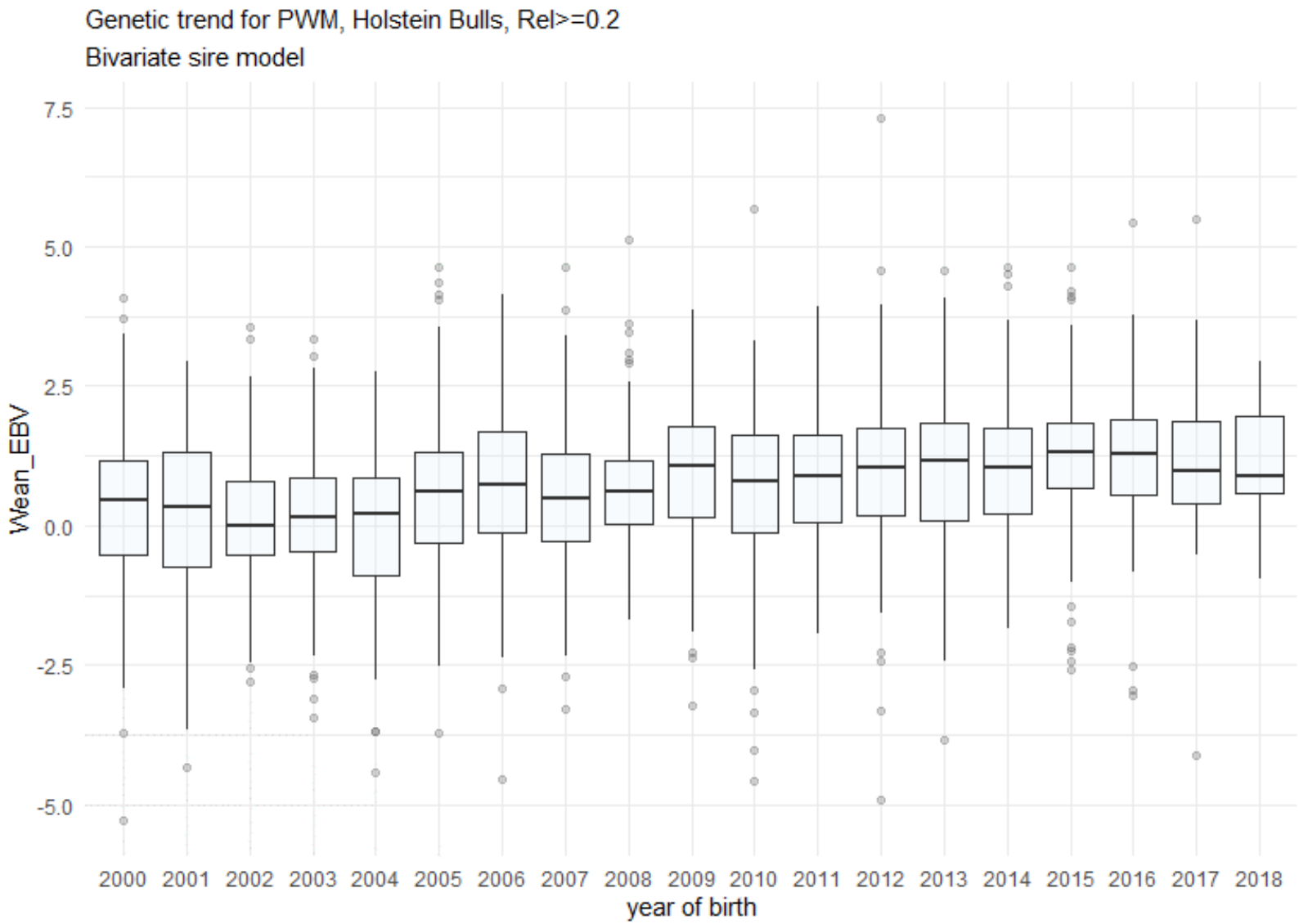
Genetic trend for Pre-weaning mortality ~0% improvement in 20 years



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Bottom line

- There is genetic variation in calf health traits so we can breed for improved
  - Stillbirth direct
  - Stillbirth maternal
  - Pre-weaning mortality

- Validation, using gold standard Australian calf data, is the next step

Acknowledgments

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- Dr Majid Khansefid
- Dr Mekonnen Haile-Mariam
- Prof Mike Goddard
- Dr Jo Newton

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- Participating farmers and their herd recording centres
- DairyBio
- DataGene
- Zoetis

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