Jerseys More than a Pretty Face

Maike Oegema & Alison Gibb

Who are we?

- Maike Oegema
- Jersey farmer in Netherlands
- 125 Jerseys and 60 calves & heifers
- MSc in Animal Sciences (Wageningen University & Research)
- Ruminant nutritionist ‘18-’23, now fulltime farmer
- Member of “Koeien & Kansen” (cows & opportunities) → group of farms studying the (im)possibilities of potential national climate/fertilization/biodiversity legacy
- Netherlands Jersey Society & European Jersey Forum board member

- Alison Gibb
- Farming 300 Jersey, 68 heifers, 76 calves
- Director of Fyvie Meadows Ltd, New Zealand
- Director Link Livestock
- Ex President of JerseyNZ
- Ex Treasurer WJCB
- Vice President for Oceania - WJCB

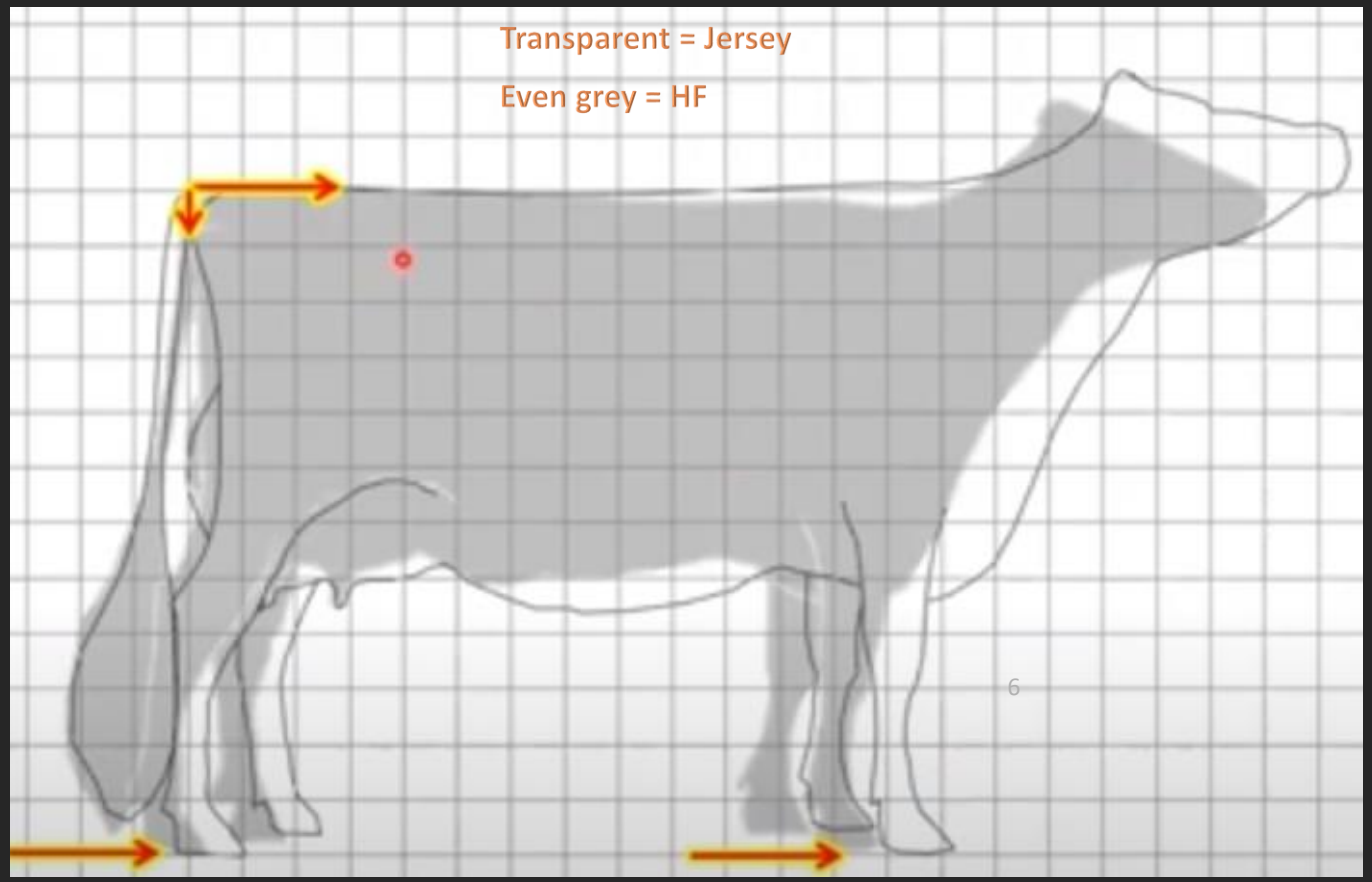
Jersey in science

- 5% - 20% more DM intake/kg live weight
- 8% - 19% less energy demand than HF to produce the same kg fat & protein
- 9 - 34% more solids/kg live weight
- 18 - 20% lower CFP (Carbon Foot Print)
- 26 - 31% more energy corrected Milk/Kg Lwt
- Higher NDF digestibility

Jersey in science

- Jerseys have a slightly different fat metabolism compared to HF
  - More SCFA and MCFA's (short and mid-chain fatty acids)
  - More de novo fat synthesis in early lactation
    - HF uses more fatty acids from the blood

- Jerseys spend the same time at the feed fence as HFs (but have a lower feed intake)
  - Length and number of feed intake moments are not different
  - Jerseys spend more time on consuming and rumination of one unit of feed
  - Jerseys naturally spread the feed intake moments more equally over the day



Why are Jerseys special?

Jersey on size HF:

- Bigger head/mouth
- Wider
- More space for rumen
- More space for heart & lungs

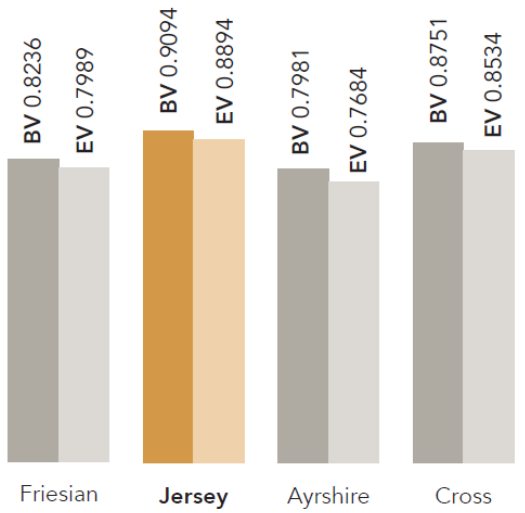
How do Jerseys compare ?

- Outperforms all others breeds in terms of a higher kg milksolids/kg LWT
- Jerseys are 9% better than Friesian and 3.7% better than cross-breed on a per kg LWT basis using the genetic base cow data

AVERAGE OF ANIMALS BY BREED

Graph 1: Comparison of kg MS/LWT – BV vs EV base assumptions (EV base)

Source: DairyNZ RAS list as at 15 August 2015

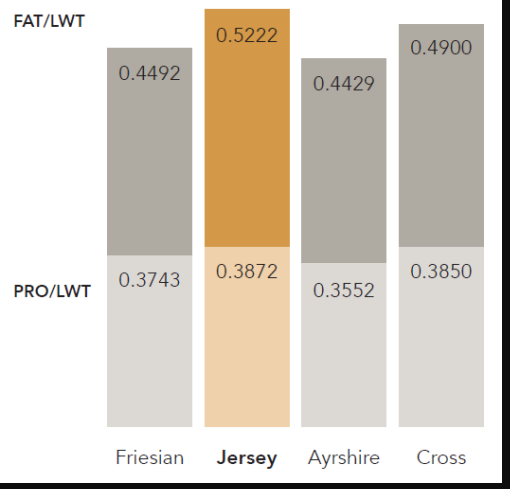


AVERAGE OF ANIMALS BY BREED

Graph 2: Fat & Protein per liveweight

Source: DairyNZ RAS list as at 15 August 2015

BREED	N	FAT/LTW	PRO/LWT	KGMS/LWT
Friesian	50	0.4992	0.3743	0.8236
Jersey	30	0.5222	0.3872	0.9094
Ayrshire	10	0.4429	0.3552	0.7981



Jerseys are more fertile

Fertility breeding values are based on 5 calving within 42 days of the start of calving.

On average, Jerseys have the highest breeding value

Average Fertility BV (%)

(NZ Dairy Stats 2021-22, page 54) of all cows born in 2019

Jersey	HF x J Cross	Holstein Friesian
1.3	0.3	-0.8

National Herd Average – Fertility

(as at May 2023)

Jersey	HF x J Cross	Holstein Friesian
0.73	-0.65	-1.42

Jerseys are breed for variable milking systems

Characteristics of Jersey, Holstein Friesian and cross bred cows from Massey University Dairy 1 over three lactation seasons

	Jersey	Holstein Friesian	HF x J Cross
Kg Milksolids / kg Liveweight	0.75	0.66	0.71
Fat %	5.8	4.4	5.0
Protein %	4.2	3.7	4.0
Milksolids %	10.0	8.1	9.0
BW	137	110	111
PW	157	120	149

What would happen if your herd changed from black/black & white to golden brown?

Cow Feed Requirements

Sourced from DairyNZ Facts and Figures, Cow Feed Requirements page 46

	LWt (kg)	Kg MS/ cow/ year	Kg DM eaten	Methane emitted
F10-F12 herd	525	400	5.2 ton	109 kg / c / y
J14-J16 herd	425	400	4.7 ton	98.7 kg / c / y
Difference	100 kg	0	0.5 ton	9.5%

A2A2 – the Jersey Advantage

A2 milk contains the A2 type of casein protein rather than the more prevalent A1 protein

Health claims from countries supplying milk with naturally high levels of A2

- Fewer incidences of type-2 diabetes and heart diseases

- In NZ 66% of the the Jersey cow population already carry A2A2 gene
- 44% for Holstein Friesian
- 53% for crossbreeds

Summary

More DM intake/Kg LWT
Less energy demand to produce same KG & Protein as a Friesian
More solids per Kg LWT
Green cow – lower carbon foot print
Higher NDF digestion
More Fertile
Adaptable to variable milking systems
A2A2 advantage

QED: Jerseys are more than a pretty face!