



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

SUCCESS STRATEGIES BEING IMPLEMENTED IN FRESH MILK SUPPLY CHAINS

Issar, G., Cowan, R.T. & Wegener, M.

University of Queensland, Gatton, Australia

g.issar@uq.edu.au

Abstract

Deregulation of the Australian dairy industry, and ensuing supermarket strategies are transforming the fresh milk supply chains. Factors such as increasing consumer awareness, concerns about food safety and environment, innovation, supply chain integration and rationalisation of supply base are adding momentum to this transformation. Milk processors in response to changing market expectations are getting proactive in their relationship with retailers across all aspects of business, innovating to generate sufficient returns from proprietary brands and strategically orienting themselves to develop a mixed customer portfolio and appropriate management structures to service that portfolio. Milk producers are expanding businesses to achieve production and cost efficiencies and strengthening contractual relationships on input and output side for a greater security.

Introduction

The completion of the dairy industry deregulation process in June 2000 is transforming the fresh milk and fresh milk products supply chains in Australia. This transformation is set in an environment where markets are getting more complex and competitive, consumers more discerning and conscious about food safety and public policy is more focused on environment related issues. Supply chains are becoming more integrated, and innovation in product, process and supply chains is revolutionising the way products are being produced, distributed and marketed.

This paper examines the factors that have driven the Australian fresh milk industry in recent years and identifies key strategies that actors across the supply chain are adopting for success. The paper is based on research, following supply chain management literature, which identifies the risk management strategies in the dairy industry supply chains in Australia. The enquiry seeks to understand the nature and shape of supply chains and the exchange relationship between supply and value chains.

The fieldwork for the research involved semi-structured interviews at middle to senior management level in the retail, processing, production and input market of the dairy industry supply chains. The data was managed and analysed using software NVivo ver. 2.0, which assists in identifying major themes and relationships between concepts in data.

Key drivers in the Australian fresh milk supply chains

The volume of milk going into the liquid milk market now accounts for around 17% of Australia's milk production. It is the largest segment of the domestic market, accounting for around 40% of total value of the domestic dairy market (Australian Dairy Corporation 2002).

There are six key factors that have driven the transformation of the dairy industry in recent years:

1. Deregulation
2. Supermarket strategies
3. Food safety and supply chain integration
4. Innovation
5. Environmental sustainability
6. Rationalization of supply base

Deregulation

Deregulation of the dairy industry can be understood in the wider context of progression of changes that are occurring throughout industries at international and national levels. Globalisation and trade liberalisation have changed the marketplace of all agri-food industries. International markets are now opening to trade, and domestic markets are exposed to increasing level of competition, facilitated by advances in transport and communication technologies.

Post farmgate deregulation opened up significant areas of opportunity for retailers in terms of increasing their margins in the fresh dairy produce category. Previously government not only set farm gate prices for market milk, but also had control over pricing throughout the supply chain, determining margins for processors, distributors and retailers. They also controlled where each processor could sell milk through franchised regions, which meant processors were not competing in any way for sales of market milk. Deregulation gave supermarkets the ability to treat the retailing of the product differently, to establish their own brands and to develop a different set of relationship with their suppliers.

Supermarket strategies

Understanding the factors driving supermarket strategies and the way actors in the upstream supply chain are responding and adjusting to these strategies provides us with the key to understanding the transforming dairy industry supply chains.

In August 2000 Woolworths announced standard national milk prices for its own label milk that effectively created a new floor in the Australian price of fresh whole milk. It was the first time that a retail chain had set national prices for milk. These new prices followed the announcement of two-year supply contracts which were offered to tender and attracted aggressive bidding from the major milk processors. Other retailers, Coles, Franklins and IGA announced they would match Woolworths' lower milk prices for their respective labels (Australia Competition and Consumer Commission 2001).

While the overall milk consumption is slowly declining since the mid nineties to an estimated level of 96 litres per head in 2001/02, milk sales through supermarket channels have increased from 49% of drinking milk sales in 1999/00 to nearly 55% in 2001/02, of which nearly 50% is own label compared with 26% in 1999/00 (Australia Dairy Corporation 2002). As a result supermarkets chains have increased the shelf space allocated to bottled milk to accommodate additional processor brands and their own labels, and raised the profile of milk products in their stores. Supermarkets also tend to use milk as a traffic builder and will sacrifice margin in order to attract customers into the store. Own label milk on an average is 30% cheaper than the proprietary brand milk.

With increased own label presence on the shelves and increased shelf space for fresh milk dairy produce, supermarkets are now looking ways to better manage the category in-store in terms of how the product is handled, placed in stores, quality, presentation and pack size. Own label products, including milk, are thus no longer competing only on price but on all aspects with major manufacturers' brands. Own label products are a priority for supermarkets and their aggressive promotion and marketing will be a predominant feature of the Australian market over the next decade (Retail World 2003a). In the dairy segment, supermarkets are expanding own labels to include reduced fat milk, low fat milk, flavoured milk, UHT milk and other fresh dairy produce.

Supermarkets are now more aware of the cost structures of the processors and thus have leverage in bargaining. However, they are also realising that a sustainable and profitable supplier is critical for their survival and they need to be accommodating in sharing the profits in the supply chains.

Supply chain integration

A more discerning and food safety aware customer is a major factor behind increasing supply chain integration. Consumers want to know more about the products they purchase, the composition of the products, where ingredients come from and the way in which the products are produced throughout the chain.

In response supermarkets have drawn their 'Food Standards' which detail 'Good Manufacturing Process' with provision for quality audits. All of the major supermarkets now require fresh produce to come from suppliers who comply with the food standards code and good manufacturing practices.

To ensure traceability throughout the supply chain, from raw material to product on the shelves, an integrated, transparent supply chain is necessary, which in turn requires standardisation of data and supporting technologies such as tracking and tracing systems (Retail World 2003b).

Supermarkets' increasing market share, focus on consumer demand, knowledge of processors' cost structure and emphasis on trace back capability has enabled them to implement the supply chain integration agenda in a more aggressive way.

Innovation

In a highly competitive market such as fresh milk and fresh milk products, characterised by oversupply and a commodity orientation, innovation in product, process and/or supply chain is the only long-term source of competitive advantage.

Retailers place much emphasis on selecting suppliers who demonstrate desire and an ability to be innovative – not just in developing new products, but also in all aspects of business.

Processors innovate not only to get a preferential status from supermarkets but also to find new consumption and retail opportunities to decrease their dependence on supermarkets.

Environmental sustainability

Changing public perception and government policy on environment sustainability has resulted in consideration of environment in all stages of the supply chain. There is increasing implementation of environmental reporting standards by dairy-food businesses through the supply chain. Supermarkets are concentrating on minimisation of waste, recycling efforts, reduction of energy consumption. Processors are designing environmentally friendly, recyclable packaging. Milk producers are under increasing scrutiny on water and land use efficiency and animal welfare.

Rationalization of supply base

The above developments in the business environment are seeing a continuation of the consolidation wave in the milk production and processing sectors. The need to gain market power, to profit from economies of scale, to gain a hold in new markets, to develop strong brands and to access new technology drives the consolidation process.

Key success strategies being implemented by processors in supply relationships with retailers

At the national level three processors dominate the liquid milk market, National Foods (34%), Dairy Farmers (31%) and Parmalat (21%). National Foods is currently the only national processor dominant in the drinking milk sector in Tasmania, SA, WA, with a smaller market share in NSW and Queensland. Dairy Farmers is a dominant processor in NSW and the second largest processor in Queensland. Parmalat is the dominant player in the Queensland market. All three processors have strong market positions in Victoria. Although liquid milk is not their core product line, Murray Goulburn has established an 18% market share of the long life milk category under the Devondale brand (Rabobank 2003).

Proactive relationship with retailer across all aspects of business

The relationship between retailer and processor is moving from a buyer-supplier relationship to a partnership approach. Processors now have multi-functional linkages with supermarkets and are gearing business structure to meet with supermarket demands (Fearne & David 1999). They are restructuring their distribution and marketing networks to be more proactive and responsive to the customer requirement. Business unit managers are being put at respective supermarkets to assist/shape customer's view of the category and its future development. Supply chains are being streamlined to facilitate integrity and squeeze out any inefficiency in the system.

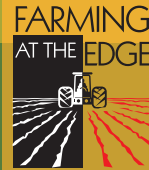
Processors are investing in information tracking systems to be up-to-date with the market developments and competitor moves. Electronic information sharing is being enhanced to create a more responsive, efficient and paperless transactional environment. However, there are costs associated with bringing about these changes and how supermarket specific these changes should be is an issue that will need to be addressed by the processors.

Innovation

Increased competition amongst processors for supermarket tender and also to compete with supermarkets 'own brand' has resulted in increased product innovation and introduction of branded speciality milk. For example, in 2001/02 sales were fresh regular milk (56%), speciality milk (28%), flavoured milk (9%) and UHT milk (7%) (Australia Dairy Corporation 2002).

Processors also expanded into UHT, organic and soy beverage market. The soy beverage market, a traditional competitor to the dairy industry, is an emerging market in Australia and has benefited from heavy promotion of its health benefits. The soy beverage market has been growing at 15% per annum and now accounts for approximately 45 million litres per annum through supermarket sales. The market includes a number of non-traditional dairy companies, however National Foods has a joint venture with Vitasoy, and holds 11% share of the soy beverage segment (Rabobank 2003).

INTERNATIONAL FARM MANAGEMENT CONGRESS 2003



Parmalat have recently launched their range of soy beverages products, and has entered into organic milk segment to enhance its presence in the 'dairy case' on the supermarket shelves.

Consumers have signalled that they are interested in product refinements as they are prepared to pay premium for modified milk products. Processing companies must generate sufficient returns from proprietary brand products to be able to invest in new product and packaging initiatives, as supermarkets own label milk had a negative impact on both the revenues and profits of all the processors operating in the drinking milk market. There is therefore increasing emphasis on developing modified milk products.

Strategic orientation

The milk processing companies, small in relation to their more powerful Fast Moving Consumer Goods (FMCG) counterparts, are striving to achieve the level of service and professionalism which the customer have come to expect from FMCGs. Processors are trying to develop a mixed customer portfolio and appropriate management structures to service that portfolio. The moves include expanding in the domestic market, expanding the product mix, putting more resources into brands and expanding into offshore businesses of appropriate products in face of static domestic demand.

Yoghurt is the fastest growing segment of the Australian dairy industry, benefiting from a favourable image as a healthy, convenient snack and experiencing growth of around 8% per annum. Unlike drinking milk, yoghurt has more brand loyalty. The market is dominated by four main players, Dairy Farmers (32%), National Foods (31%), Nestle (12%) and Parmalat (11.5%) (Rabobank 2003).

Sales through route channel, such as convenience stores and service stations, are still an important distribution route for dairy products and a channel over which processors have comparatively more control. Processors have been putting more resources in developing these channels.

As is the case in most countries, liquid milk production is predominantly for the domestic market. Less than 5% of Australia's liquid milk is sold on the export market with 83% of the exports going to Asia and 75% of the total being in the form of UHT milk. Historically, Australia's dairy companies have tended to focus on either the domestic or international market, however, in recent times they have diversified their product offerings and begun focussing on both domestic and export markets. Dairy Farmers and National Foods now have 9% and 10% revenues generated through export route respectively (Rabobank 2003).

In Australia fresh milk still accounts for 86% of liquid milk sales, however UHT is a growing segment of the market. The preference for fresh milk is similar to market situation in the US, which consumes predominantly fresh milk, however in European countries such as Spain and France, virtually all milk is sold in long life format.

Rationalisation of supply base

The fall in profitability of the major liquid milk processors following deregulation has added strength to the arguments for further rationalisation within the drinking milk sector. Although supermarkets could still be a predominant actor in the supply chain, further rationalisation of processing supply base would tend to balance the power relationships. This is likely to see returns to the processing companies improve which could then flow on to farmers in the form of higher milk price.

Over the last few years there have been a number of attempts to achieve this rationalisation with discussion taking place between all three players and, despite significant industry and media speculation as to how the rationalisation may unfold, a successful negotiation is yet to be achieved.

Key success strategies being implemented by processor in buying relationships with milk producers

Securing a reliable supply base

Following deregulation, previously secure markets were open to competition from all processors. Processors trying to gain access to a new market had to establish a supply base. At the same time milk producers were leaving the industry, and this trend was accelerated by the recent drought, resulting in increase competition for farmgate milk. To secure year round, consistent and reliable supply, milk processors are now entering into binding contractual arrangements with milk producers. It not only provides them with security of supply but also better control in terms of logistics, quality, and traceability.

Milk pricing strategy, which was earlier quota or pool based, was changed to reflect the complex market situation, including factors such as matching supply-demand patterns, composition and quality requirements, competition, product mix, attracting more milk producers and keeping a viable supply base.

The determinants of farmgate price of milk in most of the contractual arrangements are scale of milk production, composition, supply pattern, quality, distance from the factory or market and commitment of the milk producer. Quality audit protocols are also being strengthened to streamline quality of milk input.

To secure a reliable supply base, processors also had to invest in human resources for better communication with milk producers, to provide better farm services and improve production efficiencies and cost competitiveness of milk producers.

Key success strategies being implemented by milk producers in a supplier relationship with milk processors

The effect of deregulation was felt more in states such as Queensland, NSW and WA, where a higher proportion of milk was utilised in drinking milk. In Queensland farm numbers were reduced from 1999/00 to 2001/02 by more than 25% and in NSW more than 23% (Australian Dairy Corporation 2002). Drought and growing concern on environmental issues put further pressure on milk producers. With decreased profit margins, increased uncertainty in the market place, increased input costs, stricter water and land use regulations, a number of less efficient producers have left the industry and the remaining are becoming larger and more efficient.

With larger farm businesses, human resource management issues also came to the fore, as milk producers were inexperienced in dealing with employed labour. Farmers' organisations, such as Queensland Dairyfarmers' Organisation (QDO), which earlier strongly influenced farmgate milk price, were also trying to restructure their roles to suit the new environment.

Economic efficiency

Milk producers are increasing efficiency with expanding herd size to achieve economies of scale and paying more attention to the detail of farm management. They have upgraded dairy equipment, irrigation systems, and are monitoring their costs more closely with benchmarks. They are improving their feed conservation systems and in many cases growing their own feed to override cost fluctuations.

Contractual relationship

Milk producers are entering into contracts to have greater security. On the input side forward contracting on feed is a growing trend. For the milk sales the majority of milk producers now have supply contracts with their processors. To gain best value from these contracts milk producers will need to upgrade evaluation and negotiation skills.

Producer activism

Milk producers are also trying to redress the perceived power imbalances in the supply chain through attempts to collective bargain for a sustainable base price, have some say in retailer-processor milk price negotiations and lobbying with environmental agencies.

Innovation

In keeping with the overall trend in the supply chain, milk producers are also innovating in farming systems as well as trying to find new consumption opportunities. Producing milk to processor specifications, finding a niche in organic milk production, processing own milk, which finds acceptance in the local community due to embeddedness and perceived freshness, are some of the examples milk producers are innovating.

Better communication with processors

With relationships becoming critical to long-term sustainability of all actors along the supply chain, there have been attempts on both sides, milk producers and processors, to improve communication in terms of market trends forecasting and signalling. In the new environment, rather than simply delivering a bulk commodity to the processor, milk producers need to understand the quality specifications, the contractual obligations of both parties, where the risks lie and who bears those risks (Hobbs & Young 2000).

Environmental sustainability

Farmers also need to become more efficient in terms of water and land use efficiency. With increasing herd sizes and moves towards intensive farming, animal welfare is becoming an important issue. Even though farmers recognise the importance of these issues, they are currently in a changeover phase and there is certainly a scope for better communication and exchange of information between environment protection agencies and the milk producers.

Conclusion

The Australian fresh milk and milk product industry is in a transformation phase since deregulation and may take many more years to stabilise. This decade will see a continuation of the process which has led thus far to a substantial increase in scale, scope, sophistication and strategic importance of the fresh milk supply chains in Australia. It is clear that the dominance of food retailers in food supply chains in Australia is growing, however, it is to be seen whether retailers in Australia recognise the opportunities to drive value and not only volume in the fresh milk category. Milk processors and producers are realigning themselves along the supply chain to meet the market expectations. Further analysis of data is expected to look deeper into the strength of drivers of change and the implications of supply chain integrity on the actors in the supply chain.

References

Australian Competition and Consumer Commission 2001, *'Impact of farmgate deregulation on the Australian milk industry: study of prices, costs and profits'* ACCC, Canberra.

Australian Dairy Corporation 2002, *'Australian Dairy Industry In Focus 2002'* Australian Dairy Corporation, Melbourne.

Fearne, A & David, H 1999, 'Success factors in the fresh produce supply chain: insights from the UK' *Supply Chain Management*, vol. 4, no. 3, pp. 120-128.

Hobbs, JE & Young LM 2000, 'Closer vertical co-ordination in agri-food supply chains: a conceptual framework and some preliminary evidence' *Supply Chain Management*, vol. 5, no. 2, pp. 131-142.

Rabobank 2003, 'Global Dairy Focus', Rabobank, Sydney

Retail World 2003a, 'Private label growth depends on retailers' *Retail World* vol. 56, no. 1, pp. 7.

Retail World 2003b, 'National strategy focuses on food safety' *Retail World* vol. 56, no. 1, pp. 18.