The International Livestock Congress and Student Programme

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Student Report

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Introduction

The International Livestock Congress presented an overview of the Canadian beef industry and relevant issues affecting it. Whilst there are large differences between the New Zealand and Canadian beef production systems, many of the issues facing the Canadian industry were also directly or indirectly relevant to the New Zealand beef industry. As a result, the Congress not only provided an interesting discussion of an alternate production system and industry, but also allowed an insight into how events both in New Zealand and elsewhere may affect the New Zealand beef industry.

The production system

There are vast contrasts between the New Zealand and Canadian beef production systems, reflecting the differences in the role of cattle in the two countries, and the productive potential of the land available to beef cattle.

New Zealand

The primary role of the New Zealand beef breeding cow is as a pasture management tool in lamb production systems. The calves weaned from these cows are critical to the profitability of the beef cow, but without their contribution to the lamb production system, many farmers would not justify running a beef herd. Beef cattle are reared and finished on pasture, with minor use made of crops in some areas. In addition to beef calves born to breeding cows, large numbers of calves (primarily bulls) born in the country's dairy herds are also reared for beef. Prime flat land is used to graze dairy cattle, fatten lambs and grow crops for human consumption, as these are more profitable enterprises than using such land to grow crops to feed feedlot cattle. Thus, beef cattle are essentially a secondary output of sheep and beef farms, and dairy farms. Although the beef industry is important in its own right, it is closely interlinked with both the sheep and the dairy industries.

Figure 1: Yearling Angus heifers grazing on pasture in Manawatu, New Zealand. These heifers will be finished on pasture at approximately 24-36 months of age.



New Zealand's small population base (4 million people) requires that 80% of the beef produced is exported. The geographical isolation of the country means that there is very limited scope for export of live cattle, and as a result, cattle are slaughtered and processed domestically.

Canada

In contrast, beef production is the primary focus of many Canadian ranchers and feedlot businesses. The fertile prairies of Alberta allow the production of vast quantities of grain and silage suitable for feeding to beef cattle. Additionally, many ranchers in British Columbia are able to make use of mountain forests in crown ownership to graze breeding cows with calves at foot over the summer months. Virtually all male calves are castrated. These calves are then shipped to Alberta as weaners and sold alongside the calves born on Albertan ranches to provide weaner cattle for feedlot beef production. Cattle either enter feedlots as weaners in the autumn or are grazed on pasture during their first winter before entering feedlots as yearlings in spring. Once in the feedlot, cattle are usually finished at 16-18 months of age. Traditionally, finished cattle and cull cows were transported live to the United States of America, where they were slaughtered and processed into beef.

Figure 2: Yearling heifers in an Albertan feedlot. These heifers will be finished in the feedlot at approximately 16-18 months of age.



Although Canada has a much greater domestic population (32.6 million people), the large scale of the national beef herd (14.8 million cattle) requires that 40% of Canadian beef is exported. As a result, despite the differences in production systems, New Zealand and Canada are both beef exporters, who sell beef in the same world market, producing 8.0% and 10.8% of beef in the world market, respectively (Can-Fax, 2006).

Traceability and the bovine spongiform encephalopathy (BSE) outbreak

In order to sell product in the world market, beef producers must satisfy the demands of the world's consumers. In today's environment, one of these demands is traceability of product.

To meet this need, both New Zealand and Canada have evolving traceability programmes in place in their beef herds. In both countries, the system currently allows only herd of origin identification, however, the impending introduction of electronic tags will allow animals to be tracked through all movements between farms during their lifetime.

The importance of the traceability system was demonstrated in Canada in 2003 with the discovery of BSE. The impact of BSE on the Canadian beef industry was severe, with borders closed not only to the export of beef products but also to the live cattle being shipped for slaughter in the USA. The previous dependence on the US slaughter plants to process Canadian cattle was a particular problem, as Canadian plants simply did not have the capacity to process sufficient numbers of cattle. As a result, beef cattle numbers actually increased in response to the BSE outbreak.

Because the traceability system was already in place when BSE was identified, concerns of many trading partners regarding the extent of the outbreak could be alleviated relatively rapidly. This enabled the reopening of many borders, although the US border is still currently closed to cattle over 30 months of age. Additionally, consumer confidence in the traceability system was likely to have been a factor in preventing a significant decrease in domestic beef consumption.

As a result of the BSE outbreak, Canada has increased its beef processing capacity, standing it in better stead to be more independent from the US processing plants and beef prices. Additionally, the commitment of farmers to the industry-led animal identification scheme was greatly enhanced by the demonstration of its importance to the marketability of Canadian beef in the face of BSE. The lasting psychological impact of the BSE outbreak on members of the beef industry was clear at the International Livestock Congress, with many people effectively referring to two Canadian industries – the pre-BSE beef industry and the post-BSE beef industry.

From a New Zealand perspective, the BSE issue in Canada provided an example not only of the potential impact of BSE or another disease of similar economic significance, but also of the benefits of a reliable traceability system in combating its effects. Although the effects of BSE are still being felt in Canada, the extent of the impact was far less than it could potentially have been.

Meat quality

Work from the CRC in Australia has revealed that meat quality is better from feedlot-reared cattle than from pasture-fed cattle (Bindon, 2006). This result is obviously good news for the Canadian beef industry, but not for the New Zealand beef industry, where cattle are raised and finished on pasture. With the identification of gene markers for tenderness, marbling and other meat quality traits, the rate of genetic improvement in beef quality from feedlot cattle could be increased further. The low cost of New Zealand's pasture-based production system is critical to its competitive advantage in the industry, as agriculture is not supported by government subsidies in New Zealand, thus, moving towards a higher-cost, supplement-based beef production system would be unfeasible.

Figure 3: Pasture compared with grain-based diets of the New Zealand and Canadian beef cattlebeast. Not surprisingly, these contrasting diets result in beef products with different characteristics.



Instead, New Zealand beef should be promoted to the international consumer for the characteristics that make it unique compared to the feedlot beef offered in the market. The increased consumer demand for traceability of animal products is a consequence of an increased consumer desire to know what is in the food they are eating, and for many consumers, a desire to move away from products that contain many additives towards more organic products. This is a key market opportunity for New Zealand beef products, because cattle are rarely given growth-promoting hormones and are not routinely dosed with antibiotics in New Zealand. For the majority of New Zealand cattle, the only treatments they receive in their lifetime are for parasitism, and perhaps vaccination against a small selection of diseases early in life.

This is in stark contrast to the situation in Canada, where calves are usually given their first growth promotant treatment at marking at 6-8 weeks of age. Further growth promotants are

given upon entry to the feedlot and antibiotics are routinely added to the feed. The use of growth promotants is standard practice across the feedlot industry, to the point that, with the exception of the veterinarian, none of the industry participants questioned (ranging from ranchers through to feedlot management) knew what hormones were actually used within the growth promotants – they knew the commercial name of the products, but were not aware of what active ingredients they contained.

The success of the "Alberta beef" brand, as a high quality feedlot beef product, could perhaps be replicated by the New Zealand industry, with the promotion of New Zealand beef as a more 'natural' alternative to feedlot beef.

Figure 4: The "Alberta beef" brand has been promoted through a wide range of media, all of which feature this "I love Alberta beef" logo.



The need for cohesion within and among industries

The overall message of this congress was the need for overall integration of the industry, from farm practices through to supermarket marketing and also with other industries, such as the foreign currency markets. The farm practices need to meet the specifications of the consumer, by providing cuts of the appropriate size and quality, whilst the market needs to be steered in the direction desired by the producers. If producers are going to produce beef with high eating quality, such as that which meets the specifications set by the CRC in Australia, this meat needs to be marketed to the consumer in such a way that they recognise its quality and consequently pay a premium for the product. The emergence of large markets in South East Asia has the potential to generate huge demand for premium beef products, but appropriate marketing is required to introduce these products into diets that are traditionally fish- and poultry-based.

It was also clear that events within other industries, which perhaps would seem unrelated to the beef industry, could have a large impact on the practices and profitability of the beef producer. A key example of this is the impending competition for grain products between the feedlot industry and the bioenergy industry. As well as impacting the cost of grain available for feedlot beef, there is also the need to formulate new diets to make use of the by-products of biofuel production. Any increase in the costs of beef production in Canada will affect the price at which Canadian beef is sold in the world market, increasing New Zealand's competitiveness on price. In addition, if agreement could be reached regarding agricultural tariffs in the Doha round of the World Trade Organisation discussions, New Zealand is in a particularly strong position to benefit, as it currently has no agricultural tariffs.

Conclusion

The International Livestock Congress presented ideas and viewpoints from wide range of perspectives that together, represented many of the major issues affecting the beef industry, both in Canada and worldwide. It reinforced the need to consider a wide range of factors

outside of any particular area of expertise when operating within the industry, illustrating the benefits of being educated in the business arena in addition to the field of animal science.

Attending the conference and participating in the student programme gave students the opportunity to identify their own roles within the beef industry and to further develop an understanding of how their role contributes to the industry as a whole. It also highlighted many other issues that students of the beef industry should be aware of, and gave students assistance to expand their knowledge base, increase their network of industry contacts and enhance their overall familiarity with all levels of the beef production system.

References

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