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ome people argue that getting dairying back on firm ground is simply a case of reducing the dairy footprint on our land, and sing on value-add. In reality, it is

focusing on value add. In reality, it is not that simple.

For those who live in the cities, it is easy to miss the importance of agribusiness to the overall economy.

Much of New Zealand's economic growth of the past 15 years is a direct consequence of a bountiful economic environment for agriculture in general and dairy in particular. The benefits from agribusiness have not only flowed through the economy from multiplier effects, but have underpinned the increasing strength of the NZ dollar.

When city folk head overseas for their holiday, or buy petrol at the local service station, they typically give no thought to the fact the cost would be so much greater if it were not for the strong dollar.

so much greater if it were not for the strong dollar.

Nor do they consider where the foreign exchange comes from to purchase Pharmac-funded health care. Without a strong agribusiness sector, we will all be in trouble.

On most dairy land, there are no attractive production alternatives. Yes, we could produce more beef and lamb, but both the farm gate returns and the export income would be low relative to dairy, even at current prices. Also, there is minimal scope for increased lamb and beef exports to Europe or United States, so it would have to be exported to Asia in general and China in particular.

But there are limits to how much China can and will take, so caution is needed there.

The economic problem New Zealand faces with dairy is not dairy per se, but rather a dominant focus on one particular product, whole milk powder. Similarly, the environmental problem with dairy is not dairy per se, but with the uncontrolled return of nitrogen-rich urine to the paddocks in late autumn and winter. Both issues need to be, and can be, addressed. Conventional wisdom seems to be that the current economics of dairy have been created by over-production in Europe consequent to removal of production quotas in 2015, combined with Russia banning the import of European cheese.

Both are relevant, but neither are the dominant factor. Indeed, for whole milk powder European production has decreased by nearly 20 per cent in the past eight years, and nearly 40 per cent

industry is on a false path. If so, where is the path Heading into a third year of low prices, questions have to be asked whether the dairy back to firm ground? asks Keith Woodford



Fonterra's Pahiatua plant processes up to 3.8 million litres of milk a day into whole milk power.

Most of New Zealand's production increase over the last 15 years has gone into whole milk powder, with much lesser amounts into skim milk powder, butter and cheese. While developed countries have been getting out of whole milk powder production, New

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whole milk powder.

Zealand's production has increased more than three-fold since 2000, and doubled since 2008.

Overall, about two-thirds of national production goes into powders.

Whole milk powder is a product used mainly in developing countries

where cool-chain facilities are limited.
Until recently, much of the demand increase came from oil-producing

increase came from oil-producing countries where the governments used oil funds to purchase whole milk powder. There was even a time when Venezuela was New Zealand's biggest customer. But those days have gone, at least for the meantime.

Then, starting about 2008, China became an important customer and is now New Zealand's most important whole milk powder customer. In 2013 and early 2014, the demand from China went crazy, consequent to foot-and-mouth disease in their own herds, and a shortage of local product. This coincided with and immediately followed the 2013 drought in New Zealand, and the combination sent prices skywards.

Since then China's local production

Since then, China's local production Since then, China's local production of whole milk powder has increased markedly and so import demand is back to about the same level as 2012. To understand the global whole milk powder market, there are several

factors of importance: Chinese consumption makes up about 45 per cent of global consumption; there are only two big producers, with China leading followed by New Zealand; in terms of exports, New Zealand is totally globally dominant.

Whereas China's overall dairy consumption has been increasing, whole milk powder consumption has plateaued. This reflects the overall economic transition occurring in China. So, with China having increased its own whole milk powder production, New Zealand is squeezed from both sides. The reason New Zealand went down the whole milk powder path is easy to explain. Whole milk powder fits nicely with the New Zealand seasonal product. And whole milk powder fits nicely with the New Zealand seasonal product. And whole milk powder fits nicely with the New Zealand seasonal production curve. It was the easy option. Apart from Ireland, Tasmania and parts of Victoria, nearly everyone else in the world focuses on 12-month production systems.

These systems tend to be higher cost, but they open up many value-add opportunities. This is why most of the world has been happy to leave the whole milk powder market to New Zealand, apart from as a dumping ground for short-term surpluses.

In the past, there have been good times for commodity production of whole milk powder, with much of the last IS years being excellent. But it was predicated on the oil-producing countries having money available for internal welfare programmes, and on burgeoning Chinese demand.

In future, there may well be good times again for whole milk powder, but it is unlikely they will be as good as the past.

Almost certainly, the market will be ghly volatile, and that creates its own

Shifting a proportion of existing whole milk powder production to value-added consumer products – which is where international-demand growth is occurring – will require major restructuring throughout the value chair.

rent production from commodities to value-add would take at least a \$6 billion investment in processing facilities and a further \$4 billion for market development. Back on the farm, many things would need to be done different. estimate shifting one-third of cur

I am currently working with some farmers who produce milk 12 months a year, and the best of these are developing systems that have modest costs of production.

It can be done, and it will work as long as a share of the increased returns flows back to these non-seasonal productors.

As part of those systems, the cows must be off-paddock during the winter so as to minimise the nitrogen-leaching

Despite the opportunities, it is going to be a long journey, with major industry players currently in denial. And it won't be easy.

To succeed in value-add, it is essential to have products that are differentiated from other products in the minds of customers. Not everyone succeeds at that game.

• Keith Woodford is an independent agnifood systems consultant, and has