Dairy-Beef Progeny Test: Red, Black or Brown?

Rebecca Hickson, Massey University

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

Background

- Dairy beef is not new
- Dairy herd is changing
  - 47% crossbred, 34% Friesian
- Jersey bulls most common
  - Follow-up bulls & over heifers
  - High milk prices → calf is a by-product
  - Easy calving is their selling point

Export Cattle Slaughter

Dairy herd Influence

Of the 2.45 million slaughter for 2016-17f

Cull cows	37%	
Cull dairy heifers	3%	
Cull breeding bulls	1%	
Dairy Farm total*		**41%**
Dairy-beef steers, heifers and bulls*	28%	
Beef cows, steers, heifers, breeding bulls	31%	
Sheep and Beef Farm total		**59%**
Total Cattle slaughter		**100%**

*Dairy genetic origin 41% + 28% = 69%

Aims of the project

- Demonstrate a successful dairy beef system
- Identify high performing bulls for dairy beef
- Compare performance of recorded vs average unrecorded bulls

- Look at dairy farm outcomes as well as finishing farm performance
  - PhD student Lucy Coleman
- Finishing performance will include meat quality evaluation\
  - PhD student Natalia Martin

Bull selection – for cows

- Hereford and Angus
- Traits of interest:
  - Birth weight
  - Calving ease
  - Gestation length
  - Growth traits (400, 600d)
  - Carcass traits (e.g. marbling)

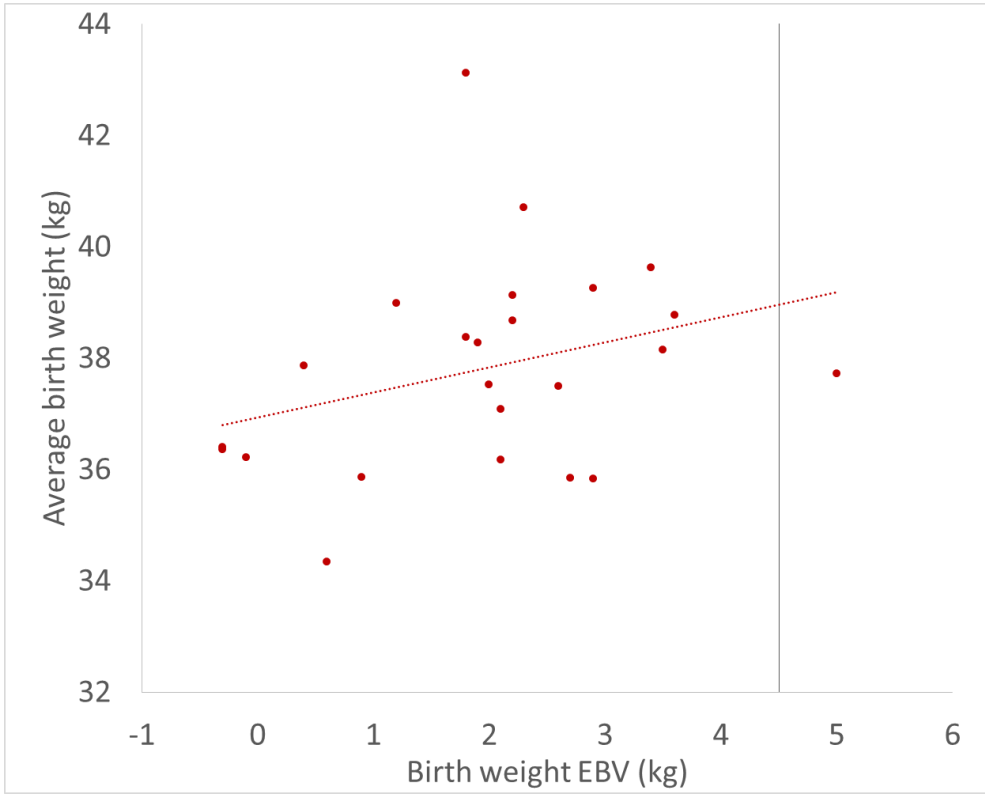
Bull selection

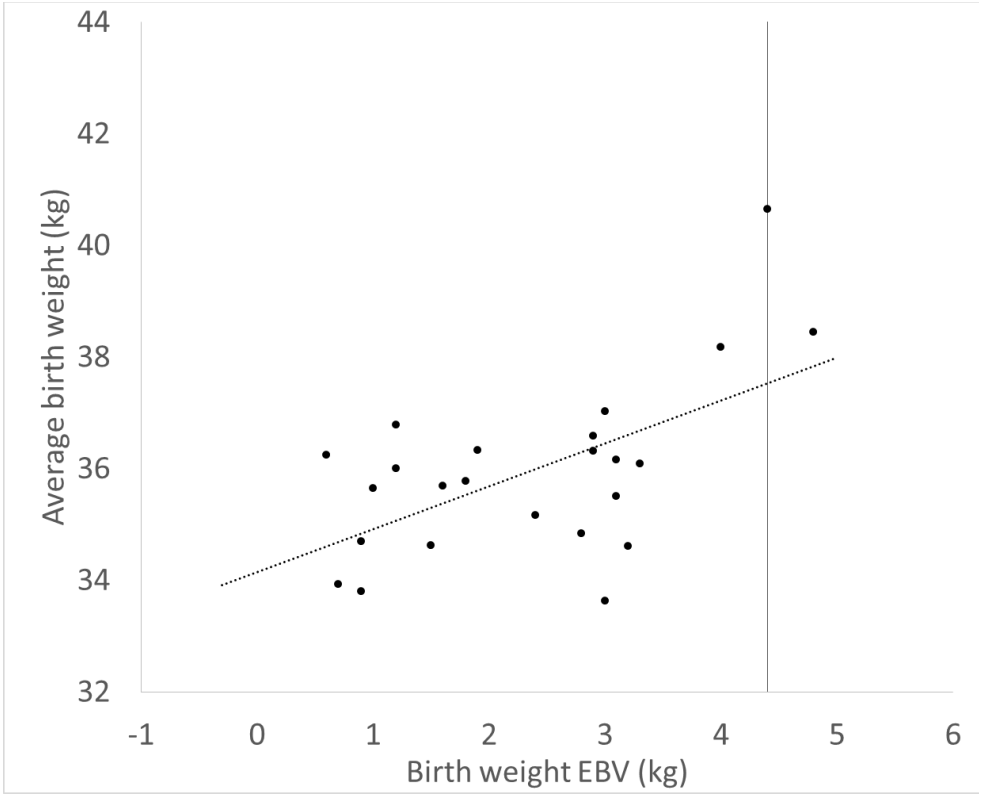
- Bulls in top 10% of breed
- Bulls in top 50% of breed
- Control bulls, similar to average unrecorded bulls

2016 Calves

- 502 singleton calves born in year 1
- 37.0 kg
- 281.9 day gestation
- Weaned at 78.8 days
    - Minimum 85 kg, average 90 kg

Outcomes: Birth weight



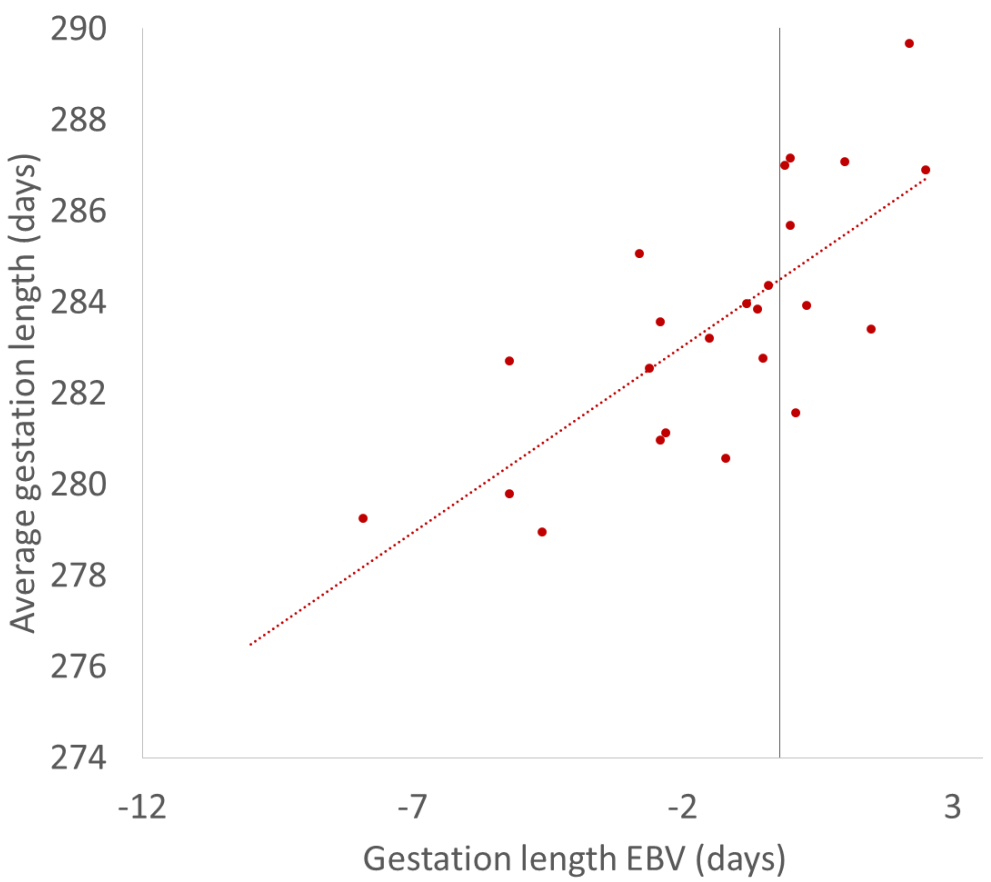


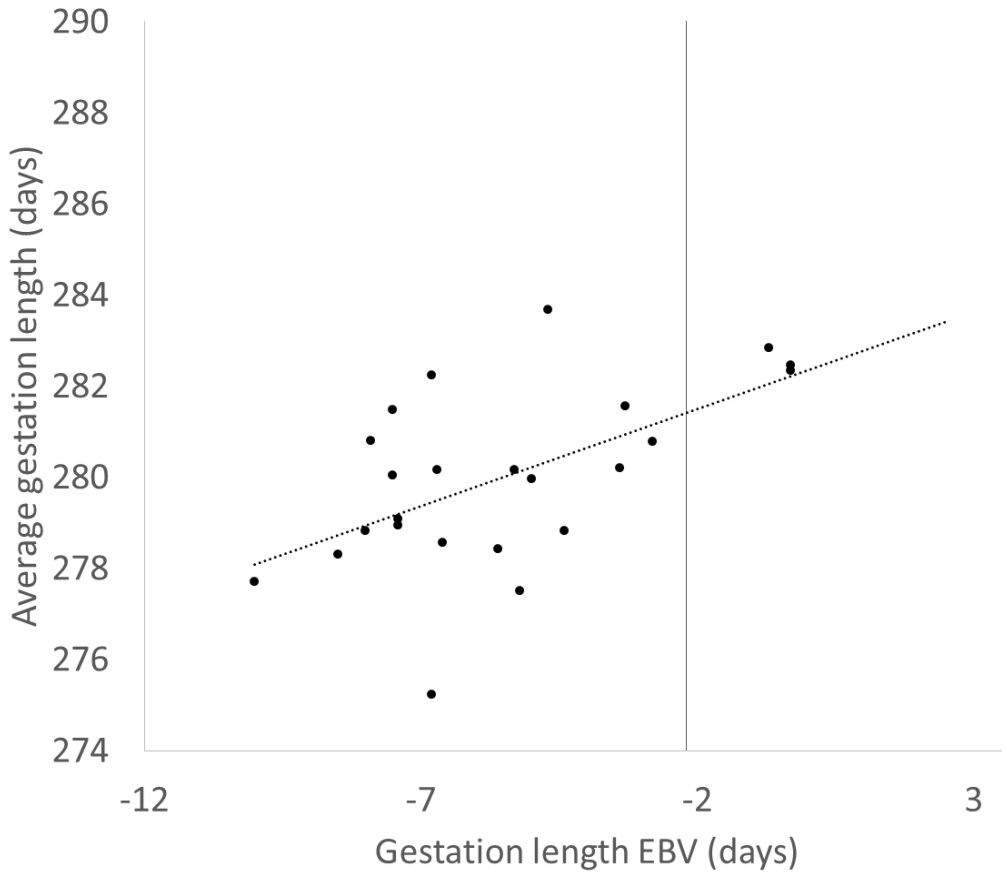
Birth weight increased 0.45 or 0.77 kg for each kg heavier the bull's birth weight EBV

Comparisons

		Birth weight (kg)
Hereford		
	Average unrecorded	39.0
	Top 50% breed	37.8
	Top 10% breed	36.5
Angus		
	Average unrecorded	37.5
	Top 50% breed	35.6
	Top 10% breed	35.4

Outcomes: Gestation length



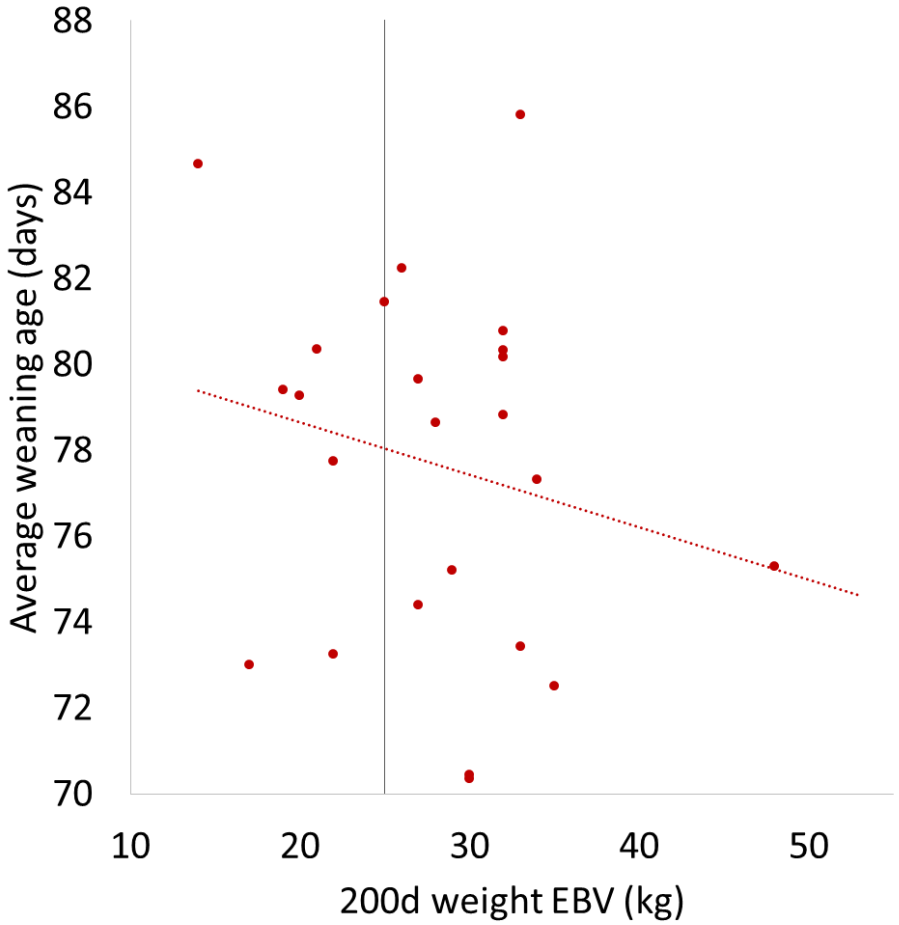


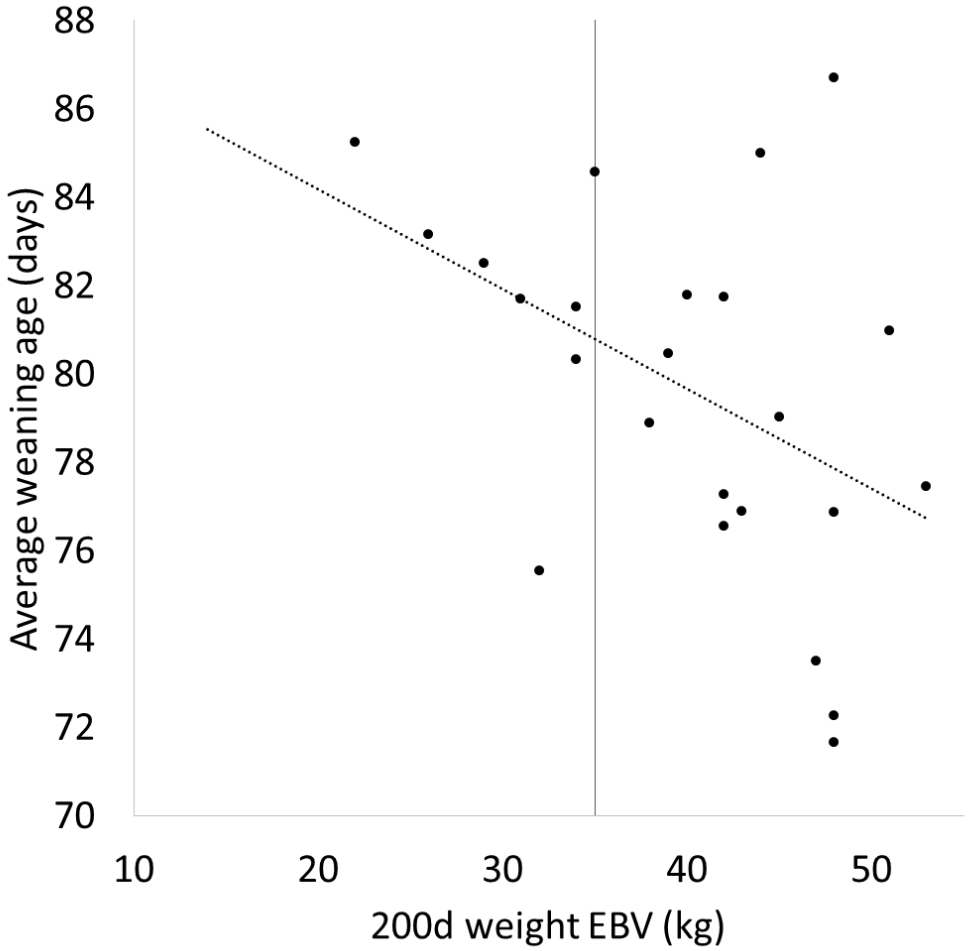
Gestation increased 0.82 or 0.43 d for each day longer the bull's GL EBV

Comparisons

		Birth weight	Gestation length
Hereford			
	Average unrecorded	39.0	284.5
	Top 50% breed	37.8	282.5
	Top 10% breed	36.5	281.5
Angus			
	Average unrecorded	37.5	281.4
	Top 50% breed	35.6	279.4
	Top 10% breed	35.4	279.3

Outcomes: weaning age





Higher 200d weight EBV = earlier weaning

Comparisons

	Birth weight	Gestation length	Weaning age
Hereford			
Average unrecorded	39.0	284.5	77.5
Top 50% breed	37.8	282.5	76.4
Top 10% breed	36.5	281.5	
Angus			
Average unrecorded	37.5	281.4	80.8
Top 50% breed	35.6	279.4	78.0
Top 10% breed	35.4	279.3	

High merit bulls boost performance

R2 heifers: Bull selection

- Jersey
  - Breed average for live weight, gestation length

- Beef: Top 15% for birth weight and direct calving ease
  - Angus: Top 5% for birth weight, direct calving ease
  - Hereford: Top 10% for birth weight, 15% direct calving ease

R2 heifers: Outcomes

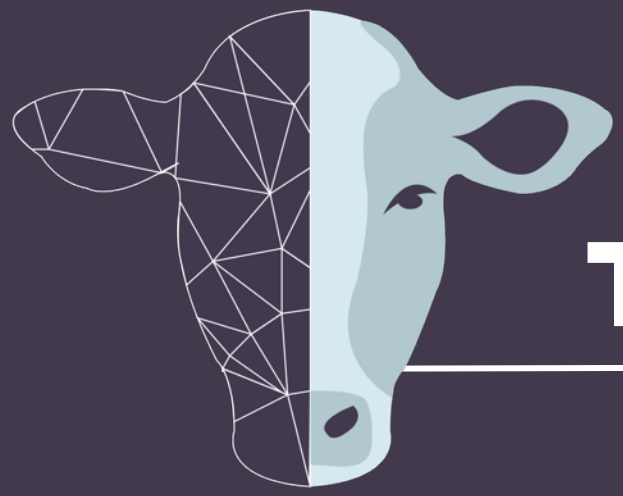
	Jersey	Angus	Hereford
n	72	72	66
Birth weight (kg)	29.3	33.7	35.8
Assistance (%)	0	4	12
Mean calving date	24 July	20 July	24 July
Weaning age (d)	.	79.6	76.0

Summary so far

- Dairy beef is adding value on the dairy farm
- Use EBVs to get the kind of calves you want

Next steps:

- Another cohort in 2017
- Growth and meat quality:
  - 300 kg carcass steers
  - 245 kg carcass heifers



Thank you.

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