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STUDENT REPORT

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Acknowledgments

Before starting my report, I would like to extend my most sincere thanks to every person and institution that made my presence in Calgary possible, especially to the Canadian Cattlemen's Association, the International Stockmen's Educational Foundation and the Calgary Stampede. Particularly, I would like to say thanks to Diane Rushforth, Iris Meck and Andrea Brocklebank for everything that they did in order to make Calgary and the International Livestock Congress an unforgettable mark in my life. All the ILC-Calgary 2006 student winners were very easygoing and polite and I am sure that I made great friends in Calgary.

I was honored to be the only student representing South America, especially Brazil, in the International Livestock Congress – Calgary 2006. I am sure that I learned a lot and I wish I left at least an idea of how the Brazilian beef cattle production systems look like.

Tours:

After a long flight from Brazil to Canada I had the pleasure to share a delightful dinner with the other students and Andrea Brocklebank, from the Canadian Cattlemen's Association. The next day, after a desired resting night, I joined the group of students to some very interesting tours nearby Calgary!

Our first stop was at a Cargill plant, located in High River, Alberta. The plant that we had the opportunity to visit is a fully integrated processing facility, with slaughter, fabrication, rendering and hide operations all under one roof. The plant processes 3,500-4,000 head of cattle each day, depending on the market

demand. Approximately sixty percent of product is exported and forty percent is sold domestic. I was really impressed with the quality of the animals slaughtered and the carcasses produced. The high content of fat, the uniformity and the white color of the subcutaneous fat were very different from the carcass traits usually seen under the Brazilian conditions, where the animals, mainly derived from *Bos indicus* breeds, like Nelore, produce much leaner and less muscle carcasses. The high degree of awareness with food safety in the packing plant was also a point of interest. The utilization of instrument grading at the line speed in the plant showed me how the technology has evolved in the beef sector, been applied by the industry. The CVS carcass imaging system only takes a fraction of a second to grab an image of the ribeye, transferring the image to the computer, where a specific software is capable of measuring the ribeye area, the fat thickness, the amount of marbling, the color of the fat and the muscle, and, subsequently, estimating both quality and yield grades. At the end of the visit to the Cargill plant some discussion around cattle identification was carried out. In 2001 the Canadian beef industry initiated and established a trace back system based on the Canadian cattle identification program, which involves tagging all cattle before they leave their herd or origin. This program is mandatory and regulated by the Canadian Food Inspection Agency. However, some hurdles still need to be transposed if the program intends to be broadly adopted by the producers. Issues regarding data confidence, costs in the identification of the cattle, resistance by the producers, among others, are the most important. Brazil has also struggled to implement its national program of cattle identification.

However, contrary to the US and Canada, the program in Brazil is being established as a way to attend some international market requirements, as Europe, which requires every country that export beef to its continent to have implemented a traceability system. Trace back of any disease is secondary in the Brazilian program, albeit is the main factor driving the implementation of the national identification programs in Canada and US.

Just before the lunch, we headed to a very pleasant ranch, Round T Ranch, where we listened to two presentations regarding an overview of the Canadian beef industry and the world beef production, trade and market. Andrea Brocklebank talked about the “State of the Industry” and Anne Dunford, from Canfax, gave an update on the beef market situation in Canada and around the world. It was two very good presentations, especially for me, whose knowledge about the Canadian beef industry was somehow shallow and not so broad. Andrea discoursed about the Canadian Cattlemen’s Association, what it is, its commitments and objectives, its operating divisions and partnerships with other organizations. The issue of BSE (*Bovine spongiform encephalopathy*) was discussed, as Canada faced some of the most turbulent and difficult time in the beef industry ever after discovering a native case of BSE in its territory in May 2003. However, what more caught my attention was the way that the Canadian beef industry reverted in its favor the problem associated with BSE. Increasing the packing plant capacity was the way found to overcome the restraints imposed by the United States to the entry of cattle in the border of both countries. Domestic consumption of beef also has experienced a pronounced increment,

helping Canada to deal with the extra supply of beef. Besides that, the implementation of the Minimal Risk Rule, coupled with efforts of both government and beef industry, has paved the way for reopening borders to Canadian beef, creating new opportunities. As Canada depends significantly on the external market, because it exports a great amount of the beef and cattle produced in its territory, it becomes mandatory to look for competitiveness in the global beef market, always trying to figure ways out of increasing the level of trade access. What I could understand is that the Canadian beef exports are highly focused on the United States and Mexico. In 2005, the US was the destination for 81% of Canadian beef, and Mexico 11%. Thus, both countries accounted for more than 90% of the Canadian beef export market.

After the lunch we went to Western Feedlots, one of the largest cattle feeding operation in Canada. The main differences with the predominant Brazilian beef cattle feeding systems were quite large. In Brazil more than 95% of the beef produced is grass fed, while in Canada, as well as in the US, is grain fed. The type of the cattle is very different too. In the Canadian feedlots I just saw European breeds and its crossbreds, like Angus, Hereford, Charolais, etc, while in Brazil more than 80% of the cattle has influence from *Bos indicus* breeds, with a great predominance of Nellore. The diet was also a surprise for me. As Alberta's region is not suitable for the production of corn, the diets are formulated basically with barley. The roughage source is barley silage and the concentrate is also based on steam rolled barley. So, it is quite different even from the US, where corn is the grain mostly utilized in the feedlots. The fences of the pens

also caught my attention. They are wood made, with very tight spaces between the posts, and are relatively tall. They are built in that way to avoid the freezing winds that blow during the winter. So, it works as a protection for the cattle against the cold wind. The veterinarian responsible for the yard also gave us some tips and insights on the management of the cattle as the calves come on in the feedlot. We visited the feed mill too and had the opportunity to see how the diet is prepared and mixed before feeding the animals. One thing that I couldn't even imagine is the problems associated with the labor, not only in the Western Feedlots, but also in the whole country. The lack and the high prices paid for qualified staff is forcing the Canadian enterprises to look for ways of stimulating the immigration of foreign workers to Canada, even Brazilians. A situation that is very contrasting to the Brazilian reality, where we have lack of jobs! Before coming back to the hotel we stopped by in a typical medium sized Canadian ranch operation (Tongue Creek Feeders), with a small feedlot. However, as we were coming back, we did not drop the bus and the visit was very quick!

To end the day we went to the ILC-Calgary welcome reception, where we introduced ourselves and had the opportunity to network with all the participants, including the other students, speakers, sponsors, ILC, ISEF and CS board. I still gave an interview to a Canadian newspaper. That was amazing!!

**The International Livestock Congress – Calgary 2006 – Strategic thinking
for a changing industry**

On Friday, July 14th, Alanna Koch kicked off the International Livestock Congress - Calgary, 2006, talking about why international trade negotiations are critical to our future. She discussed a lot about negotiations at the world trade organization (WTO) level. In her presentation one message was sent clearly: agriculture is a lot of politics. It is not only economically driven, but also politically. According to Koch, Canada have approximately 250.000 farmers, being that over 90% of them depend on the international market. With the establishment of the CAFTA - Canadian Agri-Food Trade Alliance, the partnership with US and Mexico increased a lot. Another interesting thing said by Koch was that the developing countries are those where we'll see higher demand for beef, coupled with growing beef production. Some reasons for the increase on beef consumption in developing countries are growing population, with more pronounced urbanization and increasing the level of wealth of the population. Regarding the state of trade in meat, I could understand that meat is one of the most protected products in the world. While the average tariff incident on meat is around 80%, on industrial products it is only 4%. A great difference!! Beyond receiving high tariffs, meat is highly subsidized, with an average of US\$ 1,500 per ton. It represents a figure of 34% of the beef value in subsidies. The Doha Round was also a topic in the talk of Alanna Koch. The main issues discussed at the Doha Round was the elimination of all the forms of export subsidies, the

substantial reduction in trade distorting domestic support and ways for the improvement in market access (more pronounced cuts on higher tariffs). However it is not an easy process. Some developing countries, like the G-20, lead by Brazil and India, which are more affected by these distorting issues on the international market are trying to pressure the developed countries in order to reduce the subsidies and tariffs on agricultural products like beef, what could increase the market access of these products produced on developing countries, where the cost of production is much lower. Besides all the barriers imposed in the market, between 1995 and 2000, Brazil's international market share increased from 2.8% to 3.9%, while the US market share dropped in the same period from 12.9% to 10.2%. However, the support for the agriculture in the US increased 14%. What happens is some developing countries, like Brazil, Uruguay, can produce beef with very low costs. Consequently, they can sell beef by a low price, increasing their market access, disturbing the developed countries, which have to increase their support to agriculture in order to stay competitive in the world market scenario. Some countries are reluctant to deal. Japan (38.5 to 50% of tariffs on beef), Korea (30 to 40%) and Philippines (1 to 40%) are some examples of the most closed countries for negotiations on the WTO atmosphere. Just to summarize Alanna Koch, the world needs the WTO deals. It is critical for the future of all the countries.

Glen Hodgson, vice-president and chief economist, the Conference Board of Canada, gave a talk entitled "The economic outlook: well positioned for growth. He warned about the rise of emerging markets, like China, Brazil, India

and Russia, where the great opportunities will be in the near future. What alarmed me a lot was the size of the United States domestic debt, which is estimated to be in US\$ 9000 billions, due mainly to some reasons like: high international prices of oil, the great amount of money spent to support domestic markets, the predominance of importations (mainly oil) over the exportations and the costs associated with the aftermath of the hurricanes like Katrina and its rebuilding demand. In that sense, the United States depend on some countries savings, like China and Japan, to fill this gap in the economy! Just to give an idea in the importance of China, Chinese surplus in trade was estimated to be more than US\$ 102 billions.

The main message sent by Dr. Dennis B. McGivern, vice president, Informa Economics Inc., was that the cow herd size in Canada has been increasing since the 90's, due to currency depreciation, being that it increased even more with the discovery of BSE in Canada. Following that trend, the beef production also increased a lot and the slaughter capacity of the Canadian beef industry reached its maximum, forcing the devotion of more investments into the expansion of the Canadian packing capacity.

A very interesting presentation, at least for me, was proffered by Brant Randles, who talked about the global feed grain market and supply. It was clear that corn use is markedly moving from feeding animals to produce ethanol. That's enforced by the high prices of oil in the international market. However, the production of ethanol using corn generates very good byproducts that can be used to feed the animals, such as dry or wet distiller grain. Nonetheless more

research effort is needed in order to obtain, for example, recommend levels of inclusion of those byproducts in the animal's diet. One concern about the shift of corn toward ethanol production is that the demand for the grain would increase, and then, the price of that commodity for the feedyard operators could increase, making the breakeven getting ever higher than it is nowadays. It is expected that corn price will double in the next 5 years and the market will become more volatile. Beef producers will have to look for new ways of purchasing corn, such as direct contracts with corn producers. The feedyards will have to pay more for the corn now in order to guarantee the supply in the future.

China was also a focus of his presentation, as well as from others speakers. The higher economic development of China (10%, which is 3 times the economic growth of Canada and USA) will increase even more the demand for energy (oil, biodiesel and ethanol) and food. On average, meat consumption in Chinese rural areas has increased 53 g/day and in China cities this increment was 100 g/day last year. An increase in 10 g/person in the whole country would create a demand of 36 kg/person/year, which is still 50% of the meat consumption in the USA. This figures show that the culture and food habit in China is not linked to beef. Expecting a dramatic increment in beef consumption in China would be an equivocation, as beef is not a traditional food. However, even small increments would create a significant demand for beef, as the whole Chinese population is huge!! In terms of grain demand, it is expected that China will import a lot of grains not only for human use but also to feed animals. Some limitations in China can help us to understand why that will happen. First of all is

the availability of water, which is a very limited resource in China. So, with the growth of the industry in China, water use will shift toward the industries in spite of the agriculture. Another problem is labor. With the great urbanization that has been occurring in China not only less earth for agriculture will be available but also less people to work in land as the migration to the cities is increasing.

In that sense, Mr. Randles defends that the US cropland should be used mainly for corn production aiming at the ethanol production. According to him 39 new plants for ethanol production is being built in the US. With that increase ethanol production would jump from 1,4 billion gallons of ethanol in 2006 to 6,5 in 2007, 10 billions in 2008 and approximately 13-14 billions gallons in 2010. However, this tendency is economic and politic driven. The actual subsidies for ethanol production in the US are in US\$ 0.05/gallon, and the profit per gallon is around US\$ 1.20. That's why this huge expansion in ethanol production plants in the USA has been seen in the last few years. Thus, corn will substitute lands currently used to plant soybean and wheat, which future production will come from higher yields varieties and from the inclusion of marginal lands into the production systems.

One the most impressing lectures for me was the one from Dr. David Baxter, Executive director, Urban Futures Institute. He talked about the human challenge in Canada. Before writing specifically about this lecture, I would like to express how I was impressed with the availability of jobs in Calgary! Walking around Calgary streets, shopping malls, and so on, I could stare at outdoors and store's windows announcements looking for workers: "now hiring" could be seen

everywhere. That circumstance was then reinforced by Dr. Baxter. It seems like Canada is under a perfect storm, with increased competition in the world market, declining supply and an aging workforce. So, how to keep people on farms was the predominant question. If the current situation persists, in 2010 there will be shortage of labor in Canada, as a consequence of aging, with a consistent decline in the young population. This scenario is responsible for the very low rate of unemployment in Canada in the last 32 years: 6.4%. So, what could be done to reverse the situation? Some solutions have been proposed like: work longer, engagement of young people in farm/ranch environment, increase participation, increase population and increase productivity. Although some of these solutions can help, they won't solve the problem. In that way, immigration could play an important role in building up the needed workforce in Canada. However, there is a need for immigration policy aimed at the farm / ranch sector, in spite of being metropolitan oriented, how it is nowadays. The Canadian government has to seek ways to stimulate young people to stay at the rural areas. What has been seen in Canada is a shrunk in less than 25 years old population in rural areas, although there are more young people until this age. People are moving to metropolitan areas after 25 years old. This phenomenon is explained by the fact that people are looking for the work style to go with their life style, not other way round. So, new attractions at the rural sector have to be built in order to fix the young population.

Professor Bernie Bindon showed the example of the Australian beef industry success. Australian beef industry is a US\$ 96 billions industry, exporting

beef to more than 110 countries, although the consumption internally is in decline. In an overall figure, he showed how the Australians have invested in new technologies, from conception to consumption of beef, to assert a high quality and safe product. Going from genetics, nutrition and environment improvements, passing through pre and post-slaughter management to chilling and processing methods, Australia has become a very important beef supplier worldwide.

At last, but not at least, Professor David Hughes, from University of London, talked about the food industry. According to him, it represents a sector very tough to be in. Low cost countries like Brazil, New Zealand and Argentina are very aggressive in producing cheap beef. Just to imagine how they are competitive, one kg of beef produced in Brazil, New Zealand and Argentina costs US\$ 0.90-1.00; 1.23 and 1.30, respectively, while in Australia, USA and Ireland, the costs rises to US\$ 1.80; 1.90 and 3.00, respectively. Thus, there is no way to Canada and USA to compete with those low cost countries. A plan B was to be implemented, which is producing a higher quality beef, with premium products. In the global market three kinds of meat have their own space: the good, the better and the best, which produces, cheap, medium and premium beef. In any food industry there are persons willing to pay more for more! In these kind of consumer is very strict in terms of quality and food safety and so, they should not be disappointed.

But, what do consumers want apart of low price products? The actual trend in consumer demand shows that they are looking for a product that is environmentally friendly (natural and organic food are experiencing a very strong

increase in the food market share), products produced under circumstances with minimum global warming impact and products that come from animals raised and slaughtered under human conditions. Just to have an idea how consumers, especially the Europeans, are concerned with those issues, they are worried with the distance the animals are transported from the farms or ranches of origin to the slaughter house, calling it the reduced food miles. Sustainability is imperative nowadays in any food supply chain. The impact on biodiversity, animal well being, and MGO are important aspects today. Along with that, the consumer is looking for practical products, which can be taken to the oven and in a few minutes is ready to eat.

My overall evaluation of the International Livestock Congress – Calgary, is the most positive possible! I really enjoyed it and I am sure that it contributed a lot for my professional career. Not only the lectures and meetings were important, but also the networking that the ILC allowed. I was in touch with the most important beef cattle industry representatives and I did not let that opportunity just go away! I talked a lot with everybody and I could learn a little bit more about other reality and another culture. So, I had a great time in Calgary!

Thanks for giving me this opportunity!

Best Regards!

Pedro Veiga Rodrigues Paulino.