

# Year-round milk answer to more value

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To supply the key China market with more value-added products – and reduce New Zealand’s reliance on commodity wholemilk powder exports – dairy production needs to switch from seasonal to a more year-round supply, says Lincoln University professor of agri-food systems Keith Woodford.

He supports non-seasonal dairy production which would require housing milking cows indoors in free-stall barns for at least five months of the year.

Woodford said he was aware many people would argue against this, saying New Zealand was throwing away its low-cost competitive advantage.

A conflict existed between New Zealand’s seasonal dairy production and value-add products, he told a forum at Lincoln University on sustainable farming systems for the future, hosted by the New Zealand Institute of Agricultural and Horticultural Science Inc.

Under seasonal production, dairy factories have to cater for peak spring milk flows, resulting in plant utilisation of only 50 to 55 per cent compared with 90 per cent internationally.

“This is viable under bulk wholemilk powder production, but with high capital items you cannot afford to have plants running at 50 per cent utilisation.” It also did not suit short shelf-life products which need to be supplied to supermarkets year round.

The two biggest wholemilk powder producers in the world were New Zealand and China, with only one big international consumer – China.

“So we are dependent on one product in one market, which is a little worrying.”



To get more value from milk New Zealand might have to supply it throughout the year, says academic Keith Woodford.

A market risk was the global expansion in sales of extended shelf life (ESL) milk, which was different from ultra-high temperature (UHT). ESL milk had a shelf life of 35 to 60 days if refrigerated and “tastes exactly like the milk you drink now, unlike UHT. It is widely available in the US in supermarkets and has a 30 per cent market share in Germany, but is yet to arrive in New Zealand.”

Free-stall cow barns were relatively new, with an estimated 50 to 60 in New Zealand, mainly in Canterbury and Southland. While there were many wintering sheds, these were not ideal for lactating cows, particularly long-term.

The two big challenges were the capital cost and cost of feed. A top-line set-up of barn and other infrastructure including effluent pond would cost about \$5000 a cow. “But that doesn’t scare me at all as I can see where the returns are coming from.”

Some farmers house cows for 365 days of the year and some for the first half of the lactation, while

others rotate two herds every 12 hours between pasture. Production was about 600kg of milksolids a cow in barns, with many achieving more than 700kg/MS/cow. Cows also only needed 45 days between lactations, increasing days in milk. More research was needed to determine best management practice.

New Zealand’s future was inextricably linked to China, said Woodford.

“Europe and the United States do not need our food and have considerable potential to increase their production. Japan’s population will decline from the current 126 million to 80m in the next 50 years.

“In Africa and India, populations are increasing rapidly, but they don’t have the wealth to buy our food. Living standards in India are only a quarter of those in China – they are more than 20 years behind and we have no free trade agreement. Opportunities also exist in Hong Kong, Singapore, Korea, and Vietnam. It’s a big world and we

will find niches, mainly in Asia, but without China we are severely constrained.”

China was on a huge journey from a rural to urban society. Its population was growing 13m a year, equivalent to a city the size of Christchurch every 10 days. The China of 2015 was very different from

that of 2010, with overall wealth levels up 50 per cent.

“They want food that is safe, but also food that is of genuine providence. That it comes from where it says it does.”

Chinese are increasingly buying food online and New Zealand companies needed to work together so customers could go to one online site to source New Zealand products, knowing they would arrive at their house within 24 hours.

Lincoln University professor of ecology Steve Wratten said that while dairy farming generated wealth for New Zealand it also generated external costs in water, air, biodiversity and human health. “Do we want to accept these things?”

Calculations based on 2006 figures showed these external costs were \$197 to \$308 a hectare in Canterbury, totalling \$29m to \$45m for the region. Expansion of dairying in Canterbury meant these costs had now risen to \$50m to \$79m.

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