Supply chain management in the lamb industry: An analysis of opportunities and limitations

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Abstract Record prices during mid-2004, tipping 530 c/kg (MLA 2004b) have lead to increased interest in the production of lamb. Overall sheep numbers have fallen by 30% in the last decade, while prime lamb production is increasing. With the consumer-dominating product selection there has been a changing role of the producer and a shift in power to retailers. In Australia the major supermarket chains – i.e. Coles, Woolworths and their subsidiaries - had 40% of the retail grocery market in 1970 (AFFA and ABARE 2000). By 2000-01 this figure had moved to 63% (ABARE 2002). Internationally Wal-Mart and Carrefour operate in more than 30 countries, with sales of 273,335 million Euro (A$488,098 million) in 2000/01. This compares with Woolworths, Coles and BiLo with sales of just 16,968 million Euro (A$ 30,300 million) (AFFA 2002). This domination by supermarkets in Australia and internationally has encouraged the development of co-ordination of the supply chain. Co-ordination within a supply chain implies that common objectives in product and material are necessary to achieve customer satisfaction. To achieve this requires crossing both organisational and functional boundaries. For the prime lamb industry the management of this co-ordination brings with it both opportunities and limitations. An investigation of three (3) lamb alliances found that education, business skills and quality assurance were all opportunites gained, while loss of producer identity/ power, contracts and maintenance of relationships where perceived limitations. However overall, the producers in the alliances studied couldn't comprehend why more producers did not take up the challenge of understanding their product, buyers and consumers better and participate in supply chain management (Johnson 2002).

Keywords: lamb market, supply change management

Introduction:

The prime lamb industry in Australia

The sheep industry has undergone major changes in the last decade. The total sheep and lamb numbers have dropped over 30% from 151 million in 1992 to 106 million in 2002 (ABARE 2003a). The drought has been a major contributor to the reduction of sheep numbers along with the fluctuation of the wool market. With overall declining sheep numbers and low winter lamb supplies August 2004 saw record saleyard lamb prices, with prices reaching 530 c/kg dressed (MLA 2004). This had fallen by 23% to 404 c/kg for supermarket lambs (MLA 2004) in September. However, despite this fall lamb prices are still high comparable to the past decade. The 2002-3 lamb price was 230% greater than the 1992-3 price. Despite this the consumer who is considered very sensitive to price changes has shown only limited resistance to the high lamb prices, with overall demand remaining high, especially in the restaurant and supermarket arenas (MLA 2004). In the past six years MLA claims expenditure on lamb by the consumer has increased 63% to $1.75 billion in the last financial year (2003-4) (MLA2004). This price performance adds to the overall profitability of the sheep meat industry in recent years.

Many outside factors impact on the lamb industry. The increasing competition is creating a realignment of the production systems in the lamb industry. They are moving from a production-orientated to a consumer-orientated marketplace. This has led many processors to outline detailed product specifications and to source better guaranteed quality product through more direct buying and selling methods. Prime lambs were traditionally sold almost entirely through the sale yards, where multiple handling and transporting is a characteristic potentially affecting quality. This practice is slowly decreasing in importance and the number of lambs sold direct to the processor, either over the hook or from the farm paddock, is growing in importance. In 2003 approximately 57% of all Australian lambs produced by prime lamb specialists[1] were sold directly (ABARE 2003b). However it is disturbing that the 2004 survey found that approximately 40% of all lambs sold were to an unknown destination despite processors providing detailed product specifications (MLA 2004b).

[1] Prime lamb specialists are defined as farms having greater than 200 ewes, and receiving 20% of their cash receipts from prime lamb sales (ABARE 2003b)

The changing role of wholesalers and supermarkets is also creating the need for change. Wholesalers and supermarkets are placing an emphasis on "own label" merchandising, requiring the buyers and suppliers to adopt a strategic approach to the supply chain (Johnson 2002). In 2002-3 supermarkets and grocery stores had 64% of the total food and liquor retailing within Australia (DAFF 2004). Chain and large department retailers increased their turnover by 8.9% between July 2003 to July 2004 (ABS 2004). The increasing dominance of the chain stores has required new strategies to be implemented to satisfy their supply. To achieve this, co-ordination of food chains has moved towards efficient consumer response (ECR[2]). This is designed to develop innovative marketing practices that improve co-ordination. This co-ordination has lead to a power shift toward chain and supermarkets and away from suppliers. Beurskens (2002) outlines that *grocery retailers are not villains but they are the voice of the consumer. They don't pass judgements or query the consumer's wants and needs, they simply stock the shelves with the product they demand. If they don't heed the consumer they don't sell product*. This has strengthened the need for a strategic approach to the supply chain to ensure traceability, food safety/integrity and quality assurance of the product as demanded by the consumer. This then provides the competitive edge for establishing the "own label" scheme (Fearne 2001). Supply chain management is a key strategy to cope with the changes evolving in the consumer arena.

Supply chain management is the co-ordination of all operational and functional areas within the firm/ industry becoming an organisation in its own right and linking all the members. There are three major components of the supply chain: activities; processes and operations; and organisations. While the management of the supply chain is now widely acknowledged as holding the key for industries to reduce cost and enhance service, supply chain management has been slow to filter through to many industries. The reasons for this are varied but speculated by Christopher (2004) to be due to a philosophy of vertical integration and therefore single ownership and the complexity of globalisation. Along with this, for the food sector, are the increasing demands placed on suppliers by ever-powerful retailers. As previously stated retailers are becoming a fact of life increasing their importance and share of the market across Australia and the world (Christopher 2004).

Lamb is a logical candidate for supply chain management with its perishability playing a role in encouraging the development of relationships along the chain to help ensure food safety, with trace back and quality assurance programs (VCG 1997). This is happening across the Australian Prime Lamb industry but its adoption varies. There are still concerns by the lamb producers in relation to co-ordination and Palmer (1996) reveals that, in the UK, the meat and livestock sector found difficulty in moving from an "open adversarial" market to a "collaborative scheme". Despite the limitations posed by the co-ordination of the supply chain there are many opportunities available. This paper discusses a cross section of these opportunities and limitations as determined by the case study of three lamb alliances, Tenderlean[3], TenderPlus[4] and Pastoral Prime[5] in 2002.

Opportunities

There are many opportunities for members of a supply chain. In the case studies reviewed, education of all participants has been evident across all the alliances (Johnson 2002). The education ranged from production driven issues through to product aspects. An understanding of the specifications necessary to satisfy their customer caused many changes within the alliances studied. The majority of producers changed their management strategies relating to breeding and finishing lambs. The use of scales and fat scoring has given a clearer understanding of how to provide the correct lamb to meet the specifications. This has benefited the producers by ensuring more lambs meet specifications (Johnson 2002). The retailers learnt much about the eating qualities of their lamb products. Instead of just relying on the visual appearance of the lamb they were selling, through the setting up of taste tests, they discovered what their customers thought about the flavour, juiciness and tenderness of their product. They have also learnt a great deal about price grids and how to reward the supplier for a high quality product (Johnson 2002). The processors and wholesalers learnt more about meat yield and

[2]. The industry perspective of ECR involves vertical co-ordination between different levels and types of businesses within the chain, with a focus on efficiencies of product promotion and product development (Ricks, Woods and Sterns 1999)

[3] Tenderlean was a domestic lamb alliance established in 1994 and it operated in this form for a period of about 2 years before dispersing

[4] Tender Plus is a relatively new alliance on the Gold Coast made up of both domestic and export lamb sales

[5] Pastoral Prime, Young NSW is one of the oldest continuing prime lamb alliances in Australia, and was established in 1995.

the relationships between carcase characteristics and their final product. Whipple & Frankel (1999) and Hughes (1994) believe that applying lessons learnt from each other is an important success factor in maintenance of supply chain relationships.

Fearne (2001) is critical that producers are reluctant and often unable to adjust to supply chain management due to their lack of knowledge. The alliances studied ensure that all members' knowledge is increased from their involvement in the relationship. It was education that was the key to change. It provides different perspectives and can help develop a different culture. In partnerships, change is continual and to survive all members need to adapt and create new ideas. This change leads to a paradigm shift essential for a partnership to survive (Lendrum 2000).

Another opportunity experienced was the encompassing of a strategic business outlook. Almost all parties involved in the lamb alliances studied moved from a focus on short-term financial gains to a consideration of long-term business outcomes (Johnson 2002). Feedback was the major component in the strategic outlook. Feedback provides information; justifying the price received and allows decision making to occur about production issues for the future. The use of forward contracts by the export alliance enabled lamb producers to forward plan giving the added opportunity to hedge a portion of their lamb supply (Johnson 2002). The producers unanimously agree that without this feedback, the success of the alliance would be greatly constrained. The processors use this feedback to reward those producers that comply with stringent product specifications. The use of a price grid has allowed them to maintain price competitiveness, which is seen as very important by producers but not paramount (Johnson 2002). This long-term outlook provides the necessity that the product always achieves the specifications selected. This leads to aspects of consistency and quality assurance.

Quality assurance and consistency of the product was another opportunity that arose from supply chain management. The establishment and introduction of quality assurance principles has given the alliances the advantage of trace back, in a saleyard-dominated industry. This is in line with many researchers who also believe that food quality is an essential outcome of alliances (VGC 1997; Hogg, Kalafatis & Blankson 1998; Fearne & Hughes 1999;Thompson 2001). The use of detailed product specifications and a price grid provides incentives and discounts for the producer, and this then maintains the consistency of the product. The use of the price grid provides a commercial face, for a consistent product and rewards the producers who manage their product and have a high compliance to specification. This incentive encourages producers to continually improve their management strategies and look for innovative ways to increase their rewards (Johnson 2002). Due to retailers being the voice of the consumers' trace back, food safety and integrity are the incentives to maintain quality assurance within the supply chain.

While opportunities resulting from supply chain management were obvious and rewarding, the members of the alliances studied realised that there where limitations due to their involvement. While limitations were present, the relationships studied were believed to be more "speed humps rather then barriers".

Limitations

The limitations of supply chain management are often easier to outline as they provide the reason not to change. In the lamb industry the move from a vendor relationship, usually adversarial, to a partnering relationship is the key to maintaining an alliance or relationship. In the margin-based food industry such as red meat, "*price is the ever powerful and all consuming mistress*" (Lewis 1998, p. 27). However for it to occur that it requires a paradigm shift, not just a change within the existing environment (Lendrum 2000). Whipple & Frankel (2000) outline that it is difficult as the changes in culture, mindset and behaviour can be overwhelming. However there is no recipe for achieving this shift. Within the alliances studied this shift has been gradual and has come about as a result of many factors, such as education and trust (Johnson 2002).

Another perceived major limitation is globalisation, which has brought about a change in the role of the players within the supply chain especially the retailers. Retailers are becoming the force in the market. Their dominance is growing with amalgamation between major retailers in the global arena. As an example, recent mergers between Wal-Mart and Asda, and Carrefour and Promodes have strengthened their hold on the world-retailing sector. These two retailers now operate in more than 30 countries, with sales of 273,335 million Euro (A$488,098 million) in 2000/01. This compares with Woolworths, Coles and BiLo with sales of just 6% of Wal-Wart and Carrefour at 16,968 million Euro (A$ 30,300 million) (AFFA 2002). The retailer dominance is also happening in Australia with major supermarket chains – i.e. Coles, Woolworths and their subsidiaries - having

40% (AFFA and ABARE 2000) of the retail grocery market in 1970 but by 2002-3 this figure had moved to 64% (DAFF 2004). This amount of domination can lead to exertion of power.

Originally, farmers were their "own bosses" and made the decisions in regard to when, where and how their produce was utilised. Now with the shifts in the balance of power, along with the need to be dependent on others within the supply chain, some farmers are forced with a major dilemma. Palmer (1996) reveals that, in the UK, the meat and livestock sector found difficulty in moving from an "open adversarial" market to a collaborative scheme. They were uneasy about the market power of supermarkets, and wondered whether they could really be trusted to form mutually beneficial partnerships (Palmer 1996, p.10). Power also comes from knowing your market. So knowledge becomes power and those who have it have an advantage over those who don't. Knowledge and information provide power by giving a competitive edge to those that use and utilise it (Boehlje & Schrader 1998; Hogarth-Scott 1999).

So important is the power, that Cox (2001) argues, most failures in integrated supply chain management do not come from a lack of enthusiasm on behalf of the players, but rather from a lack of understanding of the appropriate power regime and circumstance in place for the relationship to work (Cox 2001). VCG (1997) however argues that for most retailers, the need for consistent and reliable supply is greater than the need to operate opportunistically and therefore power is not an important issue in these relationships. Robson & Rawnsley (2001) interviewed food regulators and food processing and production industry senior representatives. They found that retailers hold the balance of power in the industry and they held no code of ethics in their dealings with supply chain members. Similarly a senior retail manager was quoted as saying, "*we all want partnership so long as it is on our terms*" (Ogbonna and Wilkinson 1996, cited in Robson and Rawnsley 2001).

VCG (1997) discuss the role of power in the development and maintenance of successful relationships in the Australian meat industry. VCG argue that dependence on each other rather than a power-based relationship provides the basis for the future of the industry. The balance of trust and power plays an essential part in almost all relationships and provides the recipe for opportunity or limitation.

The use of reams of legal documents and rigid structure are frowned upon greatly by all participants within the alliances studied (Johnson 2002). The "handshake" is considered the best way to do business in these alliances. Legal, binding contracts were considered a major limitation and considered by the alliances to cause unrest and were not a platform for developing trust.

Trust formed the key success factor for the alliances studied (Johnson 2002). The methods by which the trust was forged varied between relationships. However without the trust the relationship seemed doomed to failure. A major limitation of all alliances is the maintenance of the relationship. Kanter (1994) believes that all alliances are like marriages and need to be nurtured. They have an engagement period where they are full of dreams, a honeymoon period full of bliss where all things come true, a period of understanding the intricacies of living together and then the bridging of those issues. However like all relationships, some of them grow and develop, while others will fail.

Conclusions

While the lamb industry is a prime candidate to engage in supply chain management its acceptance has been spasmodic. There are many reasons for this related to the perceived limitations and opportunities. Shaw and Gibbs (1995) found that building relationships between producers and processors was far from easy and the development of loyalty to the processor comes from providing incentives. One opportunity arises in the use of price grids and feedback (Johnson 2002).

It was generally recognised just how difficult it was to make an alliance work, so someone was needed to communicate, provide motivation and encouragement, and foster the human side of the alliance. A facilitator therefore had to do the hard yards and provide the leadership necessary to expand on opportunities and curb the limitations (Johnson 2004). Kanter (2000) states that successful companies empower people to be innovative and encourage others to reach further and become "*change agents*". The leaders of the future are the ones that will empower more people to believe in themselves and achieve. However overall, the producers in the supply chain alliances studied were unable to comprehend why more producers did not take up the challenge of understanding their product, the buyers and the consumers better, and participate in supply chain management schemes (Johnson 2002).

References:

ABARE 2003a *Australian Commodity Statistics*. Australian Bureau of Agricultural and Resource

Economics Commonwealth of Australia, Canberra.

ABARE 2003b *Australian Prime lamb Industry 2003* Australian Bureau of Agricultural and Resource Economics Commonwealth of Australia, Canberra.

ABS 2004. *Retail Trade. Australia. 8501.0* Australian Bureau of Statistics. July 2004, Canberra.

Beurskens, F. 2002 *Value of Supply Chain Management Issues from the Customers Perspective.* Conference Proceedings. Corn Utilization Conference June 2004, Brisbane, as viewed 120704 online: http://www.agribiz.com/fbFiles/bio/cutc2002.htm

Boehlje M. and Schrader L 1998, 'The Industrialisation of Agriculture: Questions of Co-ordination'. Chapter 1 in Royer J and Rogers R (eds) *The Industrialisation of Agriculture: Vertical Co-ordination in the US Food System*, Ashgate, Sydney, pp 3-26

Christopher M 2004, Forwards,. in BourlakisM and Weightman P (eds). *Food Supply Chain Management* Blackwell Publishing, Oxford. pp. ix

Cox A 2001, Managing with Power. Strategies for improving value appropriation from supply relationships, *The Journal Of Supply Chain Management*, 37(2):42-47

Department of Agriculture Forestry andFisheries (DAFF) 2004, Australian Food Statistics 2004, Commonwealth of Australia, Canberra.

Fearne A 2001, *Supply Chain Management - Co-operating to Compete in a Global Food Industry.* Seminar Canberra - 19th April. Agribusiness Association of Australia. Canberra.

Fearne A and Hughes D 1999, Success factors in the fresh produce supply chain: insights from the UK. *Supply Chain Management: an International Journal.,* 4(3):120-128.

Hogarth-Scott S 1999, Retailer - supplier partnerships: hostages to fortune or the way forward for the millennium?, *British Food Journal*, 101(9):124-127.

Hogg A, Kalafatis S and Blankson C 1998, Customer-supplier relationships in the UK trade of rice, *British Food Journal*. 98(1):29-35.

Johnson AS 2002, *Success Factors for Strategic Partnering in the Australian Prime Lamb Industry,* Master dissertation. Faculty of Science and Agriculture, School of Agriculture, Charles Sturt University, Wagga Wagga.

Kanter R 2000, A culture of innovation, *Executive Excellence,* 17(8):10-11.

Lewis L 1998, Hanging up the Gloves? *Progressive Grocer,* 77(10): 17-23.

Lendrum T 2000, *The Strategic Partnering handbook: the practitioners guide to partnerships and alliances*. Edition 3, McGraw Hill, Sydney, Australia.

MLA 2004a, *Australian Cattle and Sheep Industry Overview,* Market Information Services, Meat and Livestock Australia, September 2004, Sydney.

MLA 2004b, *lamb survey summary,* Market Information Services, Meat and Livestock Australia. September 2004, Sydney.

Ogbonna J and Wilkinson T 1996, Inter-organisational power relations in the UK grocery industry: contradictions and developments, *International Review of Retail, Distribution and Consumer Research* 6 (4):395-414, cited in Robson and Rawnsley 2001, Co-operation or coercion? Supplier networks and relationships in the UK food industry, *Supply Chain Management: an International Journal,* 6(1):39-47.

Palmer C 1996, Insights from Industry- Building effective alliances in the meat supply chain: lessons from the UK, *Supply Chain Management: an International Journal*, 1(3):9-11.

Ricks D, Woods T and Sterns J 1999, *Improving Vertical Co-ordination of Agricultural Industries Through Supply Chain Management*, Staff Paper 99-56, Department of Agricultural Economics, Michigan State University.

Robson I and Rawnsley V 2001, Co-operation or coercion? Supplier networks and relationships in the UK food industry, *Supply Chain Management: an International Journa,* 6(1):39-47.

Shaw S and Gibbs J 1995, Retailer-Supplier relationships and the evolution of marketing: two food industry case studies, *International Journal of Retail and Distribution Management,* 23(7):7-16.

Thompson G 2001, *Supply Chain Management: Building partnerships and alliances in international food and agribusiness,* Rural Industries Research and Development Corporation, Publication No 01/31. Project No. GLL-2A. April 2001, Canberra.

Virtual Consulting Group Australia Pty.Ltd (VCG) 1997, *The Role of Alliances in the Australian Meat Industry.* Meat Research Corporation Report, MRC 1.1 (April 1997), Virtual Consulting Group Australia Pty Ltd.

Whipple J and Frankel R 2000, Strategic Alliance Success Factors, *Journal of Supply Chain Management*, Summer 2000, 36(36):21.