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**NEW ZEALAND**

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Registered Farm Management Consultant and Farmer, New Zealand

Location: 35° south – 45° south (similar latitude to Madison, but oceanic climate)

Size: similar to Oregon USA, 186% of Poland, 110% of UK

Percentage farmed: 56

*of which:* 14% dairy (4.5M cows)

70% sheep/beef/deer (30M sheep, 4.5M beef, 1M deer)

4% arable

12% forestry

Population: 4.5M

**CANTERBURY CASE STUDY FARMS – DAIRY (100% IRRIGATED)****Imperial**

Area: 550 acres

Cows: 770

Production: 8.25M lbs

MS %: 9.12% (5.2% fat)

Per cow = 15000 lbs (corrected to 3.5%)

= 55 lbs/day milked (270 days/year)

Staff = 4 (all capable of doing all jobs, but well paid)

wages = 16% of total costs

Diet = 80% pasture

EBIT: \$2,500 - \$3,500/ha

Land value: \$38,000/ha

Fonterra shares: \$ 8,000/ha

Stock: \$ 6,000/ha

Plant: \$ 1,000/ha

TFC: \$53,000/ha

Return on Capital = 4.7-6.6%

**Metric**

220 ha

770

342,000 kg MS

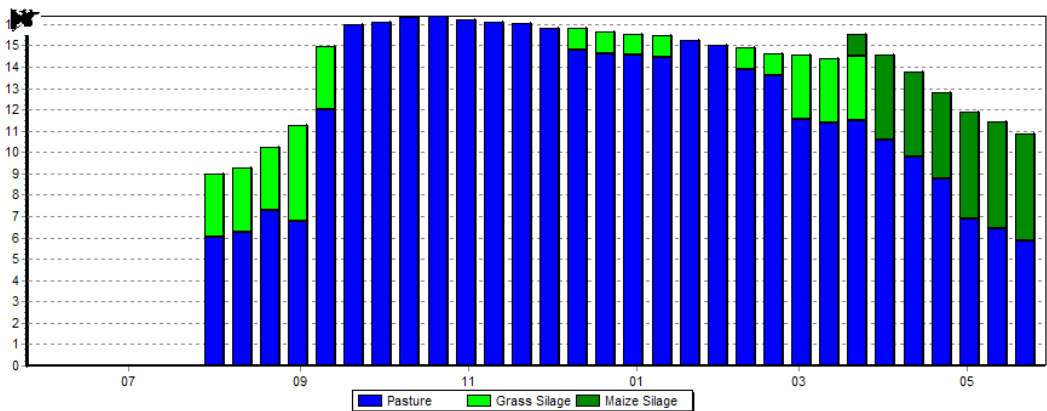
6800 kg milk

25kg/day





## DAIRY COW DIET MAKE-UP

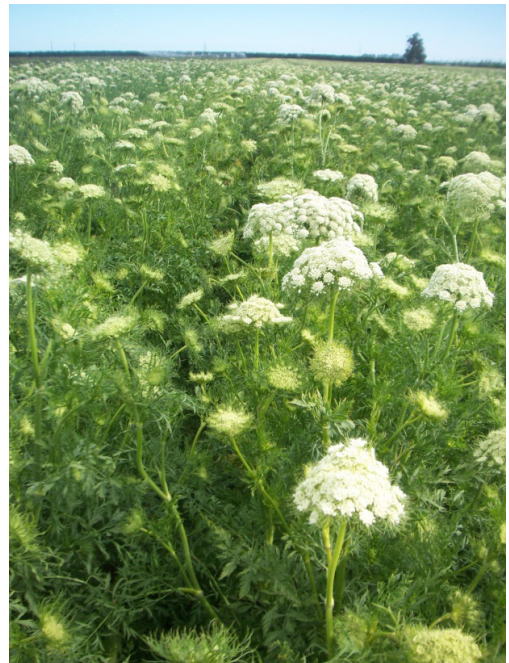


**ARABLE (100% IRRIGATED)**

Area: 573 acres  
232 ha  
Crops: 27% wheat  
9% process peas  
9% process potatoes  
9% maize silage (sold)  
9% ryegrass seed  
9% white clover seed  
6% carrot seed  
3% radish seed  
9% fodder beet (for wintering dairy cows)  
9% kale (for wintering dairy cows)

EBIT: US\$1,600/ha  
Land value: \$28,000/ha  
Plant: \$ 2,000/ha  
Working capital: \$ 1,500/ha  
TFC: \$31,500/ha  
Return on Capital = 5.1%





### **SHEEP/BEEF/DEER (25% IRRIGATED)**

Area = 800 ha  
 2,500 sheep  
 1,000 Friesian bulls  
 1,500 deer  
 EBIT: \$ 800/ha  
 Land value: \$12,600/ha  
 Stock: \$ 1,500/ha  
 Plant: \$ 500/ha  
 Working capital: \$ 800/ha  
 TFC: \$15,400/ha  
 Return on Capital = 5.2%



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## MARKETS

### MILK

2% of global production

35% of cross border trade (along with EU, USA, Australia)

53% powder, 32% fat based, 12% protein based

### MEAT

10% of production, 60% of cross border trade in lamb

40% of production, 90% of cross border trade in venison (excl intra Europe)

1% of beef production, 6% of global trade, but very important in lean been for hamburger trade

### ARABLE

Very small grain producer (not self sufficient) but one of the worlds three largest seed and vegetable seed nurseries along with Denmark & Oregon (USA).

## KEY ISSUES

### Interface between environment standards and productivity

- Environmental standards are strict, but have not historically been strict enough.
- Specific standards around effluent, nutrient management (compulsory nutrient management plan), water management, (Sustainable Dairy Water Accord).
- Ultimate cost of non compliance is heavy fine and non collection of product.
- In Canterbury, we produce around three times as much milk, meat and wheat per mm irrigation water as 20 years ago. (higher productivity, smart irrigation), and four times as much product/kg N leached.
- Almost all capital spend is going into areas that improve environmental outcomes, usually in association with productivity gains.
- Irrigation development involves large scale storage, which has increased the cost of infrastructure development by tenfold in a decade.
- The driver to irrigation is reliability of production.
- The NZ public (rightly) have very high expectations of environmental standards. (Christchurch is one of only two global cities not to require treated water).
- A new means of agreement through having all stakeholders round the table seems to be working.
- The infrastructure cost is driving output away from sheep production to dairy and arable on flat land, but sheep & deer are increasing in number on hill country.

### Food Safety

- We export to global markets.
- Quality standards have to meet the level of the most demanding markets (typically Japan and EU, but increasingly, China).
- Food testing techniques are more sensitive (driven by crises like melamine in China, and new technology such as DNA testing).
- High prices encourage opportunists to defraud value chains.
- Traceability issues such as horse meat in Europe, rat meat in China, DCD traces in NZ milk powder all underpin the need for vigilance.

**Credit availability**

- Farm credit readily available (especially dairy).
- Four major Australasian trading banks plus Rabobank. These banks are five of the nine “AA” rated banks globally.
- Average debt levels high (NZ average is 45% gearing).
- Result of high generational turnover, productive investment, farm expansion.
- New Zealand 3<sup>rd</sup> highest farm gearing in world (behind Denmark and Netherlands) USD 70/cwt, or \$USD 1.80/kg milk.
- Interest rates high relative to USA and Europe (6% fixed for 5 years, 5.2% variable).
- Interest rates unlikely to reduce as the Government is working hard to keep inflation under 2%.

**Market volatility**

- Our global markets outside Asia and Australia are all practicing quantitative easing.
- Weak Yen, USD, Euro is resulting in a high Australian and New Zealand dollar.
- We can not print money as we do not have a deflationary environment.
- High, but volatile soft commodity markets (as result of low \$US) are offset by very high New Zealand dollar.
- Small buffers of international commodity stocks inevitably create volatility which can be accentuated by exchange rate movements.

**Market realignment**

- Our markets are moving from the west to the east.
- China now takes 30% of our milk and lamb, and may take 30% of our beef and timber.
- The lesson learnt from the EU in the 1970’s is that we want to maintain market diversity.
- To date, Chinese capital investment in New Zealand has been much lower in practice than publicity would indicate.
- Most Chinese investment to date has been in the processing sector rather than land.

**Capability**

- The resurgent rural sector in New Zealand is creating major demand for
- Rural professionals
- On farm management capability
- We are struggling to supply the demand.
- We estimate that Ag Science and Commerce students need to increase 500%.
- The average 30 year old farmer in our area needs to juggle production skills, human resource, financial management, risk management, compliance, climate management, capital spend, and manage a mortgage of US\$3.2M.

**Inter-relationship between business, science, and education**

- New Zealand did a poor job through the 1990’s when the three sectors became “disconnected” as agriculture fell out of favour.
- A major change in government mind-set occurred five years ago.
- Lincoln University and the AgResearch Lincoln campus are being rebuilt (after the earthquake) as a part of an expanded “Lincoln Hub”. Lincoln has just been invited to join the “Euro league of Life Science” Universities.
- Growth in the “agricultural silicon valley between Christchurch/Lincoln/Ashburton/Methven” is massive.

- A similar “Agrifood” Hub is expanding on the Massey University campus in the North Island.
- None of the current growth would be possible without the foundations laid by the economic reforms of the 1980’s.

### **Rebuilding our second largest city**

- The chance for a world class “small city” (400,000 pop).
- Central planning is underpinning the strategy, but has slowed the rebuilding process.
- Voted one of top five destinations by “Lonely Planet”.

### **THE FUTURE**

- With market based economics comes volatility.
- Ability to generate cashflow and grow equity excites young people.
- Proportion of employees is rising as farms increase in size.
- Average age of farmers is decreasing.
- Ownership models have diversified, with contract milking, sharemilking, and equity partnerships all common, but much easier with dairy farming.
- A greater proportion of industry participants have vocational qualification (8% have degrees in agriculture).
- The industry objective is to have every farm owner and/or managers with a degree or university diploma.
- Growth will slow as credit availability slows and environmental compliance requirements tighten further.
- Fonterra has given dairying direction and strategy, even though every dairy farmer has a choice of processor.
- We are in restructuring mode in our meat industry, with processing overcapacity accentuating market volatility.
- Irrigated parts of temperate New Zealand will grow their importance as one of the world’s most important seed nurseries.
- Likely to become more focused on output per unit of natural resource.
- In a world where competition to supply will be less important, free trade will encourage collaborative rather than competitive behaviour.
- New Zealand is ideally placed as an “alternative” for high end product where local supply is not available or not suitable.
- We can only feed 30M people!