

# Dairy Breeds

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## Jerseys

The following come from Fieldays Dairy Farmer of the Year competitions that I managed; a New Zealand survey I did in 1989 in the NZ Dairyman, the NZ Livestock Herd Improvement Association (LIC), NZ AgResearch and USA.

All the following results were based on milk solids (protein and fat) production, not milk volume which has a lot of water. New Zealand and Australia are paid for MS, not volume, in fact Fonterra has a volume penalty of about three cents a litre because it has to be transported, pasteurised and processed.

Four out of five of the most profitable Fieldays Dairy Farmer of the Year winners in the 1970s and 80s had Jerseys. This competition was based on profit per hectare which is a good way to measure profit. Economic Farm Surplus (EFS) was used. See GrazingInfo > Spreadsheets >

A survey of 300 farmers over the whole country that I did through The Dairyman magazine showed that Jerseys' production per hectare was considerably higher than Friesians and crossbreds. Ayrshires were lowest by quite a bit.

Trials at Ruakura to select a once a day milking herd and higher protein chose Jerseys as the base because of their benefits.

Their automatic milking staff found that Jerseys learned faster. Their meat and their crossbred meat is usually more tender because they are quieter and less stressed. Stress at slaughtering has been shown to make tough meat.

The Jersey dairy type is generally better than the Friesian type, and far better than the North American Holstein type. Jerseys have better udders, legs and hooves and better overall conformation. However, as in other countries, in New Zealand some within breeds are much better than others, in USA there are even bigger variations. The very inbred cows in Jersey Island are much smaller and more petite, rather than bigger and stronger NZ ones.

Jerseys are much quieter and easier to handle. They are also more intelligent and for example learn more quickly than others the difficulty of entering and turning in the dreadful internal rotary parlours which I would ban.

New Zealand Jerseys in an international comparison rated better than those from Denmark, England, and Jersey Island. Reports state that New Zealand Jerseys produce well in Britain, and are looked on as amongst the best in the world.

Brad Cowan of Oregon, USA who milks 750 cows wrote on graze-1, "The improvement in my herd from the top NZ Jersey bulls is fabulous. We figure to have 200+ good cows for sale every year worth around \$2000 a head."

If that was a North American Holstein herd the 200 would be culled after two or three lactations so only earn half as much from McDonalds.

Jerseys get less endophyte toxicity and being lighter, cause less pugging, cause less ryegrass pulling, so fewer weeds grow. Less compaction gives more pasture growth according to Rod Millar, then farming near Ngatea.

Over the last two years I have heard of many previous Friesian breeders changing to Jerseys, but I haven't seen this promoted.

Dr Paul Miller from the US, guest speaker at a Ruakura Conference said he saw a future in cross breeding dairy cows, and thought that Jerseys should be used.

At present USA has only three percent Jerseys in their national herd, but, according to Dr Miller, the percentage is increasing. NZ Holstein-Friesians are also increasing there, and all the rest are decreasing.

High BW Jersey cows are larger than low BW Jerseys. The trend to larger and stronger Jerseys is popular, and was needed. It is likely to continue, so breed for it, and keep improving by leading the market and filling needs.

Jerseys, more than some breeds, need mineral levels to be optimum which they should be anyway.

Most Jerseys in NZ are descended from Milking Shorthorns more than a hundred years ago and still have their high tail setting that helps with conception.

New Zealand dairy farmers changed the national herd from Jerseys to Friesians (Holsteins originally mainly from UK and some from Holland) over about 25 years by using Friesian semen on Jersey cows and benefited from heterosis, but pure Jerseys are still more profitable per hectare when based on New Zealand milk payout based on milk solids (MS) and cow weights, as the following 305 day (approximately) 1992 Livestock Improvement Corporation production figures from 90,000 weighed cows show.

|                   | <b>Weight</b> | <b>MS Earnings</b> |
|-------------------|---------------|--------------------|
| Jersey            | 324 kg        | \$1,272            |
| Holstein x Jersey | 395 kg        | \$1,144            |
| Holstein          | 441 kg        | \$1,014            |

### **Friesians**

Most in NZ are descended from Jerseys about 50 years ago, hence the less white than North American ones. Most Jerseys, not the pedigree ones, were descended from the first Shorthorn cows brought to New Zealand by the Scots. Milk was soon over-produced so was exported as butter. To increase the fat %, Jersey bulls were used.

You will have gasped at the big body and strong legs. They, the compact udder and black teats are from genetics in this Pukeroro cow developed over two human generations of line breeding. (What were our breed societies and AB (AI) centres doing?) See Breeding for her production figures. As you can see, she has no mineral deficiencies and no health problems. Note and strong tail - a sign of adequate selenium. Her pastures have had LimeMag (See Elements > Calcium) and fertilisers based on pasture analyses, not at all on antiquated soil tests. See Pastures > Analysing Tissue Versus Soils.

If you can take your eyes off her, look at the pasture. A little perennial ryegrass is seeding - so what? Also note the dense clover laden pasture with no weeds except for one dock, a high fertility plant that will be eaten. The pasture fully fed with LimeMag and fertilisers, won't suffer ryegrass pulling, or need the expense of spraying or oversowing seed to keep it weed-free. Most pastures suffer weeds seeding, but pastures never seeding. Farmers who use deferred grazing in summer, notice a tremendous improvement in pastures because of the seed dropped and an increase in earthworms because the well covered soil doesn't dry out as much. Feeding hay on pastures is free oversowing (seeding).

### **Holsteins**

The large numbers of these provide faster genetic improvement.

Some have low tails (low between the pin bones) which adversely affects conception. Many have weak sickle hocked legs and bad hooves. Some have undershot jaws which make grazing short pasture difficult, and most have narrow muzzles.



You will have gasped at the big body and strong short legs on this New Zealand Friesian. The wide muzzles, large body, compact udder and black teats, are from Pukeroro genetics by Chynoweths in the Waikato over two human generations of line breeding. (What were our breed societies and AB (AI) centres doing?)

Bill & Janette Chynoweth worked with Tom Wallace of Ambreed.

As you can see, she has no mineral deficiencies and no health problems. Note her strong well-held tail - a sign of



adequate selenium. Her pastures have had LimeMag (Lime and serpentine. See Elements > Calcium and see Magnesium) and fertilisers based on pasture analyses. For information on growing it see Pastures.

Bill Chynoweth was a client of mine for 15 years. His 110 Friesian cows peaked at 2.2 kg MS, produced 493 kg MS and 1,020 kg MS/ha. He reared 110 calves until weaning, when they went to his runoff, and with 8 to 10 mature bulls on 52.5 ha. Animals were fully fed except when dry and always calved at condition score >5. His herd produced double the NZ average, and on a par with TMR fed ones in the Northern Hemisphere.

Roscoe Amy averaged 5.97% fat and 4% protein. Semen from her descendants is still available from CRV Ambreed Ltd, Box 176, Hamilton.

He had cows fully fed on pasture and maize silage as required, with minerals, but no bought feed or TMR, produce 8,700 litres (19,000 lb) of milk and 690 kg of milk solids (1,500 lb of protein and fat) in about 300 days and calve every year for more than ten years.

Overseas farmers wanting semen must send a permit from their authorities to Ambreed, Box 176, Hamilton, with an order for at least 200 straws delivered to an AI centre. Ambreed's fax is 64-7-827-5057, and email enquiries@ambreed.co.nz

See <http://www.ambreed.co.nz/>

The late Ray Metcalfe, NZ dairy farmer, and Gallagher export manager, visited NZ Friesians in the cold of England and in the Mexican heat. In both cases the New Zealand cows were out grazing, while the local ones stayed in the barns. The farmers said this was always the case.

### **Ayrshires**

There are so few that genetic improvement is slow. They have many claims, but the figures don't back them. A survey I did in 1980 odd. New Zealand's LIC comparisons 20 years later found the same.

### **Milking Shorthorns**

There are so few in New Zealand that genetic improvement is very slow. They are big cows that carry meat and add it to it when dry and fed well.

### **Future**

Sexed semen with 90% accuracy is available, but not in New Zealand yet. It costs about three times more, but to get a heifer from a top cow could be worth it.

### **KiwiCross**

A move away from the very large bodied Holstein-Friesian cow has been a step in this direction. LIC have done an excellent job in developing this new medium size dairy breed for grazing and high fertility. They also perform well under Once a Day Milking.

See their web page <http://www.newzealandgenetics.com/> and search for Kiwicross.

Some have criticised the Kiwicross claiming that after the first cross there is nowhere to go, but -

Some farmers have developed their own cross and are happy with the medium size cows.

150 years ago the National herd was Shorthorns. Jersey bulls were used to increase the fat levels because surplus milk was exported to the UK as butter.

In the 19 60s Friesian bulls were used over the Jerseys, especially those that had become too small.

The Murray Grey beef breed was developed by crossing Shorthorns with the Aberdeen Angus.

The KiwiCross in New Zealand is doing well and increasing in popularity faster than other breeds. It is a grazing medium size strong cow.

“We are moving more towards the Kiwi-type Friesian and also to Kiwi-cross bulls,” said Bill Millar.

“We have been running pedigree Jersey bulls across our heifers for a few years now, and we have been getting very good results from those. We have had some of the resultant heifers in our herd for three or four years, and they are proving top animals.”

‘KiwiCross’ J X F heifers and cows in NZ have average bodyweights of the average of their parent breeds. There is little positive heterosis (Hybrid vigour) for this trait. Conversely, they produce MORE milk-solid production per cow than BOTH their parent breeds. No wonder it makes this efficient cross a popular choice for NZ dairying.