

NEW ZEALAND **GRAZING** **GENETICS**



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The early Polynesian settlers called the country Aotearoa, meaning 'Land of the Long White Cloud'. It is a name by which New Zealand is quite often known. The climate is perfectly suited to growing grass and the New Zealanders have perfected the art of turning all this grass into high quality milk.

Located far from the leading consumer markets of the past century meant New Zealand farmers have had to apply low cost and efficient farming systems in order to be competitive on the world dairy markets. The resulting farming system required specific genetics with focus on performance on grass, seasonal calving, longevity and easy care. This has resulted in the New Zealand Genetics as we know them today.

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NEW ZEALAND GENETICS CHARACTERISTICS

Generations of selection in the New Zealand environment have resulted in our genetics carrying the following characteristics:

Quality Milk

Milk payout is based on kg of fat and protein with a negative for volume. As a consequence the fat- and protein% of our genetics is resulting in quality milk;

Efficient converters of grass

the focus in our national breeding goal is for cows to efficiently convert grass to milk. Farmers focus on maximum output (kg solids) per kg of body weight. The best farmers realize 1 kg of fat and protein or more per kg of body weight per lactation.

Fertile

most farmers calve once a year and will only AI for 4-6 weeks. Empty cows are culled and this stringent selection in combination with focus in the breeding goal has resulted in the New Zealand genetics having the best fertility in the world.

Robust

Cows are outside day and night, 365 days of the year. This means they have to cope with changing weather - and on top of that - they have to compete within larger herds.

As a result NZ cows are hardy and robust. They will excel in hardy environments and look after themselves. The availability of body condition score indexes aides in the selection of no fuss, healthy, easy to manage cows. This is proven by the average cow lasting 4.8 lactations in New Zealand.

In comparison with Holsteins and Jerseys from North America and Europe, New Zealand genetics are:

- Smaller in stature;
- Carry more body condition
- Have wider muzzles, more width of chest and deeper bodies
- Slightly more set to the leg
- More aggressive foragers.
- Outcross to North American and European bloodlines

CROSSBREEDING WITH DAIRY BREEDS

Nearly 43% of cows in New Zealand are crossbred which means they are less than 14/16 Friesian, Jersey or Ayrshire. The most common ways of crossbreeding in New Zealand are:

Criss-Cross

- Farmers will use Friesian and Jersey and crossbreed for management purposes and leverage hybrid vigour for performance benefits;
- All maiden heifers will be mated to Jersey for ease of calving and management;
- Anything that looks like a jersey will be mated to Friesian and vice versa;

USING CROSSBRED BULLS

- Simplicity is the main reason. They have a crossbred herd and want to keep it crossbred;
- Farmers are aiming for a cow of a certain body weight that fits their farm/production system and can realize this by having a ¾ Jersey or ¾ Friesian herd. They are using the jersey part to infuse fertility and components and the Friesian part to infuse milk volume and robustness.

CROSSBREEDING WITHIN A BREED

With their specific characteristics the New Zealand Jerseys and Friesians can be used successfully in high input Holstein and Jersey herds to infuse fertility, efficiency, robustness and quality milk. You can use these breeds to cross breed within the breed. The resulting cows will still



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be true to the breed but the strength of the New Zealand genetics complements well with the ultra-dairy ability of the high input Holstein and Jersey genetics. 20-25% of New Zealand Genetics is all that is required similar to the way tropical breeds are used to infuse heat tolerance and disease resistance.

NEW ZEALAND INDUSTRY STATISTICS (2012/2013)

- Total dairy cows 4.78 million
 - 42.6% Friesian/Jersey Cross (< 14/16 Jersey and <14/16 Friesian)
 - 37% Friesian (≥ 14/16 Friesian)
 - 11.7% Jersey (≥ 14/16 Jersey)
 - 0.7% Ayrshire
 - 8.1% other
- Average herd size; 402 cows
- Cows in milk recording 71.6%
- Inseminations/cow 1.34

HERD TEST BREED AVERAGES IN 2012/13 SEASON

Breed	Cows tested	DIM	Milk (ltr)	Kg fat	Kg prot	Kg solids	Fat %	Prot %	Body weight	Calving interval
Friesian	925,203	211	4,414	193	161	354	4.42%	3.65%	468	368
Jersey	340,146	210	3,118	176	129	304	5.65%	4.14%	376	368
Xbreed*	1,225,542	212	3,932	193	152	345	4.95%	3.89%	434	368
Ayrshire	18,545	219	3,934	173	141	314	4.42%	3.60%		369

*These cows are less than 14/16 jersey or 14/16 Friesian