



Beef on Dairy

Key messages

- It's the bull, not the breed!
- We need to think about the whole value chain, not just ourselves
 - But to do that ... we need to share information and get paid for the value we add.
- NZ opportunity from surplus dairy calves is orders of magnitude above anyone else in the world
- We can learn from others
 - US/Canada – Beef on Dairy calves can produce quality beef outcomes
 - Ireland – We need to produce high quality calves and share information

What traits do we want in a beef x dairy calf?

- Dairy farmer
- Calf rearer
- Grower/finisher
- Meat Company
- Consumer

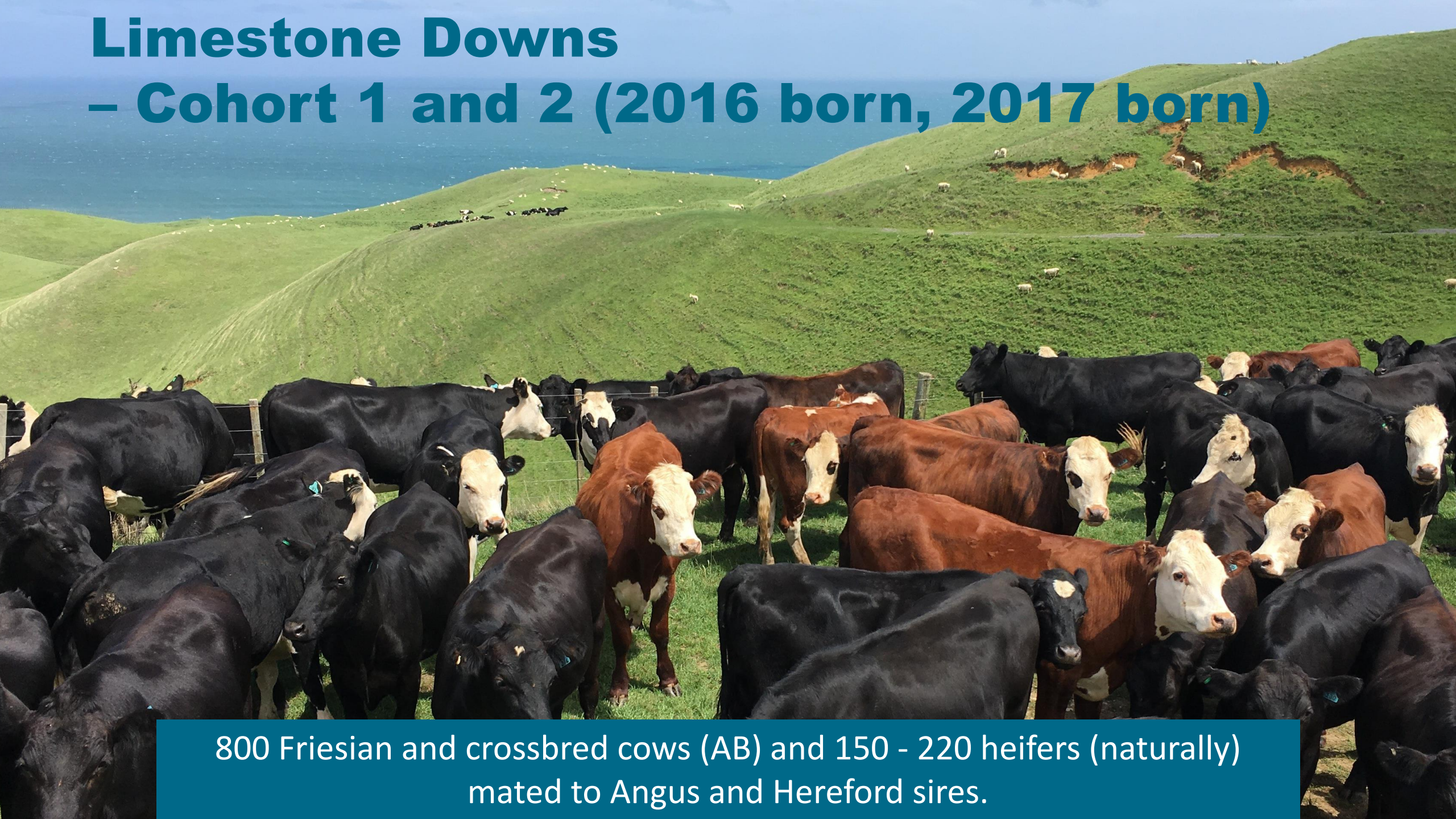
B+LNZ Genetics Dairy Beef Progeny Test

- First mating took place in 2015
- 9 cohorts of calves born
- Limestone Downs (Port Waikato) and Wairakei Pastoral (Taupo)
- Recorded beef bulls nominated by breeders
- Collaboration with LIC 2020-2024 born cohorts. New structures for 2024 mating.



Limestone Downs

– Cohort 1 and 2 (2016 born, 2017 born)



800 Friesian and crossbred cows (AB) and 150 - 220 heifers (naturally) mated to Angus and Hereford sires.

Limestone Downs

- Range of EBVs tested to determine how well the progeny performance matched the EBV of the sire.
- Demonstrate successful use of beef bulls in a dairy and dairy-beef finishing system.
- Compare the impact on heifer mating between easy calving beef bulls versus Jersey bulls.
- Assess value added by selection of high merit, recorded beef bulls.

Wairakei Pastoral

– Cohort 3 – 9 (2018 born – 2024 born)



1400 - 1600 crossbred cows (AB) to nominated beef bulls, open to ALL breeds.

Wairakei Pastoral (Renown and Orakonui)

- **IDENTIFY** and **PROVE** beef bulls that have:
 - ✓ Short gestation length
 - ✓ Easy calving
 - ✓ Excellent growth rates and superior carcass traits
 - ✓ That are suitable for widespread use in the dairy industry via AB.
- 2020-2024 cohorts collaboration with LIC ensuring that the beef semen choice of dairy farmers will produce calves that perform at all stages of the supply chain.

Dairy Beef Progeny Test – Traits measured.

- Renown
 - Calves weighed at birth and DNA sampled
 - Assistances recorded
 - Weaned at a set weight – date recorded
- Orakonui
 - Split into four groups by sex, weight and sire
 - 400-day weight, 600-day weight and Pre-Slaughter weight recorded
 - Ultra-sound Scanned for EMA, Rib and Rump Fat and IMF
 - Carcase and Beef EQ data

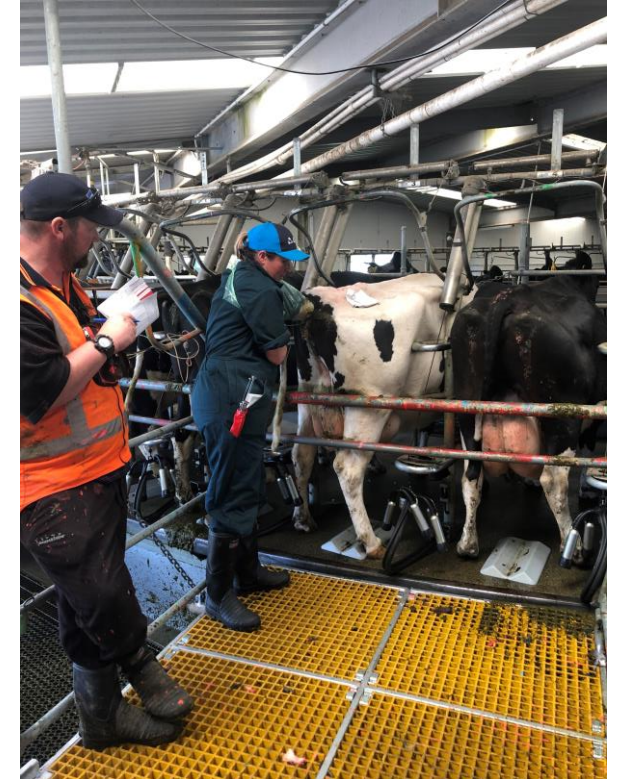


Dairy Beef Progeny Test – Results so far.

CALVING TRAITS

- Gestation length **sire mean range** of 13.5 days.
 - ✓ 282-day average GL (all sires) comparable to Jersey bulls
 - ✓ Shortest - 6 days off the dairy average with 276 days
- 33kg - 45kg mean birthweight **range among sires**.
 - ✓ 37kg average (all sires) - comparable to Jersey bulls
- No significant calving difficulty caused in dairy cows (<1%).

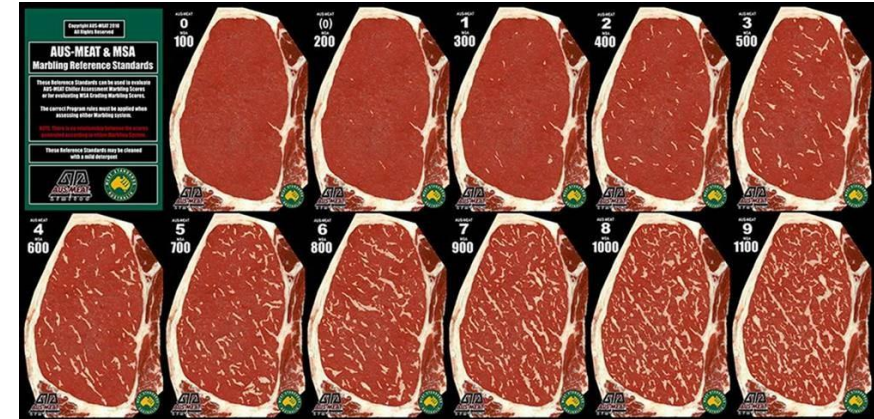
125 bulls tested between 2016 and 2020.



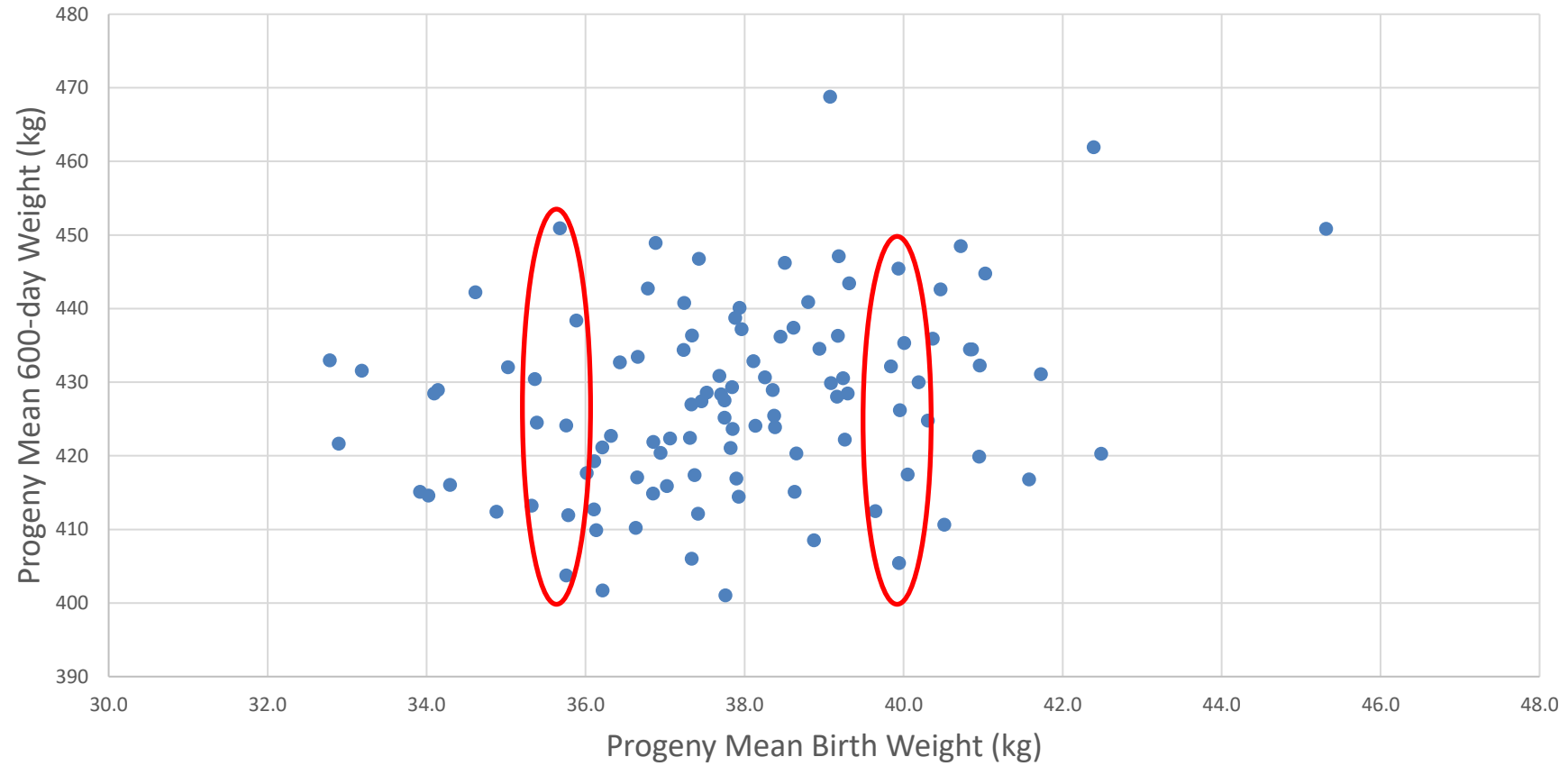
Dairy Beef Progeny Test – Results so far.

GROWTH, CARCASS TRAITS

- Progeny mean 600-day weight range of 68kg.
- The majority of progeny processed graded P2 (97% - 2016/17 born, 97.6% - 2018 born).
- All traits assessed in **live** animals have shown a significant impact of sire.
- Only two carcass traits – pH and meat colour – were not affected by sire.



DBPT 600-Day Weight



DBPT MARBLING SCORE

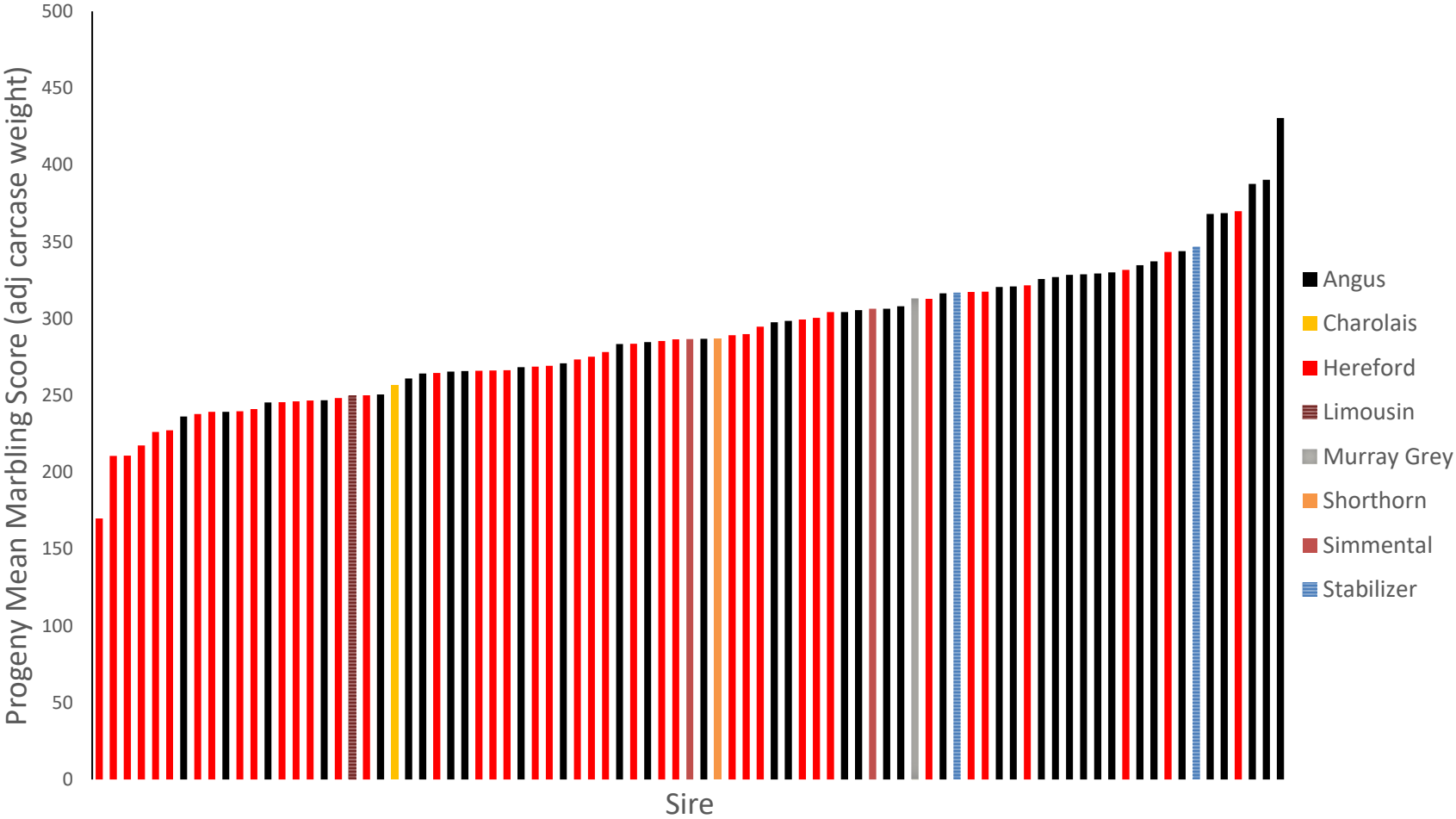


Table 5. Bulls with lifetime progeny data that meet the “all-rounder” criteria, having good birth weight, gestation length, carcass weight and marbling score.

Sire Name	Herdbook number	Breed	Gestation length (days)	Birth weight (kg)	Weaning Age (days)	200-day weight (kg)	400-day weight (kg)	600-day weight (kg)	Ultrasound EMA (cm ²)	Carcass weight (kg)	Marbling score
Earnsclough Tussock 144307	210130144307	Angus	279.9	37.9	86.8	182	296	440	74.4	283	308
Rissington Protégé 110002	145720110002	Angus	278.6	37.4	81.0	178	302	447		284	321
Rissington C200	14572015C200	Angus	278.8	33.2	82.6	177	297	432	75.5	284	390
Storth Oaks Everest J20	19507013J20	Angus	278.3	37.5	89.5	174	290	429		279	335
Storth Oaks K122	19507014K122	Angus	279.2	35.4	85.3	170	289	430	73.5	283	369
Te Mania Limitless	16932015380	Angus	281.5	36.7	84.5	171	293	433	75.7	285	368
Ardo Ajax 5014	0277155014	Hereford	281.2	34.1	86.4	177	297	428	74.4	280	317
Torrisdale Kakanui K123	1427140123	Murray Grey	280.5	36.9	87.8	171	290	420	73.7	278	313
Glenside Crumpy C4	1312AC0004	Simmental	280.4	36.9	80.3	185	304	449	75.8	291	306
Stabilizer 165287	N/A	Stabilizer	282.0	35.7	89.3	183	312	451	73.7	293	317
Stabilizer 165303	N/A	Stabilizer	278.6	34.1	82.7	178	294	429	74.9	281	347

Note: bulls are listed alphabetically within breed. Rissington Protégé 110002 and Storth Oaks Everest J20 were used at Limestone Downs only and do not have ultrasound records on their progeny. Bulls with values highlighted indicate they are within the top 20% of tested bulls for that trait.





Dairy Beef Progeny Test Report

JULY 2024

This publication is made possible by sheep and beef farmer investment in the industry. B+LNZ Genetics is not liable for any damage suffered as a result of reliance on the information contained in this document. Any reproduction is welcome with consent from B+LNZ Genetics, and that the source is acknowledged. The content published must fairly and reasonably reflect the report or result as a whole and not be misleading or deceptive in any way. Content should be stated to be an extract only and does not purport to be the full report or results (as the case may be).

Report prepared by Nick Sneddon, Massey University

<https://www.blznzgenetics.com/progeny-tests/beef-progeny-tests>



Acknowledgments



SCHOOL OF
AGRICULTURE
AND ENVIRONMENT



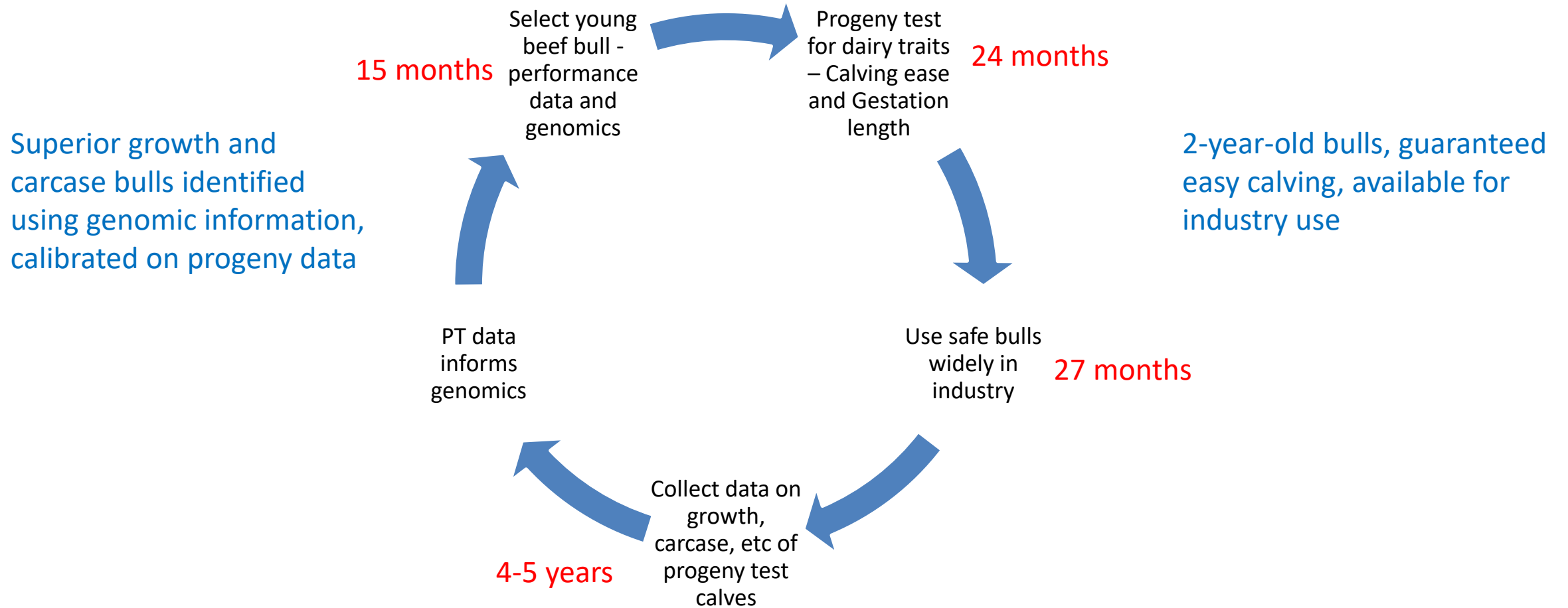
<https://www.blznzgenetics.com/progeny-tests/beef-progeny-tests>



Dairy-Beef Genetics – where to next?

- Scale up to identify best bulls - more bulls, more semen companies, more farms involved
- “distributed progeny test” model – multiple farms, most bulls used across most farms.
- Move from a single data set analysis, to combining data into a central database and evaluation

Low risk, rapid use



Optimising value across the chain

• Early life actions	• Later life outcomes
• Calf genetics	• Growth rates
• Colostrum	• Feed efficiency
• Health treatments	• Health
• Diet & weaning practices	• Carcase yield, marbling, quality

- Who pays, who benefits?
- How is value shared?
- Information at point of sale is fundamental to functioning value chains

USA & Canada – Beef x Dairy calves can produce quality beef outcomes



Ireland – regulation, data sharing, incentives



- Zero bobby strategy (15k calves)
 - All calves must be reared to 8 weeks of age
 - Quality beef calves often sold at 14-21 days
 - Poor calves may not find a market
- Identifying and paying for quality
 - All calves on ICBF database
 - Genomics
 - Carcase data
 - All calves assigned a GHG value at slaughter, passed to processor
 - \$ Commercial Beef Value
- Risk – 200,000 exported calves
 - GHG inventory implications

Key messages

- It's the bull, not the breed!
- We need to think about the whole value chain, not just ourselves
 - But to do that ... we need to share information and get paid for the value we add.
- NZ opportunity from surplus dairy calves is orders of magnitude above anyone else in the world
- We can learn from others
 - US/Canada – Beef on Dairy calves can produce quality beef outcomes
 - Ireland – We need to produce high quality calves and share information



QUESTIONS?
