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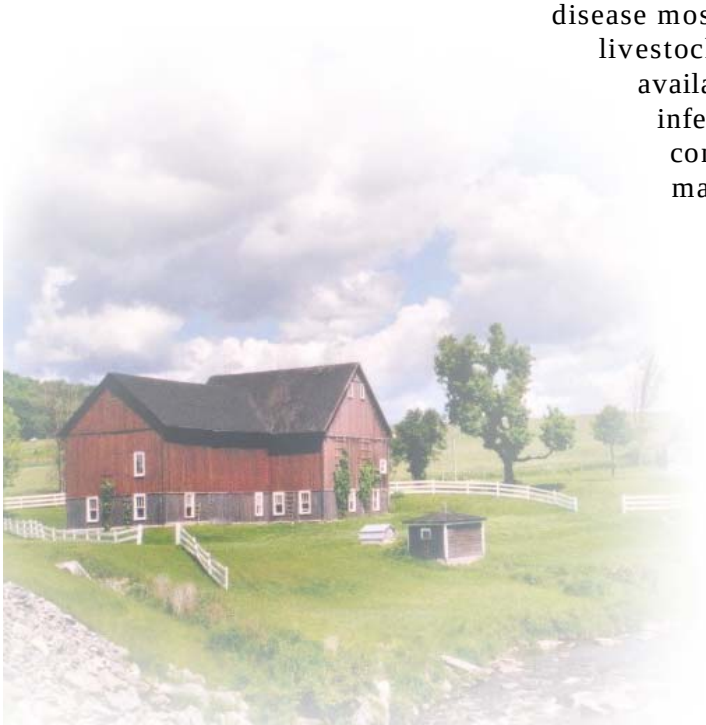
FOREWORD

Food markets are becoming global and competition in all markets is intense, countries are working to improve market access through the current round of World Trade Organization negotiations and through regional agreements such as the Free Trade Area of the Americas. Trade is critical to Canada's agri-food sector. Canada is a major agricultural producer with a relatively small population. As a result, we export almost half of our farm products. Because of the magnitude of our exports, the success of the agri-food sector depends, in large part, on international markets.

International competition is increasing from low-cost countries, with little government support. Argentina has significantly increased agricultural production in the past ten years using their low costs to increase world market share with relatively low levels of government support. The competitive position of the Argentinean beef industry, however, depends on meeting required safety standards, which is critical to their success. Currently Argentinean authorities main goal is to free cattle from Foot and Mouth Disease (FMD). FMD remains the single most important constraint on trade in live animals and animal products and is the disease most feared by those countries with a large and efficient livestock industry. The central problem is that no currently available test is sufficiently sensitive to identify persistently infected animals with 100% certainty, making it difficult to convince any country to start importing vaccinated animals.



Foreword

The country's disease status is important to avoid the erosion of consumer confidence in the safety of eating beef. Apart from the social consequences, the loss of production and the loss of trade markets cause serious economic losses. Virtually all world meat markets are fragile. However, Canada has been free of FMD since 1952 and free of Bovine Spongiform Encephalopathy (BSE) or "Mad Cow Disease" since 1993[1]. Argentina is currently recognized as being BSE-free.

In February 1999, Argentina announced that it had concluded its vaccination program and was FMD free. As a consequence of these developments, it had been anticipated that many new markets would open to Argentina fresh and frozen beef products. In May 2000 Argentina obtained the status of FMD free country without vaccination from the Office International des Epizooties (OIE), and in a short time, Argentinean beef exports went to 75 different markets as reported by the Secretaría de Agricultura, Ganadería, Pesca y Alimentación (SAGPyA). In August 2000, Argentina issued a voluntary ban on beef exports due to the re-detection of FMD and initiated other measures to control disease spread. The main goal for the Argentine authorities is to free cattle from FMD once again through application of the "National Plan for the Eradication of FMD, 2001-2005."

Part of the implementation of the Agricultural Policy Framework (APF) is to support global market success for industry through a Value Chain Roundtable Process (VCRP) to work towards enhancing the sector's competitiveness. Part of the VCRP involves benchmarking the competition for the industry. As Argentina meets the strong sanitary and phytosanitary regulatory process essential in any trade agreement, it could exert major pressure on the Canadian cattle sector. The study of "The Competitiveness of the Beef Sector in Argentina and Canada" provides the benchmarking of the sector through the use of a set of competitiveness indicators and it is complemented by a discussion of factors determining competitiveness in both countries.

1.This study was completed in May 2002 and it was during the final phase of publication that the single case of BSE in a cow from an Alberta farm was detected as part of Canada's ongoing BSE surveillance program in May 2003. The animal was condemned at slaughter so the carcass was not processed for human consumption; although more than 2,700 animals were destroyed and tested as part of the investigation, no other case has been detected. BSE has been a reportable disease in Canada since 1990.

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Executive Summary

The main aim of our study has been to provide a comparative analysis of Argentina and Canada using a set of indicators that would allow us to ascertain the competitiveness of beef production in each country. Our study has been complemented by a discussion of a set of factors determining the production environment in which businesses must compete and which can further, or retard, the creation of comparative advantages. These factors we might call the *determining factors* of competitiveness.

- The participation in international markets indicator shows that Argentina's participation in world beef exports has decreased over the past two decades, declining in 1999 to one half of what it was in 1980 (i.e. down from 8% to 4%). It fell to seventh place after being the fourth or fifth place exporter in the world in the first years of the 1990s. Canada, on the other hand, has achieved an ever-increasing market share of total global exports, rising from 1% in 1980 to more than 6% in 1999.

- The level of competitiveness as measured by the Comparative Advantage Coefficient (CAC) has indicated an improved position for Canada vis-a-vis Argentina. According to this indicator, Argentina has fallen in competitiveness not only with regard to total meat exports but also regarding the more important group of products, such as fresh, refrigerated, frozen and prepared meats. Canada, although it may have a lower value of competitiveness than Argentina (CAC < 1, indicating a performance inferior to average world exports) nonetheless has shown a clear trend in improving its competitiveness as the 1999 CAC value is four to five times that of 1980-95 period.

- As for domestic sectoral competitiveness—that is, the rate of import penetration in the domestic market—Argentina has a negligible coefficient given the minimal quantities of its imports.

Canada's situation is however different, showing a marked penetration by imports of the domestic market, mainly from the US as a result of the North America market integration.

- Argentina shows minimal levels of exposure to international competition due to the fact that the major part of its meat production is targeted at the domestic market. However, using this same indicator, we can see that Canada is exposed to strong competition both in its domestic and foreign markets; but Canadian exports are higher than imports making Canada a net exporter.

- A comparison of international prices shows that Argentina's competitiveness has been declining since the mid-1980s. Prices for Argentine beef have been above those of the other major exporters, with the exception of the United States. However, Argentina's prepared meat products have remained competitive with prices remaining below those of many of its competitors. Canadian prices have been close to world prices for almost the entire period under review, except for recent years in which rising prices have decreased its level of competitiveness. Regarding prepared meat products, its performance has been similar to Argentina's and it appears that this product group has the greatest potential for market expansion for both countries.

- Argentina appears to have an advantage over Canada in production costs. It can reduce various types of cost such as direct costs, structural costs and marketing costs (the latter currently representing more than 50% of the total cost) through policies such as tax incentives. In Canada, such costs represent only between 20% and 30% of the total cost, while the cost of calves (representing about 80%) shows little possibility of decreasing. No additional conclusions are possible in this area due to a lack of comparative cost statistics for both countries.

- The meat characteristics, which contribute to the quality of Argentine beef—that is, its low fat and cholesterol content—contribute to its competitiveness in the sector, especially when recent changes in consumer preferences are taken into account. Nonetheless, continuing problems with animal health (foot-and-mouth disease) have closed foreign markets and reduced competitiveness. Canada's high quality meats have also made it competitive in the majority of export markets. The absence of disease (BSE and foot-and-mouth disease) favors sectoral activities, especially when epidemics of these diseases afflict competitor countries. The major challenge for Canadian beef is to reduce trade outflow of live cattle in favor of higher-value-added beef products.

- On a broader scale, competitiveness with other commercial exporting countries can be achieved only by continually improving efficiencies, lowering all costs of production, winning niche markets and adapting beef products to meet the needs and specifications of foreign customers. With a concerted effort to remedy existing problems and successfully respond to market opportunities, the industry could improve its competitiveness.

CHAPTER 1
INTRODUCTION

Market liberalization, increasing globalization and the slow growth experienced in domestic markets has made it ever more necessary to increase national competitiveness within the growing international market in order to increase exports.

The raising of beef cattle and the production of related industrial products are both important economic activities in Argentina and Canada and make an important contribution to the Gross National Product (GNP) of both countries. They are an important source of employment and remain among the countries' principal exports; for Argentina they also constitute the main elements of the national diet.

The report starts with a discussion of the different understandings of the concept of competitiveness and then proceeds with our principal aim, namely that of formulating a set of indicators and determinants allowing us to measure and ultimately compare the levels of competitiveness found within the sector.

The next section discusses the specific determinants of competitiveness from various international and domestic perspectives and includes an assessment of the international context, price fluctuations, costs, supply, foreign and domestic demand, quality and government policies.

Finally, we present our conclusions in the form of a comparison between Argentina and Canada using the results of the indicators developed.

CHAPTER 2

WHAT IS COMPETITIVENESS?

There is something of a consensus in the literature on competitiveness that the concepts and indicators used to understand it are imprecise and difficult to measure. A 1995 Economic Commission for Latin American Countries (ECLAC) report observes, "In the majority of cases, there is no exact definition of competitiveness and there is little emphasis on measuring the importance of the indicators used."

Along similar lines, Porter (1990) maintains that, "...there is no real definition of competitiveness and no generally accepted theory that explains it."

The World Competitiveness Report cited in Hertford and Garcia (1999) sets out general criteria for competitiveness between countries. These criteria are based on a longitudinal study of 24 OECD countries and 20 developing countries using a large number of political and economic factors divided into seven categories: a) macroeconomic behaviour, b) level of openness, c) finance and public policy, d) infrastructure, e) administrative capability, f) science and technology and g) human capital.

In another vein, ECLAC provides a definition of competitiveness at the company or country level that includes the following indicators: a) participation in domestic and foreign markets, b) productivity, c) prices and costs, d) economic environment (e.g., exchange rate, interest rate, educational levels, public service costs, etc.), e) foreign and domestic investment, f) technological development trends and g) human resource development.

The last few years have seen a large number of definitions of competitiveness. Although everyone appears to agree on the problematique requiring analysis, there is little consensus on the concept itself. This situation often causes confusion between the effects and the determining factors thought to have caused them (Obschatko, 1993).

For the purposes of our present discussion, an appropriate definition of competitiveness would be one that identifies it using *the results or behaviour of the sector in international trade* and that would be compatible with any of the following definitions:

- "the capability of a country, an industry, a productive sector or chain to achieve, maintain, or increase its domestic or foreign market share" (Inter-American Institute for Cooperation on Agriculture (IICA), 1992);
- "capability to obtain and keep a lucrative share of a market" (Martin, 1991);
- "the capability of producing goods for the international market while obtaining a level of benefits vis-a-vis the resources used (human and physical) that is at least equal to the benefits obtainable through alternative uses" (Working Paper 3-93); and
- "an industry is competitive when it has the capability of making a profit and maintaining its share of international and domestic markets" (Ash and Brink, 1992).

CHAPTER 3
COMPETITIVENESS INDICATORS?

3.1 Participation in International Markets

A country's level of beef exports relative to total world exports is the measure of market share and therefore of level of competitiveness that is used here. This is a valid indicator only if there are no barriers to trade. If there are trade constraints, international agreements or any other restriction on free trade, then we must analyze additional indicators.

World marketing activities have been directly related to the periods of contraction / expansion in the economies of the developed world and the ongoing adjustments in the balance of payments disequilibrium in the developing world. During the 1980s, the world's major importers applied protectionist measures and barriers which affected world trade in meat. Due to major export subsidies, a number of importing countries were in fact turned into net exporters, a situation which altered world prices and decreased marketed volume. In fact, the European Union up to 1986 was a major exporter of beef.

In 1998-2000, Australia is an important beef exporter with a 23.4% share of world totals (see Figure 1), the United States following with 19%; Argentina's and Canada's shares are 4.15% and 6.4% respectively. Regarding imports, the United States accounts for 23% of total world imports, followed by Japan and the Commonwealth of Independent States (CIS).

Figure 1a: Principal Beef Importers
1998-2000

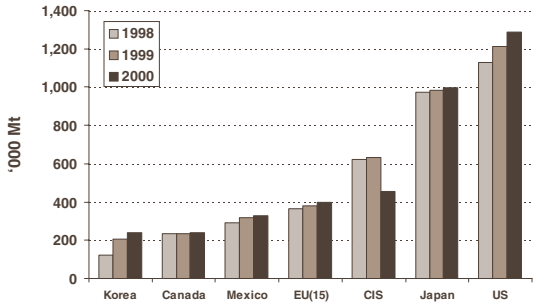
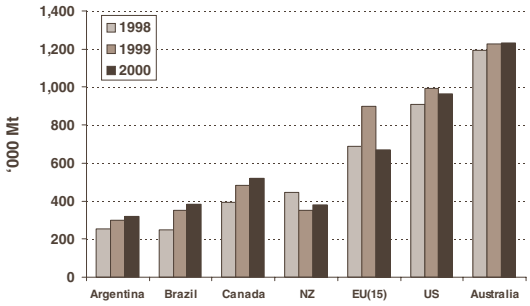


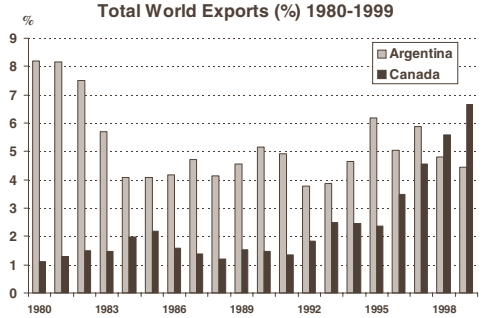
Figure 1b: Principal Beef Exporters
1998-2000



Source: FAO, USDA, DMA, SAGPyA

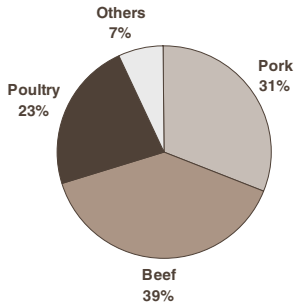
In the 1980s, Argentine beef exports lost market share in total world exports, a trend which reversed itself by the end of the decade (see Figure 2). Share percentages then became cyclical and ended up at levels well below those reached at the beginning of this period. If we look at the percentages for 1980 and 1999, Argentina's share has fallen by half (from around 8% to a little more than 4%). For Canada, these indicators show exactly the opposite, its share of world totals has continuously increased from 1% in 1980 to 6% during the last year of the period under review. This increase is the result of the integration of the North American markets and the Western Grain Transportation Act (WGTA) reform.

Figure 2: Argentina's and Canada's Share of
Total World Exports (%) 1980-1999



Source: FAO

Figure 3: World Meat Exports, 1999



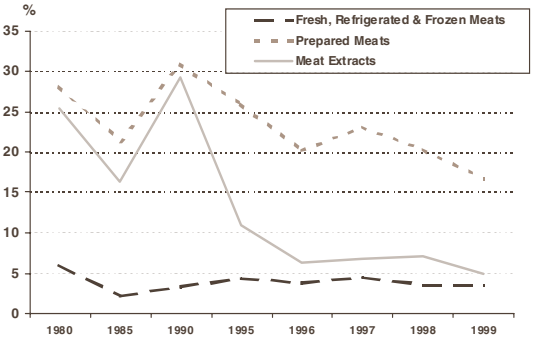
Source: FAO

The exports of beef dominate international trade in meat. Figure 3 shows that beef exports represent about 39% of total meat exports followed, in order of importance, by pork (31%), poultry (23%) and sheep and goat meat (5%).

If we look at the principal types of beef products (see Figure 4a), we can see that the larger part of Argentina's exports is taken up with so-called "prepared meats" (mainly corned beef). Over the last 20 years exports of Argentine prepared meats have reached about 30% of world exports. However, this fell off sharply in the 1990s to little more than half the previous high figure. A similar phenomenon is to be observed with the so-called "extracts" and for these

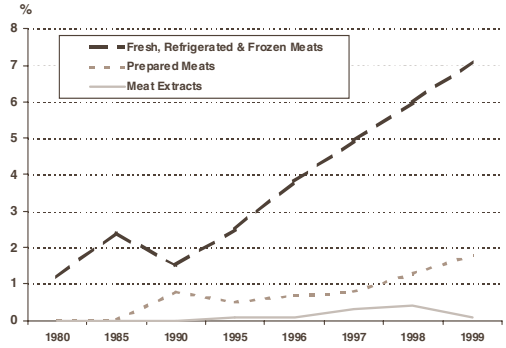
the falloff has been even greater. With regard to fresh, refrigerated and frozen meat, the percentages have remained more or less constant, but this group of products is of relatively less importance (around 5%).

Figure 4a: Argentina's Share of World Exports by Type of Products



Source: FAO

Figure 4b: Canada's Share of World Exports by Type of Products



For Canada, only fresh, refrigerated and frozen meat exports have any significance in the total world exports (see Figure 4b). However, we can see there has been a sharp increase in the relevant figures beginning in 1990, indicating market penetration for Canadian products. As a matter of fact, in 1999 with 7.1% of world exports, Canada's share of exports was double that of Argentina.

Above and beyond what the indicators show us, a national industry can indeed experience a decrease in its competitiveness while at the same time increasing its production due to the simple fact that its rate of growth is lower than the rate of growth in world exports, in which case its relative market share will fall. On the other hand, a sector experiencing decreasing production can actually appear competitive when its rate of decrease or contraction is lower than the rate of contraction in world export markets.

The limitations associated with such an indicator can be overcome by using parameters which take into account simultaneously the relative behavior of the sector in each country with the relative behavior of world markets, as is the case with the comparative advantage coefficient.

3.2 The Comparative Advantage Coefficient

This coefficient [hereinafter, abbreviated as CAC] provides information on a country's performance for a given product by comparing the product with total national exports and the same parametric values for the product at the global market level. When the coefficient is "1", the country has a neutral comparative advantage or its performance is the same as the average performance at the global market level. The level of competitiveness increases proportionately with the increasing value of the coefficient.

The formula for determining this coefficient proposed by Bela Balassa (Obschatko, 1993) is,

$$CAC_{i,c} = (X_{i,c}/X_{i,t})/(X_{w,c}/X_{w,t})$$

where,

X i,c = country exports of beef (Argentina or Canada);
X i,t = total country exports (Argentina or Canada);
X w,c = total world beef exports; and
X w,t = total world exports.

Table 1 shows the relevant values for this coefficient with regard to beef and the principal export products.

Table 1: Coefficients of Comparative Advantage

	1980	1985	1990	1995	1996	1997	1998	1999
Total Meats								
Argentina	20.7	9.4	14.2	14.5	11.0	12.0	9.6	10.5
Canada	0.3	0.5	0.4	0.6	0.9	1.1	1.4	1.5
Fresh, Refrigerated and Frozen Meats								
Argentina	15.1	5.0	9.1	10.4	8.2	9.3	7.2	8.6
Canada	0.4	0.5	0.4	0.7	1.0	1.2	1.5	1.6
Prepared Meats								
Argentina	71.0	49.1	84.5	61.1	44.0	47.1	40.6	39.5
Canada	0.0	0.0	0.2	0.1	0.2	0.2	0.3	0.4
Meat Extracts								
Argentina	64.1	37.5	80.1	25.7	14.0	13.7	14.0	11.4
Canada	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0

Source: Estimated from FAO and WTO data .

In general, the figures show that Canada is experiencing a more positive market evolution with respect to Argentina even though the latter has consistently shown a coefficient greater than 1. For Argentina, the total figures for meat as well as the more important groups of products show a marked decrease in levels of competitiveness. Indeed, if we compare the first year with the last year of the period, the indicators have fallen by almost one half.

On the other hand, Canada shows a lower level of competitiveness—with CAC coefficients below 1—which indicate performance below the average level of world exports. Nonetheless, recent years show a marked increase in the level of competitiveness for the more important groups of products and the value for the last year of the period is four or five times that of the first year for the same period under review.

3.3 Import Penetration Rates

This indicator [hereinafter, abbreviated as IPR] characterizes the internal competitiveness of the sector by showing the magnitude of international competition within the arena of domestic demand (Agénor, 1997).

It is defined as the ratio between beef imports[2] and domestic consumption calculated as the sum of production plus imports minus exports and waste product:

$$IPR = \frac{M}{C} \times 100$$

where,

M = imports; and
C= consumption.

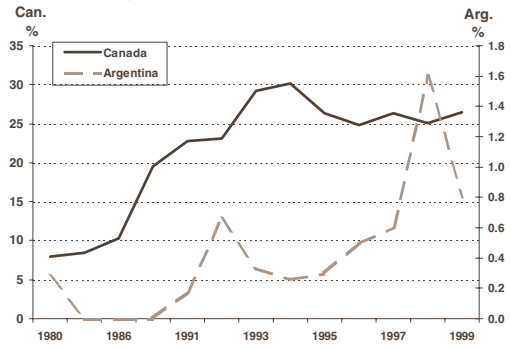
Table 2: Import Penetration Rates

	1980	1983	1986	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Argentina	0.28	0.00	0.00	0.00	.0.17	0.66	0.33	0.26	0.30	0.5	0.6	1.6	0.8
Canada	7.96	8.49	10.26	19.47	22.71	23.08	29.19	30.19	26.39	24.8	26.3	25.1	26.5

Source: Estimated from data presented in FAO and WTO

For Argentina, the value of the IPR is insignificant due to the relatively small quantity of imports. Starting in 1991, the value increases slowly reaching a maximum in 1998, something that would appear to be connected with a marked increase in imports. The domestic market is supplied almost exclusively by national production. Canada's situation however, is completely different, as can be seen in Figure 5, the penetration ratio has increased significantly, especially in the last decade, which shows a marked penetration of the Canadian domestic market by imports.

Figure 5: Import Penetration Rates



Source: Estimated from FAO and WTO data.

2. Due to a lack of available information, we could not extend the calculation to type of product.

3.4 Exposure to International Competition

This indicator [hereinafter, abbreviated as EIC] is based on the assumption that exports meet international competition within global markets and the production targeted at domestic demand experiences competition from imports (as measured by the previous import penetration ratio). Thus, this indicator measures the percentage of national production that is exposed to foreign competition (Agénor, 1997 and Perona y García, 2000).

$$EIC = \frac{X}{P} + \left(1 - \frac{X}{P}\right) \times IPR$$

where,

$\frac{X}{P}$ = percentage of exports over production, and

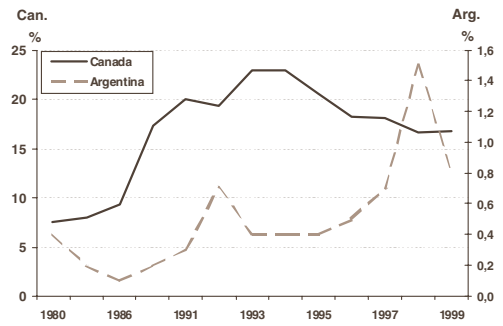
IPR = import penetration ratio.

Table 3: Exposure to International Competition

	1980	1983	1986	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Argentina	0.4	0.2	0.1	0.2	0.3	0.7	0.4	0.4	0.4	0.5	0.7	1.5	0.8
Canada	7.5	7.9	9.3	17.3	20.00	19.3	23.0	23.0	20.5	18.2	18.1	16.6	16.7

An interesting feature is the increase in foreign competition over the last few years. The Canadian value for this indicator shows that this country has had to confront an increased exposure to foreign competition during the beginning of the 1990s; the value has improved over the last several years but has never reached the values shown for the beginning of the 1980s. The Argentinean values on a smaller scale show sharp increases in 1992 and 1998 to finish in 1999 with a decrease from previous years but with a higher value than 1980.

Figure 6: Exposure to International Competition



Source: Estimated from FAO and WTO data.

In summary, the competitiveness indicators analysis shows that for Canada the removal of grain transportation subsidies in 1995 significantly increased the competitiveness of the Canadian beef industry. The simultaneous presence of high levels of Canadian imports and exports are evidence of the integration of the North American beef market. For Argentina, the minimal levels of exposure to international competition is due to the fact that the major part of its meat production is targeted at the domestic market.

CHAPTER 4
FACTORS DETERMINING COMPETITIVENESS

We will follow Michael Porter (1990) who indicates that levels of competitiveness within a sector are determined by a number of factors operating within the arena in which companies must compete. Principal among these factors, which can encourage or discourage the creation of competitiveness, are the following:

4.1 International Factors

a) The international context

The reduction of tariff barriers to trade in meat products has proceeded under the auspices of international trade liberalization agreements. Nonetheless, there has been a marked trend in countering these advances with the imposition of non-tariff barriers, that is, barriers in the form of laws, regulations, policies and practices which a country brings into operation in order to restrict the access of imported products to its domestic market. The majority of importing countries levy their heaviest duties on processed products, something which has proven prejudicial for exporting countries such as Argentina and Canada.

Among such non-tariff barriers are those restrictions connected with commercial and health practices, the imposition of which has caused the segmentation of the global market in meats. The determining factor in this segmentation is the limited access given fresh, refrigerated or frozen meat coming from countries with occurrences of foot-and-mouth disease. The International Epizooties Organization for Animal Health has defined two zones:

- zones Free of Foot and Mouth (FFMD) disease which have not carried out vaccinations for at least one year (United States, Australia, New Zealand, Canada, Japan, Korea and the rest of Southeast Asia along with the Central American countries) and
- the so-called disease circuit (European Union countries, Eastern European countries, the Commonwealth of Independent States, the Middle and Near East, Argentina, Brazil and Uruguay), which consists of countries carrying out vaccination and which have been free from the disease for at least two years together with those showing an incidence of the disease.

Given that the majority of the high-income OECD countries are found in the first group or zone, the prices for meat in the FFMD markets are higher than contemporary prices in the so-called circuit countries.

Besides health or sanitary non-tariff barriers, there are other non-tariff instruments used by countries wishing to protect an economic sector from foreign competition. Such instruments may include customs fees, variable levies, quotas, import licenses, subsidies and labeling and packaging requirements. These non-tariff instruments can affect the production, consumption and international trade in meats.

From the very outset, the European Union has sought to protect its domestic market while at the same time formulating and implementing aggressive export policies. The policy regime governing beef was put in place in 1968 as part of the Common Agricultural Policy (CAP). This regime set up customs duties, variable levies and import licenses (along with subsidies) which have had an effect on international trade by promoting production within the Union trading bloc. This has meant that EU meats could enter various different markets, displacing the entry of other countries which in fact may be more competitive. Producers receive additional subventions through direct payments of grants, price controls and export subsidies.

The 1995 Agricultural Agreement forming part of the Uruguay Round contains provisions on market access, export subsidies and domestic support for meat products. The spirit of this Agreement was based on the assumption that it would strengthen global demand and therefore increase world prices for meat products. The global market in beef was understood to be the one most directly affected by the Agreement, since export subsidies and obstacles to market access were greater for beef than for the other related products. Although there has been some compliance with these provisions, a number of factors have unaccountably appeared to halt the process, among which are the concern with disease-free food emerging in Europe and Japan and the financial insecurity within the major importing countries. These have decreased demand for meat and have served to bring pressure to lower prices (FAO, 2000). The framework of the EU's Program 2000 continues this trend of substituting price support mechanisms with direct payments.

For Argentina, it is the quotas that have been put in place by various countries which are most important since volumes of product exceeding the quota fall under extremely high tariffs. Argentina is included in the Hilton Quota and the Bilan Quota, both of which have a tariff of 20% within the quota and 104% outside of it.

The United States' Meat Import Law at one time fixed import quotas annually for fresh, refrigerated or frozen meat. As a result of the commitments undertaken within the 1995 Agricultural Agreement, the Meat Import Law was derogated and an import quota was brought into force which fixed the pertinent quantity at 656,000 tonnes, exclusive of imports from Canada and Mexico which were governed by the provisions of NAFTA (FAO, 2000). Later, in 1998, the import quota was increased by 20,000 tonnes for Argentina and Uruguay once these countries had been declared free of foot-and-mouth disease without vaccination. With the loss of this status in 2000, the United States has cut off the importation of meat coming from Argentina.

The international market in meat has been disturbed over the last five years by two sorts of crises, namely, that associated with animal health and that of confidence in the quality of food products. These crises began in 1996 with the first appearance of mad cow disease in the European Union. This crisis continued into 2001 with an outbreak of epidemic proportions of foot-and-mouth disease in the United Kingdom, together with a number of other foci of the same

infection in other EU member countries. Argentina won foot-and-mouth disease-free without vaccination status in 1999, but subsequently lost this status when a number of foci of infection were detected in some of its regions. At the present time, exports to the European Union have been resumed and it is hoped that the same will occur for other markets such as the United States.

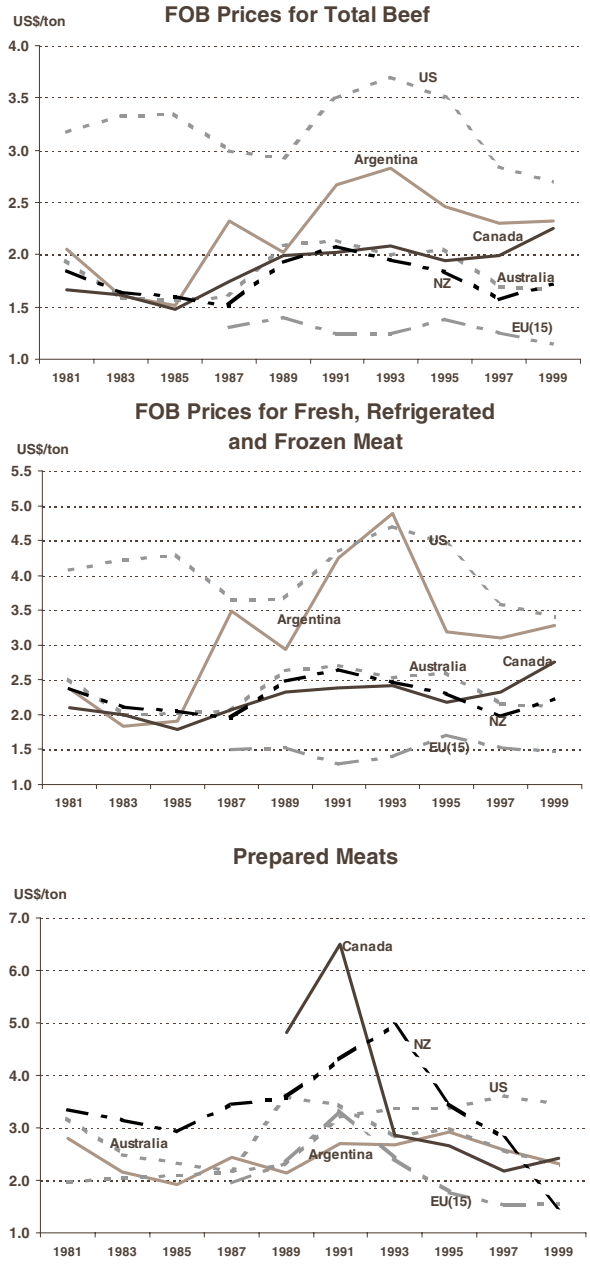
In order to appreciate the impact of these crises, we have to distinguish between crises that interrupt international trade relations and those which affect demand and consumer confidence. Factors having to do with food safety affect demand and may result in a loss of export markets. Canada, for its part, may have benefitted indirectly from the mad cow epidemic in the European Union by experiencing lowered competition in the lucrative Asian markets, given that Australia had redirected its meat exports to the European market (Agriculture and Agri-Food Canada, 2001).

b) International prices

The behaviour of international prices for the more pertinent export products (fresh, refrigerated, frozen and prepared meats) is another factor determining competitiveness within the sector. In Figure 7, we compare the history of particular prices[3] associated with the major competitors within the international market.

Argentina's prices for all beef products stayed around those of the other exporting countries up until the 1980s. After that time, its prices showed a significant increase over the prices of all other countries with the exception of the United States. For Canada, prices were located in the vicinity of world prices for most of the period under review. However, in the last two years this price indicator has revealed a decreased level of competitiveness. We can see that the US price

Figure 7: Evolution of International Prices, 1981-1999



Source: Estimated from FAO data.

3. *International prices are approximated by (export value FOB/quantity exported.*

levels are the highest, and those of the European Union the lowest (excluding intra-Union trade). With regard to fresh, refrigerated and frozen meat, Argentina experienced, beginning in 1985, a marked deterioration in the competitiveness of its prices, even going beyond those of the US in some years. Canadian prices have behaved similarly to total beef prices, given that for Canada this type of meat product is the most important within its total group of exports.

Argentina appears to have consolidated its competitiveness with regard to prepared meats and prices have tended to be located firmly below those of its competitors. Canada has been in the process of consolidating its position in regard to this type of meat product over the past five years and its prices have been near those of the rest of meat exporters.

Keeping these price indicators in mind, we conclude by pointing out that the group of prepared meat products shows the greatest possibility of gaining market share for both countries in our discussion.

4.2 Internal Factors

a) Costs

The evolution of production costs is a factor in competitiveness which cannot be ignored. Lower costs mean higher profits for companies, making them more competitive. The pertinent accountable costs include historic costs which have been determined by an arbitrary process of resource allocation. International comparisons are difficult, since standardized procedures are not used in the required measurements. Nonetheless, we can usefully employ the unitary costs for each country since this will give us some indication of the underlying competitiveness for the product under review. We point out, in addition, that the relevant costs must include, besides production costs, those involved with marketing and distribution[4].

We have used, for the purposes of this discussion, the production costs associated with the winter pasture system in Argentina and the feedlot system in Alberta, Canada, since these are the operations most directly connected with the beef processing industry which consists of cattle slaughtering as well as conversion of beef carcasses into a wide variety of fresh or frozen beef products (cutting).

Production costs can be disaggregated in the following manner:

i) The cost of feeder cattle, representing the cost of the animal bought for fattening. In Argentina, the net weight at purchase of such an animal is between 170-180kg. Pasturage has been selected as the fattening system since this is the most common method and the one for which information is available. However, as of 2000, information became available which distinguished between pasturage and feedlot fattening. For Canada, we are presuming a net weight at purchase of 420 kg and a weight out of 578 kg after 100 feeding days.

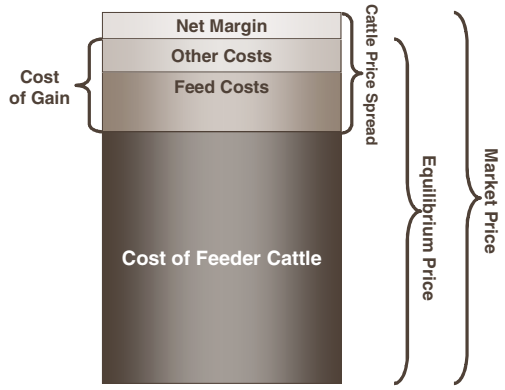
---

4. Unitary costs reflect average and not marginal costs and for this reason they furnish little information with regard to the relationship between changes in costs and changes in the product. In the case of competitive markets, this problem is solved by the fact that prices will reflect marginal costs.

ii) Direct costs, representing costs involved with feed, winter forage, pasture maintenance (labor and materials for controlling weeds and applying fertilizers), and supplements (grain, silage). Included here are the amortization of pasturelands and equipment, veterinary and medicine.

iii) Indirect or structural costs, representing those incurred independently of the size of the operation such as administrative costs (administrator's remuneration, accountant, office costs, travel expenses, etc.), organizational costs (personnel, technical consulting, electricity, upgrading, etc.), and municipal and provincial taxes.

Figure 8. Market Price Determinants for Fed Cattle



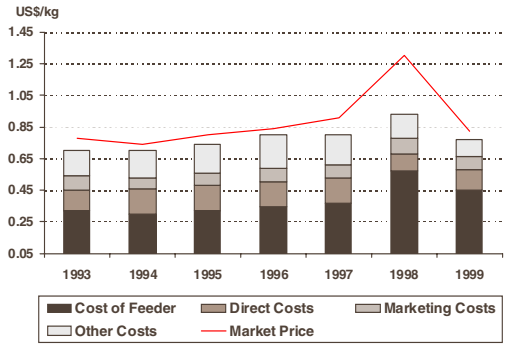
iv) Marketing costs, represented by commissions, sales taxes, various charges and freight costs borne by the producer.

The equilibrium price or break even price for the operation will be the price covering the sum of all accountable costs (see Figure 8). The difference between the price paid for the calf and the price received by the producer for his animal at sale is called the "spread" or the available margin for covering the cost of fattening and generating a marginal net profit.

Argentina

Argentinean data have been gathered from trade publications (farming and agricultural market margins) and correspond to four model zones (Buenos Aires East, Buenos Aires North-Santa Fe South, Buenos Aires Southeast, and Córdoba Central) based on the annual sales of each region. The predominant breed in these regions is the British steer.

Figure 9: Argentinian Costs of Production 1993-1999



Source: Estimated from Agromercado data.

Figure 10: Market and Equilibrium Prices 1993-1999

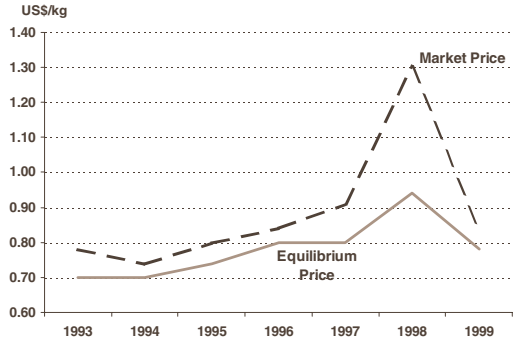


Figure 9 indicates the total cost trajectory for operations during 1993-1999, disaggregated by major types. In recent times, calves have risen in value, structural costs have decreased and there has been a slight increase in direct costs. The remaining items have remained relatively constant.

Up to 1997, the price obtained for the product covered the so-called accountable costs. The marked increase in price, which took place in 1998 more than covered total production costs, including the opportunity cost. Regarding the opportunity cost (not shown here), we have allocated a rate of 4.5% to both the capital and the land for each model based on annual sales (Ostrowski, 2000).

In recent times, that is, over the past two years, despite the 1999 decline from 1998, the price has remained slightly above total production costs which has meant that operations have been receiving so-called supernormal gains.

The variation in profit margins may arise due to changes in costs or in prices. As we can see from Figure 10, there is a clear trend in the direction of an increase in net profitability, which may be explained more by an increase in prices than lowered production costs.

Canada

The costs presented are the Alberta feedlots as developed by CANFAX. The Alberta Cattle Commission reports that nearly 60 percent of Canada's beef is produced in this province. The largest feeding network and the largest beef processors are located in Alberta, and beef is Alberta's number one agricultural commodity.

CANFAX develops monthly estimates for Alberta, for feeding six classes of cattle, namely, heifer calves, steer calves, yearling heifers, yearling steers, shortkeep heifers and shortkeep steers. The shortkeep steer costs are the ones presented here as the costs of production estimations for Canadian feedlots. These costs are estimated using a complex set of formulas and assumptions. The assumptions underlying these costs are shortkeep steer in at 925 lbs., out at 1275 lbs., gains 350lbs at 3.50 Average Daily Gains (ADG) in 100 days on feed. These are the operations most directly connected with the industrial processing of meat. The major costs of cattle feeding are the feeder cattle themselves (see Figure 11). Other than the feeder cattle, feed is the largest component of cost. Together the cost of feed and other variable costs, such as labor, interest, medicine & veterinary services and transportation, represent the "cost of gain." The cost of gain is the cost of putting weight on feeder cattle in order to sell them as fed cattle.

Figure 11: Canadian Costs of Production
1993-1999

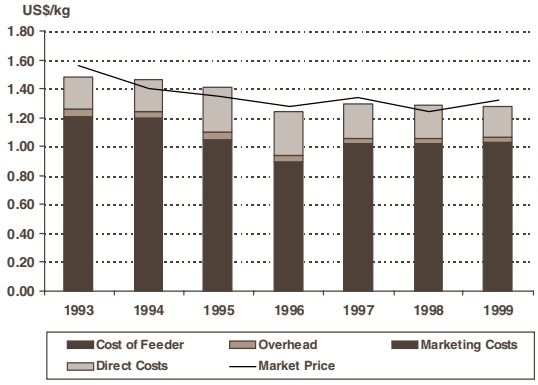
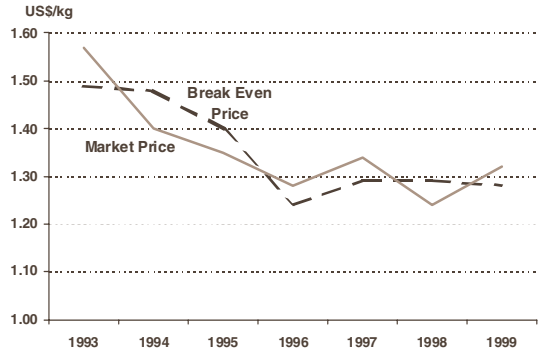


Figure 12: Market and Equilibrium Prices
1993-1999



Source: Estimated from CANFAX data.

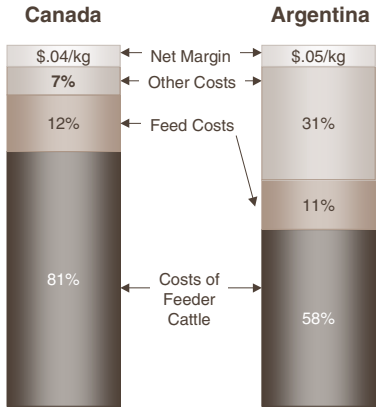
The cash expenses in US$/Kg represents the break-even price for shortkeep steers. The break-even price per CWT in Canadian dollars for shortkeep steers went down from $87 in 1993 to $86 in 1999. During the 1993-99, costs declined reflecting the lower cost of feeders. The cost of feed remained fairly constant around 13% except for 1995-96 which increased around 17% and 1995-96 feeder costs declined around 26% .

Overhead and other variable costs were higher from 1993-95 (8%) declining to 7% for the following years. The difference paid by a feedlot for its feeder cattle and the price that it receives for fed cattle is the size of the "cattle price spread," or margin available to support the cost of gain and to generate positive "net margin," i.e. a profit. A negative net margin will result when the cost of gain is greater than the cattle price spread.

The profitability of the industry is affected not only by the management skills of feedlot operators but by higher costs and the length and depth of the contraction and expansion phases of the cattle cycles as well as international prices. In 1994-95, higher feed costs that occurred at the expansion phase of the North American cattle cycle, when the market prices are always at the lowest levels, as well as a shift in consumers preferences in most developed countries from red meat to white meat, resulted in negative margins.

Based on this analysis, we can conclude that in both countries the costs of feeder cattle is the most important one, but while in Argentina this represents between 35% and 50%, in Canada this is between 70% and 80% of the total costs, as shown in Figure 13. However, Argentinean cattle for slaughter are smaller than Canadian carcasses. Argentinean feeder cattle costs moved upward since 1993, while in Canada the higher 1993 costs declined, reaching the lowest in 1996. But despite increases in the following years, Canadian costs in 1999 were still lower than those of 1993.

Figure 13. The determinants of the market price for Argentina and Canada 1999



Source: Estimated from Agromercado and CANFAX data.

Regarding the structural, marketing and direct costs in Canada, these costs range between 20% and 30% while Argentinean costs are higher at around 50% and 65%. The flexibility of reducing these costs for Argentina through policies such as tax incentives puts their producers in a more advantageous position than Canadian producers since these Canadian costs have historically not presented much change.

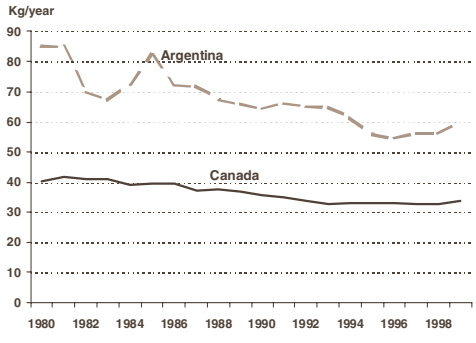
b) Demand

World demand for beef has increased due to increases in incomes, population, and urbanization. Beef contains animal proteins for which there are few substitutes and given the relationship between consumption and income levels there is much demand for it among the more developed countries and within the better off socioeconomic strata of less well developed countries. Domestic demand has been traditionally considered to be one of high income elasticity.[5] Nonetheless, there has been a trend toward decreasing demand, mainly in the European market, because of the appearance of Bovine Spongiform Encephalopathy (BSE), there have been changes in patterns of consumption driven by health considerations whithin part of the population and a decrease in the price of a number of substitutes. Consumption levels in the European Union have slowly recovered after the mad cow disease (BSE) crisis, although they have yet to reach pre-1996 levels. The United States is the largest consumer with a total of 12.3 million tonnes in 1999. This being followed by the Eureopean Union at 7.2 million tonnes. Argentinian and Canadian consumption stand at 2.2 million and 1.0 million tonnes, respectively.

5. *Income elasticities derived from OECD, AgLink Model: U.S. (.93), Japan (1.2), China (.98), Argentina (.19), Canada (.14), EU (.14).*

With regard to per capita consumption, levels are relatively high for Latin American countries. Argentine and Uruguayan levels of consumption are especially high. In the case of Argentina, up until the mid-1980s average beef consumption[6] was 83.5 kg per capita per annum (1950-1984). Peaks of more than 100 kg have been recorded, along with occasional drops to 60 kg. The share of domestic demand in the total supply of meat over the last four decades has varied between 75% during periods of high exports and 95% when the latter diminish.

Figure 14: Canada's and Argentina's Per Capita Beef Consumption, 1980-1999



Source: FAO

Since 1985, consumption began a marked decline. In that year, the figure of 90 kg was the last that was above the recorded average. After that, consumption fell to below 70 kg and in 2000 it reached 60 kg, a level not seen since 1972 when policies were put in place to restrict domestic consumption (see Figure 14).

Among the causes which might account for the decline in consumer demand for beef are the higher prices for live cattle which were passed on to consumers. Since 1993, the price of meat has stabilized but domestic demand has, during the same period, fallen off. Consumer behaviour suggests that medium and medium-low income socioeconomic strata have found a substitute in poultry meats, the price of which has seen a relative decrease. Within the medium-high and high income socioeconomic strata, traditionally the largest consumers of meat, a change has occurred in the form of a partial replacement of meat by non-meat products or products with little meat content and also products which are better prepared or more sophisticated. Lower income socioeconomic strata tend to subsitute meat with low cost grain derivatives, vegetables, and legumes.

This decrease in consumption has come about in spite of a decrease in the costs of the principal cuts of meat and a simultaneous increase in incomes during the first years of the 1990s. This leads one to think that what is transpiring is a fundamental structural change in the population's consumption habits. Part of this change has been due to the campaign for foodstuffs with less meat content.

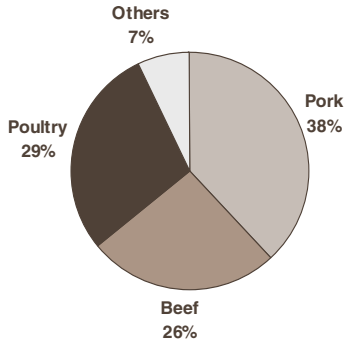
Canadian per capita consumption has decreased slowly over the last two decades from 40 kg in 1981 to 31 kg in recent years. This can be attributed to a combination of the higher relative price of beef compared to other meats, a major shift away from products perceived to have significant fat content, an aging population traditionally less likely to eat large quantities of red meat, the availability of a wide range of international and convenience food products not based on beef (pastas, oriental dishes, etc.) and an increasing consumer preference for poultry meat. During 1999, beef consumption experienced a slight increase which may be explained by the increased demand for a diet with greater protein content.

6. *When we refer to consumption we are in reality referring to data which describe apparent consumption.*

c) Supply

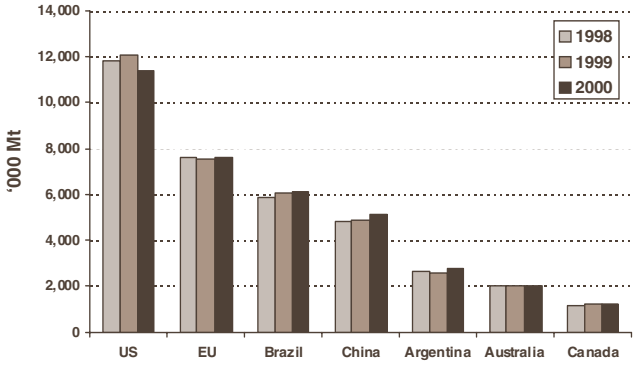
World meat production[7] is heavily dominated by pork production and this is followed by poultry and then beef (see Figure 15). In 2000, pork production represented 38% of total production, followed by poultry at 29% and then beef at 26%. If we compare these figures with 1990, we see that beef production has fallen by 3%. This may be explained in large part by a decrease in poultry prices together with a change in consumer preferences as a consequence of the spread of cattle diseases such as BSE and foot-and-mouth disease.

Figure 15: World Meat Production, 2000



Source: FAO

Figure 16: World Beef Production, Selected Countries 1998-2000



Source: USDA, FAO

Beef production is principally located in developed countries (see Figure 16), especially North America and Europe, and accounts for 50% of world production. The US is the main producer and its 11.4 million tonnes (head equivalent) in 2000 accounted for 20% of world production. In second place is the European Union whose production of 7.6 million tonnes (head equivalent) accounted for 13% of total production.

The remaining producer countries account for appreciably lower quantities. Argentina is the world's fifth largest producer, it share having been reduced to 4.5%, from above 5%, over the last five-year period. Canada contributes 1.2 million tonnes or 2% to world totals.

Argentina

Argentina's livestock cycle has been historically asymmetrical. The period of liquidating stock is normally shorter than the time stock is retained because this last involves reproduction of the herd and the recuperation of cows from the whole stock and all this requires two and one-half years to complete the biological cycle. There is also a seasonal variation in the cattle supply related to the pasture system, but such seasonal effects have diminished due to changes in the system of operations and the increased use of feedlots over the last number of years.

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7. We need to clarify that neither the production nor export of live animals has been factored into our discussion.

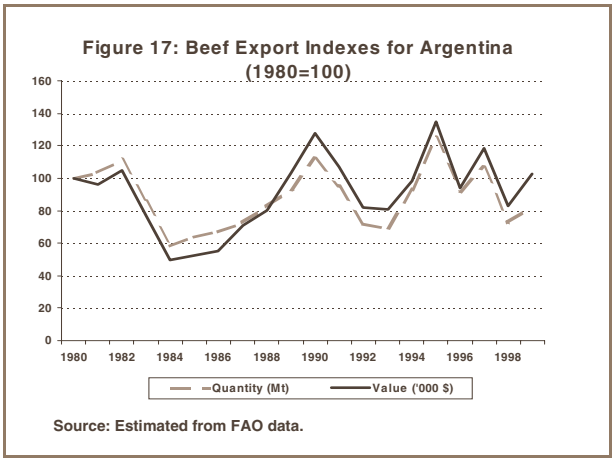
Table 4: Argentina's Supply and Disposition of Beef (Mt), 1985-1999

Year	Production	Imports	Exports	Total Supply	Waste	Domestic Disappearance
1985	2,847,838	39	283,259	2,564,618	77,618	2,487,000
1986	3,023,413	13	299,550	2,723,876	503,877	2,220,001
1987	2,574,359	0	323,719	2,250,640	1,640	2,249,000
1988	2,506,467	23	365,118	2,141,372	1,372	2,140,000
1989	2,558,857	0	411,539	2,147,318	27,315	2,120,003
1990	3,007,000	0	496,968	2,510,032	414,990	2,095,042
1991	2,918,000	3,818	421,250	2,500,568	315,382	2,185,186
1992	2,784,000	14,498	319,079	2,479,418	298,845	2,180,577
1993	2,808,000	7,210	309,058	2,506,152	305,934	2,200,218
1994	2,783,000	5,522	412,195	2,376,327	260,067	2,116,260
1995	2,688,000	5,759	556,305	2,137,454	187,506	1,949,949
1996	2,694,000	8,947	407,798	2,295,149	374,436	1,920,713
1997	2,712,000	11,688	473,737	2,249,951	243,268	2,006,683
1998	2,451,524	31,846	323,554	2,159,816	127,134	2,032,682
1999	2,652,571	16,690	364,152	2,305,108	103,825	2,201,283

Source: FAO.

We point out the appearance of imports starting in 1991 and with an unusually high value in 1998: this is principally due to a rise in domestic costs which later also caused an abrupt decrease in production and exports (see Table 4).

The marked drop in exports recorded for 1996 pushed Argentina to seventh place after having been the world's fourth or fifth largest exporter in the first years of the 1990s (see Figure 17). Among the causes for this abrupt decline we indicate, on the supply side, the retention phase of the livestock cycle for 1997 / 1998 and the important reduction in cattle livestock due to a significant increase in the domestic price of farms. As for external causes, there was apprehension over BSE expansion in the European Union, the negative effects on consumption of the crises in Asia and Russia, all of which reduced the demand for meat products, but beef in particular.

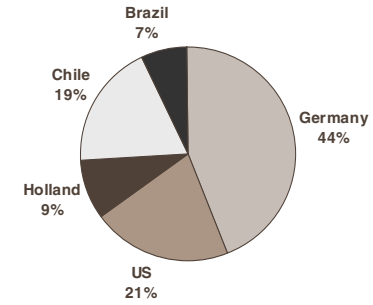


The appearance of foot-and-mouth disease in 2001 brought about the closure of foreign markets and reduced export volume by 53% and export value by 65% within the first eight months, compared to the previous year.

The main destination of Argentine exports is Germany, especially the boneless refrigerated cuts the majority of which are included in the Hilton Quota. The United States has become the second most important market. When Argentina won the foot-and-mouth disease free without vaccination health status in 1999, the United States granted it an import quota equivalent to 20,000 tonnes (product weight). Up until then, Argentina had been shut out of access to the fresh meat market for health reasons.

Exports are very concentrated with only five countries buying 75% of total exports in 1998. The principal country among these five was Germany at 44% (see Figure 18). Argentina has never been able to achieve any significant penetration of the Pacific market which is located between foot-and-mouth disease free zones, although the situation was changing before the 2001 epidemic. Argentina's foot-and-mouth disease-free without vaccination status appears to be in jeopardy once again with the appearance of a new epidemic (apparently under control) and so we must assume that in the short term it will be difficult to break into the Asian, Canadian and American markets (these last two having import quotas).

Figure 18: Principal Destinations of Argentinian Beef Exports, 1998



Source: FAO

Canada

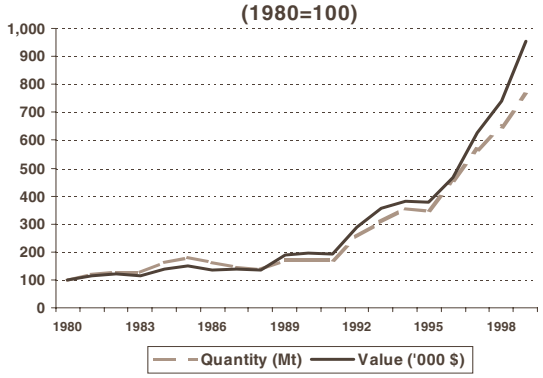
In Canada a cycle of expansion and reduction runs through the industry every 9 to 10 years. Table 5 provides Canada's supply and disposition of bovine meat. The total production in 1999 increased 20% from 1985 and 44% from the lowest level in 1993. CANFAX, a division of the Canadian Cattlemen's Association reported that more beef is being produced due to the fact that cows are weaning bigger calves, resulting in bigger carcasses. Since 1996 steer carcasses have gained 67 pounds on average, lower feed costs contributed to heavier carcasses. Other factors influencing the increase in carcass weights include higher feeder cattle prices and tighter supplies of feeder cattle (meaning inventory stays in the feedlot longer).

Table 5: Canada's Supply and Disposition of Beef (Mt), 1985-1999

Year	Production	Imports	Stock Exchange	Exports	Total Supply	Waste	Domestic Disappearance
1985	1,028,790	109,159	-2,120	113,885	1,021,944	4	1,021,940
1986	1,028,240	106,505	4,469	101,117	1,038,097	0	1,038,097
1987	953,380	129,157	1,946	89,691	994,792	0	994,792
1988	947,380	158,659	-6,467	86,927	1,012,645	0	1,012,687
1989	951,930	161,881	1,202	105,396	1,009,617	0	1,009,632
1990	900,100	192,540	3,749	107,253	989,137	0	989,137
1991	865,950	222,575	-1,994	106,602	979,929	0	979,928
1992	898,800	222,970	110	155,679	966,201	0	966,201
1993	859,630	272,318	-9,930	189,166	932,852	0	932,939
1994	899,460	290,473	-7,410	220,439	962,084	4	962,203
1995	928,200	257,850	6,720	215,632	977,138	-1	977,139
1996	1,016,330	243,423	2,013	280,899	980,867	2	980,864
1997	1,076,280	259,222	-470	350,867	984,165	-4	984,175
1998	1,148,100	247,343	-3,350	404,945	987,148	4	987,148
1999	1,238,000	272,748	-6,000	476,869	1,027,8	3	1,027,934

Source: FAO

Figure 19: Beef Export Indexes for Canada (1980=100)



Source: Estimated from FAO data.

During the same period, international trade has become an increasingly important component of the Canadian market with beef imports almost doubling in the 1988-1999 period while beef exports increased approximately five fold during the same time span (see Figure 19 and Table 5). However, imports are small relative to exports. Canadian imports of bovine meat, mainly from the United States[8] increased dramatically. This development can be attributed, in large part, to the benefits of trade in the North American market. The major consumption centres in Eastern Canada (Montreal and Toronto), are located closer to the US beef production centres than Alberta, Canada's major producing region.

8. *The U.S. is the main source of fresh chilled beef. However, frozen beef imports to Canada are from Australia, New Zealand, Uruguay, Argentina and the U.S., in that order, for 1999.*

Conversely, Alberta is closer to US west and central beef consumption centres than the major US production centres. The development of a more open international trading environment, primarily resulting from the Uruguay Round, CUSTA, and NAFTA agreements, has resulted in a more open and competitive North American beef market.

Figure 20a: Principal Destinations of Canadian Beef Exports, 1999

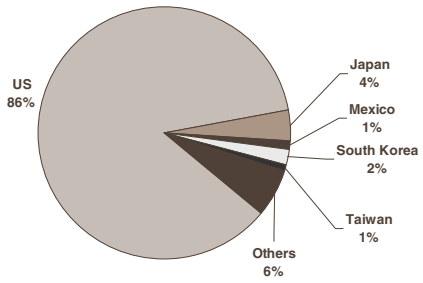
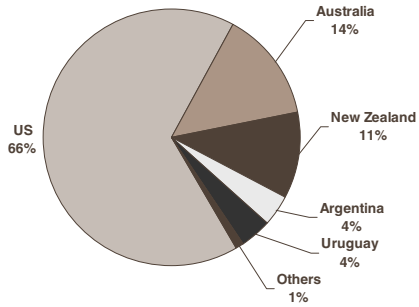


Figure 20b: Canadian Beef Imports by Country of Origin, 1999



Source: Statistics Canada

Beef exports represented 39% of production in 1999 while imports accounted for 22% of production (see Table 5). By far, the largest portion of Canadian beef exports are destined for the United States (86% in 1999) while other important markets include Japan 4%, South Korea 2%, Mexico 1%, and Taiwan 1% (see Figure 20a). Canada's imports from the US have increased in recent years compared to the levels of the late 1980s as a result of North America market integration. In 1999, the imports of beef from the US were 66%, from Australia 14%, New Zealand 11%, Uruguay 4%, Argentina 4% (see Figure 20b). Imports from Argentina increased considerably from 4% in 1999 to 18% in January-March 2000 as a result of the lifting of FMD health barrier.

d) Quality

The market for foodstuffs in general is undergoing a change from supply-side to demand-side in the sense that consumers are demanding more information on the health characteristics and quality of the foodstuffs they consume. They are also interested in environmental matters and the variety and identification of contents.

Argentina

Beef production in Argentina is carried out using principally British strains of cattle in an extensive system of pasturage located especially in fertile zones (the Moist Pampa). This form of beef production involves the continuous movement of animals and thus diseases associated with more intensive forms of production may be avoided. The animal reaches its production terminus after a period of between one and a half and two years, at which time its meat has acquired high quality gustatory characteristics. Argentine beef is tender (Warner-Bratzler values of between 7 and 9 pounds/inch), juicy and brilliantly red. Another interesting feature for consumers is the lipid content. It has been shown that animals fed on pasturage have intramusculure fat content and cholesterol values 25% and 10% lower than those fattened with grains.

Yet another aspect of interest related to the processing of beef is the hygienic quality and bacterial content. It is proven that the latter is equal to or less than that found in countries using high technology, which means there is a lower risk of disease or changes in meat quality. The Argentinean system of livestock raising based on natural pastures produces a meat with low fat and cholesterol content (Secretaria de Agricultura, Ganaderia, Pesca y Alimentacion (SAGPyA), 1998).

Canada

Canada has an internationally respected federal government-supervised plant inspection system in place to meet the most demanding animal health and meat hygiene standards. The grading regulations and Canadian standards facilitate trade and marketing by establishing a basis for the determination of meat quality and yield.

Thirteen carcass quality grades exist for the classification of carcasses according to the criteria of maturity, muscling, meat colour, marbling, fat characteristics and fat measurement. Youthful top quality beef carcasses would be graded either Canada Prime, Canada AAA, Canada AA or Canada A. A youthful carcass not meeting the criteria for one top of the quality grades would be assessed on one of the four Canada B grades. There are four Canada D grades for cow carcasses and the Canada E grade is primarily for bull carcasses. Grading is not mandatory.

The Canadian Food Inspection Agency reported that in 1999, the Canadian cattle slaughter totaled slightly more than 3.3 million head. Although beef carcass grading is optional, nearly 3.0 million carcasses or 90% of the slaughter was graded and of these carcasses, approximately 2.5 million were graded either Canada Prime, Canada AAA, Canada AA or Canada A, reflecting the high quality of Canadian cattle.

Today's beef cuts contain considerably less fat and cholesterol because animal feed is based on natural and healthy diets which exclude undesirable feeds. Experienced farmers care for their animals and provide the highest standards of welfare, ensuring that they live in a stress free environment. Improved grading, greater trimming of surface fat and leaner carcasses, resulting from better feeding and management practices, have substantially reduced fat content. These measures, coupled with an effective marketing strategy, stabilized and increased the declining demand for beef in North America.

In conclusion, Canadian beef, because of its consistent high quality, is also competitive in most major export markets.

e) Government policies

Argentina

The Convertibility Plan [of the peso to the US dollar--Trans.] which began in April 1991 introduced important policy and institutional reforms that affected the beef production sector. A fixed exchange rate was put in place, the operations of regulatory agencies such as the National Meat Board were suspended and restrictions on agricultural exports and subsidies for loan interest rates were eliminated. Port operation costs were significantly reduced and the use of bank credits rose.

Macroeconomic stability and sectoral deregulation caused changes to production systems which were potential sites of growth for some activities but without allowing for substitution among production types, and this came to be a period of stagnation for agriculture with livestock being raised and fattened on grains (Reca and Parellada, 2001).

The tax policy designed for the beef production sector during the 1990s took place in two different stages: From 1991 to 1994 the aim was to simplify the tax system, reduce levels of tax evasion and improve collection. From 1995 to 1998, tax pressures increased as successive reforms had as their sole goal an increase in the collection rate to finance a growing fiscal deficit.

Regarding technological improvements, the beef sector has seen a series of progressive practices in the pasturing and livestock raising system, all of which have led to an increase in beef production per hectare (Sonnet, 2000).

About the middle of 2001, the federal government sought to implement a number of plans with the objective of increasing the competitiveness of various production sectors. Among such plans was the agreement between the Ministry of Agriculture, Livestock, Fisheries and Food, the provincial governments of Buenos Aires, Santa Fe, Córdoba, and San Luis and the business organizations representing cold storage interests. Short term measures involved, among others, those oriented towards businesses specializing in meat exports (in order to lessen the impact of the closure of major foreign markets), a deferment of federal taxes, the elimination of certain federal, provincial and municipal taxes, the elimination of employee contributions, assistance with labour financing and so on.

The seriousness of the national economic crisis and the requirement that the government comply with its own zero deficit law caused the very authorities which proposed such measures to cancel them before they had become fully implemented.

The devaluation of the peso by 40%, which was implemented at the beginning of 2002 and the subsequent floating of the currency served to make Argentine beef more competitive in the international market. However, we have to keep in mind the reappearance of measures such as restrictions on agricultural exports which tend to reduce the effects of devaluation.

One of the factors affecting meat exports over the past few years has been that the price of a steer in dollars has been above that found currently in the main exporting countries (New Zealand, Australia, Brazil and Uruguay). This became most accentuated in 1998 when, in spite of the increasingly good prospects for exports resulting from the lifting of the health barriers to exports (which had been put in place because of the presence of foot-and-mouth disease in Argentine herds), exports actually declined by 33% compared to the previous year. The beef cold storage industry found itself in a critical situation in which competition in international markets was becoming very difficult.

Canada

The Government of Canada, along with provincial and territorial governments is working with the agriculture and agri-food industry and interested Canadians on a national plan, the Agricultural Policy Framework (APF), to make Canada the world leader in food safety, innovation and environmental protection. The APF will provide the tools and the choices for producers to strengthen their businesses by focusing on the sector's ability to increase profitability.

Canada's work in reducing unfair, trade-distorting international subsidies, will lead to a greater convergence between (and a more timely alignment) of domestic and world prices and increase the influence of market signals on the orientation of agricultural production and consumption. In this way, improved market orientation will contribute to a better allocation of resources in agriculture.

Feed grain programs affect the livestock sector through the cost of feed grain and feed costs and also tend to limit growth in grain-fed production. One of these programs was the Western Grain Transportation Act (WGTA) passed in 1983, effective from January 1/84 to July 31/95 inclusive. The elimination of the WGTA improved resource allocation in line with market forces and fostered diversification in Western grain-producing regions into activities such as livestock and high value added products. The Alberta Crow Benefit Offset Program, which was introduced in 1987 to offset the distortions in feed grain prices arising from payments of the WGTA, was terminated on March 31, 1994. The Feed Freight Assistance (FFA) program was also terminated in January 1996. The National Tripartite Stabilization Program (NTSP) for beef was terminated on December 31, 1993, in all provinces. Overall, policy developments affecting grain transportation and tripartite stabilization have shown a movement in the direction of lower support and greater market orientation.

Farm income protection policy in Canada has undergone significant adjustments. The objective is to provide Canadian farmers the tools to manage and reduce risks that threaten the profitability of their operations, with programs cost-shared by government and producers. Support is increasingly provided through sector-wide income protection programs such as the Net Income Stabilization Account (NISA), which encourage farmers to set aside funds to manage future risks. NISA extended commodity coverage for beef in 1996-97 to Saskatchewan producers, but the majority did not become participants in the program until 2000. In 2000, the coverage was extended to Alberta and BC producers.

The Companion Programs are province-based safety-net initiatives designed to meet specific needs. Many are designed to enhance assistance provided by NISA. Others are intended to foster the long-term viability and competitiveness of Canadian agriculture. These initiatives are funded jointly by federal and provincial governments. Industry Development Fund (IDF) programs support the agri-food sector with the purpose of sponsoring research and industry development activities, with the objective of promoting and enhancing competitiveness.

CHAPTER 5
CONCLUSION

This study analyzes a group of indicators and determinant factors which allow a comparative assessment of the competitiveness of the beef production sectors in Argentina and Canada. Our conclusions are that both countries produce excellent quality beef, but from 1980 to 1999 the share of world export markets has been decreasing for Argentina while it has been increasing for Canada. The greater part of Argentine production is targeted at the domestic market whereas Canada is in competition with the United States as a result of Canada/US market integration. Regarding production costs, the analysis shows that direct, structural, and marketing costs are higher for Argentina than for Canada and the flexibility of reducing these costs places Argentinian producers in a more advantageous position than Canadian beef producers. Argentinian producers have extensive areas which are not used and can be exploited for cattle production; by contrast Canada has no such unused land and therefore increased cattle production must come at the expense of crop production or through efficiency gains such as improved pasture production, better genetics and others. As for domestic sectoral competitiveness—that is, the rate of import penetration in the domestic market—Argentina has a negligible coefficient given the minimal quantities of its imports. Canada's situation is however different, showing a marked penetration by imports of the domestic market, mainly from the US as a result of the North America market integration.

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