The Australian Beef Research experience and how it relates to Canada

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There has been discussion in the Alberta cattle industry about how Meat Standards Australia, the Australian beef grading system, revitalized the beef industry in Australia. Meat Standards Australia was a grading system concept developed in 1994 to focus on the characteristics of beef valued by the consumer. The impetus for Meat Standards Australia came from the Meat Industry Strategic Planning group, a collection of producer and processor representatives, which mandated that research be performed that would halt the decline of beef consumption in Australia, a decline that had been underway since the mid-1970's, with a startling 26 kg lost per capita between 1975 and 1985 (Kingston et al. 1987). Australian consumers cited inconsistent quality as the main reason for the decline in beef consumption, a perception exacerbated by waning meat cooking skills in the general population and the rise in popularity of convenience foods (Polkinghorne et al. 2008). Understanding and controlling meat quality was therefore one of the key thrusts behind the development of the Cooperative Research Centre (CRC) for Cattle and Meat Quality, a research group drawn from the Commonwealth Science and Industrial Research Organisation (CSIRO), the state agriculture departments of New South Wales, Queensland, Victoria, South Australia and Western Australia, Murdoch University, the University of Adelaide and led by the Department of Meat Science at the University of New England (UNE) in Armidale, NSW. The Beef CRC as it became known was supported by the Cattle Council of Australia, the Australian Lot Feeders Association (ALFA) and the Australian Livestock Export Corporation and received considerable sponsorship and in kind support from individual cattle pastoralist and animal health companies. The Beef CRC was primarily financed, however, from actual monies from Meat and Livestock Australia, ALFA, the Australian Centre for International Agricultural Research and the Australian Federal Government Cooperative Research Centre matching funds.

Discussion in Alberta regarding Meat Standards Australia arose because of the financial downturn suffered by the Canadian beef industry, about 60% of which resides in Alberta. This financial downturn prompted the realization that the industry could not continue to focus on commodity beef and feeder cattle exports to the United States of America (USA) indefinitely and that value needed to be added to the Canadian product in order to penetrate new markets and increase current market shares. Meat quality, however, has not been identified by the beef industry as a cattle price factor. Recently, the National Farmers Union of Canada concluded in its report *"The Farm Crisis and the Cattle Sector: Toward a New Analysis and New Solutions"* (National Farmers Union 2008) that low cattle prices were due to herd health crises, reduced beef packer competition, forward-contracting by packers for captive cattle supplies and beef production practices that eliminated Canada from lucrative European export markets. These factors do indeed contribute to low cattle prices but changing their status quo will not address the decline in beef consumption that has been observed in Canada since the early 1980's.

Although Canada's beef consumption has remained stable since 2006 (Statistics Canada 2008), it has declined from a per capita consumption of 17.59 kg in 1981 to 12.95 kg in 2007. Beef demand is determined by four factors: consumer income; consumer health concerns (healthfulness and food safety); demographics; and product quality (Schroeder and Mark 2000). Of the factors identified, health concerns and product quality were

identified by Schroeder and Mark (2000) as having the biggest impact on the decline in beef consumption. The Canadian beef industry has worked diligently to address consumer health concerns through re-establishing confidence of major export markets after bovine spongiform encephalitis (BSE) and by emphasizing the nutritional aspects of lean, properly prepared beef. Meat quality concerns, however, have not been completely addressed, as indicated by the *Beef Consumer Satisfaction Benchmark Study* (Beef Information Centre 2002) where only 68% of consumers were satisfied with the tenderness of three commonly purchased Canadian beef cuts (chuck, loin and round). Meat quality concerns encompass low overall product uniformity and consistency, inadequate tenderness, low overall palatability, excessive external fat and the high product price for the value received (Schroeder and Mark 2000), but the primary quality concern of Canadian consumers was tenderness (Beef Information Centre 2002). Recently, Dr. Ted Schroeder of Kansas State University informed the 2008 Alberta Beef Producers annual meeting (Duckworth 2008) that worldwide meat consumption was increasing but worldwide beef consumption was decreasing. He attributed this decrease to a lack of industry response to what consumers were demanding, which is a safe, consistently flavorful, tender product produced in an environmentally conscious manner.

According to Dr. Heather Burrow, CEO of the Cooperative Research Centre for Beef Genomics in Australia, the advent of Meat Standards Australia reversed the decline in domestic beef consumption in Australia (Burrow, personal communication). The Australian experience clearly showed that not only will increasing the consistency of beef revitalize beef consumption; it will also increase the price that consumers are willing to pay for beef (Polkinghornet al. 2008). USA studies have shown as well that beef consumers will pay a premium for beef that is guaranteed tender (Boleman et al. 1997; Miller et al. 2001). Boleman et al. (1997) found that consumers were willing to pay $1.10/kg more for beef guaranteed tender than that which was not, while consumers in the study of Miller et al. (2001) were willing to pay $1.08/kg more for beef that was guaranteed tender than that identified as potentially tough. Polkinghorne et al. (2008) showed that using the Meat Standards Australia system with cut-based grading increased carcass value between $0.50 to 1.00/kg. Also, the same authors showed that the implementation of a Meat Standards system in Australia based on the value of each beef cut rather than on the perceived value of the carcass grew beef sales by 12% at retail when value-added beef products were offered. Polkinghorne et al. (2008) also noted that the beef producer received a greater return providing a specific type of animal (for example, no hormonal growth promotants or grass-fed) than when it provided an animal raised within a conventional production regime. Clearly, diversification of the beef carcass according to its value to the consumer will increase retail beef income, which will increase producer economic returns.

The Australian Beef CRC is a model of how industry, government and science can work together to achieve an audacious, national goal. The Beef CRC was not without its challenges, one being that industry research partners were difficult to secure and that individual projects were often under-budgeted. What ensured that the Beef CRC was effective in delivering on its goals was that it was led by scientists, supported by industry and funded by government in partnership with industry. For a similar resurrection of the beef industry to occur in Canada, a similar formula of industry approval, government funding and scientific leadership would need to be followed. Such an undertaking could indeed launch the Canadian beef industry into a new way of viewing its product and meeting the needs of its vast markets.

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