A CRITICAL ANALYSIS OF THE EFFECT OF SELLING CONSORTIUMS IN THE PORK INDUSTRY ON PROFITABILITY: AN EXPLORATORY STUDY IN KZN.

By

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A dissertation submitted in partial fulfilment of the academic requirements for the degree of Masters of Business Administration in the School of Business.

University of KwaZulu-Natal

2004

ABSTRACT

The pork industry in South Africa is faced with many challenges some of which have been exacerbated with the trend toward globalisation. The success of the individual farmer is dependent upon co-operative agreements, achieving economies of scale, adding value to the commodity product pork and producing the end product efficiently enough to be competitive in the long-term whilst adjusting to the highly volatile market.

The objective of this study was to determine whether the use of a marketing consortium was in principle an appropriate means of increasing profitability of individual farming operations. A secondary objective was to determine what the processing companies thought of the proposed selling consortium and how they would react to the concentration of supply that would result from the formation of a marketing consortium.

The secondary research was based on a literature survey of current pork journals, articles from South African pork magazines, statistics from industry reports, textbooks on international trade and marketing, the Internet and newspapers.

To evaluate the findings of the literature survey, a questionnaire using Likert type scales was devised and empirically tested among selected samples within the pork industry in KwaZulu-Natal. The literature review and the results from the questionnaire established that the formation of a selling consortium or collaborative relationships would have the potential to be mutually beneficial to both pork producers and pork processors. As a result of this it is felt that marketing consortiums have a place in the pork industry.

The scope of this research is limited to the requirements of a dissertation that fulfils the partial requirements of a Masters in Business Administration. The sample sizes were small as the research was confined to the KwaZulu-Natal pork industry.

In order to facilitate the reading of the dissertation and to simplify referencing of sources from the Internet the term "online" has been used to replace lengthy Internet addresses. The full address, however, is included in the list of references at the end of the dissertation.

ACKNOWLEDGEMENTS

I am indebted directly and indirectly to a number of people who sacrificed many hours of their time to assist me fulfilling the requirements of this dissertation. I will, however, mention some of those who assisted by name.

Firstly, to my supervisor, Professor Charles O'Neill, who spent many hours in deliberations with me ensuring that we had clear direction, for his patience, advice, attention and support. To Professor Debbie Vigar for her input at all levels of the dissertation.

Secondly, to my wife, Siobhan, for all the hours that you sacrificed while I was studying, your continued support, your understanding and love. I could never have done this with out you by my side.

Lastly, to Carol for all your time and effort spent proof reading the completed dissertation.

DECLARATION

I, Alexander Daniel Brett Hopkins, hereby declare that this dissertation is my very own original work and that all sources have been accurately reported and acknowledged and that this document has not previously in its entirety or in part been submitted to any university in order to obtain an academic qualification.

Alexander Daniel Brett Hopkins

21 October 2004

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List of abbreviations

ABIOVE	-	Brazilian Association of Vegetable Oil Industries
AFMA	-	Animal Feed Manufacturers Association
ASF	-	African Swine Fever
BBC	-	British Broadcasting Corporation
BSE	-	Bovine Spongiform Encephalopathy – "mad cow disease"
CAFO	-	Concentrated Animal Feeding Operations
CIA	-	Central Intelligence Agency
COOL	-	Country of Origin Labelling
CPI	-	Consumer Price Index
CSF	-	Classical Swine fever
DDA	-	Department of Animal Health - Brazil
DNA	-	Deoxyribonnucleic Acid
DS	-	Federation of Danish Pig Producers and Slaughterhouses
EU	-	European Union
FAS	-	Foreign Agricultural Service (USA)
FMD	-	Foot and Mouth Disease
FRD	-	Federal Research Division – Library of Congress USA
GAIN	-	Global Agriculture Information Network - USA
GATT	-	General Agreement on Tariffs and Trade
GDP	-	Gross Domestic Product
GNI	-	Gross National Income
GSA	-	Grain South Africa
HACCP	-	Hazard Analysis and Critical Control Point
IGC	-	International Grains Council
IPPA	-	Iowa Pork Producers Association
KZN	-	KwaZulu-Natal
KZNPPO	-	KwaZulu-Natal Pork Producers Organisation
MAPA	-	Ministry of Agriculture, Livestock and Food Supply - Brazil

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Organisation of the dissertation

This study was made up of 6 chapters, each related to the next and a brief summary of each chapter follows:

Chapter 1, is titled "Introduction, problem identification and justification of the study." It is made up of three sections, the first of which is an introduction to this study it defines the topic that is to be researched in this case the suitability of a marketing consortium in the pork industry in South Africa. The second section provides information leading to the research problem. The third section is the summary that defines the purpose of the research and provides factors that were researched.

Chapter 2, is titled "Review of the literature with regard to the global pork industry with special emphasis on trends and determinants of profitability." and is made up of two sections. Section 1 gives a brief overview of pork production worldwide. Section 2 is more specific and looks at the top producers of pork namely: China, Brazil, Denmark, United States of America (USA) and Canada.

Chapter 3, is titled "South African pork industry and the pork industry in KZN with special emphasis on trends and determinants of profitability." And is made up of three sections. Section 1 examines the South African pork industry. Section 2 compares the South African pork environment to international markets analysed in chapter 2. Section 3 narrows the focus even further looking at the pork industry in KwaZulu-Natal.

Chapter 4 is titled "Research Methodology" and provides details of the research problem, the research objectives, the research method adoption, the method of data collection and capturing and the method to be used for data processing and analysis. The data collection method was a questionnaire and this can be found in Appendix 1.

Chapter 5 is titled "Empirical findings analysis and discussion." The questionnaire is discussed, the empirical findings are analysed and the results of the analysis are discussed.

Chapter 6 is titled "Conclusion, recommendations, caveats and suggestions for further research". This chapter provides a summary of the study and a brief conclusion, recommendations and indicates what caveats there may be and what further research is needed.

Chapter 1: Introduction, problem identification and justification of the study.

1.1 Introduction:

The globalisation of world markets, the impact of the deregulation of the South African meat and maize industry, the volatility of the rand and the influence of a new government in South Africa, among others have resulted in the South African pork producer experiencing a number of challenges. Consequently the pork producer has to find innovative ways to ensure long-term survival.

1.2 Globalisation:

After World War II the advanced industrialised nations of the West committed themselves to removing barriers to the free flow of goods, services and capital between nations. This agreement was formalised in 1947 when 23 Countries formed an association called the General Agreement on Tariffs and Trade (GATT). The purpose of GATT was to negotiate reductions in tariffs and work toward common procedures for handling imports and exports, including both tariff and nontariff barriers.

GATT's most important activity was sponsoring rounds, or sessions, named for the place in which each began, such as the Tokyo round, the Uruguay round and more recently the Cancun round in Mexico (Daniels & Radebaugh, 2001, p.218). At the signing of the Uruguay round, in 1993, the GATT established the World Trade Organisation (WTO) to police the international trading system (Hill, 2003, p.8).

As a consequence of GATT and the WTO global trade barriers have decreased and global trade increased. When an industry is offered a price domestically that is lower than the price on the international market, the industry players have a greater ability to export than they did when there were restrictive trade barriers. When a domestic market experiences a shortage and prices increase an opportunity exists for importers (Daniels, *et al*, 2001, p.8). This places a ceiling on domestic prices determined by import price parity the price at which an importer can import and sell goods in the domestic market.

With a new government and a new philosophy, South Africa became a member of the WTO on 1 January 1995. South Africa has, in order to comply with the requirements to ease access to its markets, reduced the tariffs that are imposed on the importation of pork products to South Africa. The South African producer now, more than ever, has to be more conscious of input costs; ensuring that the product cost is less than the international competition.

In the global economy no industry can operate in isolation, and foreign exchange rates are a complicating factor. When considering international competition, the fluctuation of the South African Rand is an important factor as it can increase or decrease international competitiveness when the exchange rate moves significantly. Figure 1.1 shows the volatility of the exchange rate from 1996 to 2003: the last quarter of 2001 and the 2002-year are of particular interest.

Figure 1.1: The Depreciation and Appreciation of the Rand
Source: Easysoft and I.N.D.S. (easysoft-inds.co.za) current data

When the exchange rate moved from R7.15/US$ to R11/US$ in 2001, South Africa became a more competitive exporter. However, within two years, the Rand has strengthened to levels below R7/US$ changing the face of the industry, making the South African pork producer a less competitive exporter.

Added to the impact of the exchange rate is the unresolved issue of the Developed Nations' subsidies of their agricultural producers. This is an issue that was debated at the most recent Cancun round of the WTO trade negotiations. The agricultural subsidies proved to be one of the dividing issues at the WTO talks. "In the end, the rich countries would not agree to the abolition of all export subsidies which make their agricultural products cheaper on world markets."(BBC, online, 02 December 2003) With South Africa's lower tariffs the South African producer is at a disadvantage when competing against internationally subsidised pork products.

"South Africa has become a global player and we have to be effective to compete with the international producers. For different reasons subsidies for the international farmer make it almost impossible for the local livestock producer to be competitive. In some cases the import tariffs that protect the local primary producer against these subsidies are of such a nature that it makes the livestock producer even less competitive." (Bekker, online, 08 December 2003). An example of this is the base price of maize, US$110 per ton, which is used to calculate the tariff on imported maize. The base price is set as a minimum price below which any price would attract a tariff, the tariff being US$110 less the trading price quoted on the International Grains Council (IGC). The result is a tariff ensuring a minimum price of US$110 per ton of maize, consequently the South African pork producer cannot benefit from commodity prices that are lower than US$110 per ton. Conversely if the maize price is above US$110 there is no tariff (South African Grain Information Service (SAGIS), online, 03 December 2003).

1.3 Global trends in the pork industry:

The global pork industry is characterized by a number of trends: the consolidation of production and packing; movement to an industrialized model; dominance by large

breeding companies; environmental pressures and regulations; food safety concerns; increasing importance of technology, and the increasing standards of living in developing countries.

The consolidation of production and packing

In an attempt to better satisfy the needs of the consumer there has been a significant level of integration between production and packaging. This has entailed various forms of strategic alliances and contractual arrangements facilitating pork marketing (Greenough & Associates Inc., Mitura Economic Research Inc., 2002, p.3). The structure of these marketing organizations would include: vertical integration of production units into processing and then marketing; joint ventures between a number of supply chain participants, even co-operatives, serving the interests of the producer, all of which serve to better coordinate the producer creating a competitive advantage. (Boehlje, Clark, Hurt, Jones, Miller, Rickert, Singleton & Schinckel, 1997, p.15.)

Movement to an industrialized model

There is a clear movement to an industrialized model of pork production, in other words, pig farms are increasing in size with the smaller units becoming less viable (Boehlje *et al*, 1997, p.15.). This is evidenced by the increase in the number of sows kept with a reduced number of pork producers (Hopkins, 2003). The larger units are being run in a more corporate sophisticated and professional manner, an example being the use of futures exchanges to ensure that specific input costs are fixed up front.

Dominance of large breeding companies

The larger breeding companies increasingly dominate the global pork industry. These larger breeding companies generally have better access to resources and gain from certain economies of scale (Collins, 2001, p.1). This does not mean that there are no longer any smaller breeding companies, however it does suggest that they are less likely to succeed. In contrast to the global pork industry the South African pork industry has only recently seen the entrance of the larger breeding companies. This may very well mean further problems for the smaller independent South African breeding companies.

Environmental pressures and regulations

Greater environmental pressures to conform to regulations exist today. "It is anticipated that environmental regulations which safeguard both human and animal health will have a significant impact on the ability of countries to expand livestock production." (Greenough & Associates Inc., Mitura Economic Research Inc., 2002, p.3). The production of pork provides two environmental concerns that are becoming increasingly important air pollution and effluent disposal. This has tended to move pork production away from concentrated populations of people and most often pork production units are established closer to the source of inputs and/or closer to processing plants (Boehlje *et al*, 1997, p.15.). This has resulted in many pork production units situating themselves where the grain is grown and hence the concentration of production within these specific regions.

Animal welfare organisations are receiving greater attention giving them the ability to influence prescribed minimum standards for the housing and treatment of animals. The consequence of prescribed housing standards is to increase costs of production.

Food safety concerns

Concerns for food safety and quality are becoming more important. "Food safety concerns and a drive toward qualified suppliers and trace back will increase pressures - and the payoff – of tighter coordination along the production and distribution chain." (Boehlje *et al*, 1997, p.15.) Examples of this can be seen in trends such as country of origin labelling, where consumers are demanding to know what they are eating. It is likely that organisations that can provide food safety assurances will attain a competitive advantage.

Increasing importance of technology

Technology is becoming more and more important: with rising wage levels modern pork producing units are almost entirely mechanized; the environments in which the pigs are reared are often temperature and humidity controlled; the feed that they are fed is

formulated by nutritionists, with different rations developed for different stages of growth; careful control of the genetic characteristics, genes such as the stress gene can be eliminated from breeds by genetic testing and selective breeding; medical conditions, the health of a herd can often make the difference between a profitable or non profitable farm; the information link between production processing and retail is becoming especially important, often a source of competitive advantage. The importance of technology is appropriately summarised by this statement "Modern hog production operations must, in order to maintain quality and contain costs, apply a whole spectrum of technological innovations." (State of Utah, online, 12 January 2004)

Increasing standards of living

As the developing countries increase their standard of living their dietary preferences are changing. Accordingly the developing countries have started increasing their consumption of meat, including pork products. This brings with it a new dynamic to world pork production, the increased demand can be satisfied in two ways, exporting or by foreign direct investment. (Foreign Agricultural Service(FAS), online, 12 January 2004)

1.4 The main changes in South African agricultural marketing policy:

"The Marketing Acts of 1933 and 1968 had a production and self-sufficiency focus and led to producer-dominated management of the sector, with producer-owned co-ops playing a pivotal role. These Acts made provision for regulations regarding movement to markets, quality standards, floor prices, retailer registration and quantitative import controls." (Raath, online, 10 February 2004) This system ensured that the producer was protected from movement in the market prices for pork as well as costs of inputs, protecting inefficient farmers.

Between 1992 and 1994 the gap between producer and consumer prices grew, coinciding with the rapid rise in food prices which prompted various official enquiries into the domestic marketing system for agricultural products. The worldwide trend of deregulation and globalisation clashed with the philosophy underlying the 1968 Act. It

was also inconsistent with the new government's emphasis on efficiency, growth, food security and equity. A new Marketing of Agricultural Products Act was adopted in 1996 and in terms of its provisions the Meat Board ceased its operational activities on 31 December 1997 (Raath, online, 10 February 2004).

From the highly regulated past where floor prices were guaranteed, the South African pork producer now competes in a competitive market where market forces determine the selling prices of pork products. Maximum pork prices are set by import parity with pork imports attracting an import tariff of 15% Ad valorem. (Cargo Info Africa, online, 01 December 2003) The implication is the South African pork industry has to be globally competitive to survive.

1.5 The RSA pork industry:

In 2002, the South African pork industry produced a gross value of products of R873.498 million which is 1.323% of South Africa's agricultural gross value of products produced (South African National Department of Agriculture (SANDA), 2002, p.80). The pork industry is a small, yet dynamic, industry consisting of: approximately 100 000 sows, 7 000 boars owned by 600 pig farmers with 26 stud breeders. There are 46 registered pig abattoirs, responsible for the slaughtering of 86.5% of the 2.2 million pigs slaughtered annually (South African Pork Producers Organisation (SAPPO), online, 28 November 2003).

The pork industry in South Africa can be appropriately described as turbulent. Pork production is capital intensive requiring a significant investment to start production. Once the investment in infrastructure has been made, two other factors play a major role in the profitability of pork production: the price of pork and the price of feed, feed accounting for 60-65% (U.S.A. National Pork Board, 2003, p.22) of the cost of the pig. Of the feed cost approximately 50% (Hopkins, 2003) is attributable to yellow maize, illustrating its impact on profitability. Figure1.2 below shows the fluctuation of the price of yellow maize and the fluctuation of the pork price.

Figure 1.2: The maize price (Rands per ton) and the pork price (Cents per Kg)
Source: Pork Price - (SAMIC), 2002, Annual Report, p.12: Maize price - Grain South Africa (GSA), 2003, Daily Report.

The graph shows the seasonal fluctuation of the price of pork, with it reaching its peaks in the December/January periods. Following the price of pork per kg from early 2000, it can be seen that the pork price increased by approximately 30% to its highest point in December 2000/ January 2001, then decreased to almost the prior year's low of below R8 per kg, then again in 2001 it increased by approximately 25%, to its highest point just above R10 per Kg. In contrast, considering the change in the price of maize per ton from the lowest price in 2000 to the highest price in early 2001 an increase of almost 100% is seen, with a small decrease thereafter, from the lowest point in 2001 to the highest point in 2002, again an increase of almost 100% is seen. The differential in the change of the pork and maize prices was sufficient enough for 11% (2000/18000) (Hopkins, 2003) of the sow numbers to be removed from the KwaZulu-Natal (KZN) market, producers either reducing production or curtailing operations. The rise in the pork price from the end of

2002 to the beginning of 2003 was a result of the significant shortage of pork because of the reduced supply.

An exacerbating factor is the throughput time of pork production; it takes approximately 10 months from the date of conception to the day the pig can be marketed. What this means is once production is started the producer is subject to what the market dictates for at least 10 months. Considering the long production time, the highly variable pork price, the highly variable input costs and the costly capital investment, a conclusion can be drawn that the pork industry is a risky business.

1.6 Motivation for the study:

The risky nature of the pork industry emphasised the need for measures to normalise the industry on a micro scale. This contributed to the formation of Unipork (SA) Marketing. The approach taken was, if the farmers worked collectively they would have more bargaining power. This would help reduce input costs and help influence the prices paid by processors. Working together would ensure that the needs of the processors would also be better met. Unipork is a marketing consortium that has 7 shareholders, all of whom are pork producers. Collectively they control approximately 21%(3300/16000) (Hopkins, 2003) of the pork produced in KZN which represents about 3.3%(3300/100000) of the South African pork industry.

1.7 Research problem:

To determine the potential stabilising effect of a selling consortium on producers and processors in the pork industry.

1.8 Research objectives:

1.8.1 The primary objective of the research is:

To determine whether the objectives of the members of a marketing consortium will align sufficiently well with the objectives of the processing companies to allow for the expected gains of the marketing consortiums to be realised.

Essential in determining the primary objective are:

1.8.1.1 To determine what the objectives of the marketing consortiums are.

1.8.1.2 To determine what the objectives of the members of the marketing consortiums are and whether they are aligned with the goals of marketing consortiums.

1.8.1.3 To determine expectations and anticipated problems that the processors may have with marketing consortiums.

1.8.2 Secondary objectives are:

1.8.2.1 To determine what the reasons are for the potential members being interested in becoming members of a marketing consortium.

1.8.2.2 To determine what the reasons are for people declining to become members.

1.8.2.3 To identify factors which determine profitability, stability and sustainability in the pork industry and the impact they may have on the research problem.

1.9 Conclusion:

With the trend toward freer markets, the unpredictable movements in the Rand, the changing emphasis of the government and the resultant competition from subsidised nations, it is clear that the pork industry is a highly competitive industry. Given its turbulence and the domination of the prices by the large processors and retailers the individual pork producer is in no position to bargain effectively and is likely to be marginalized.

Chapter 2 will start with a generalised overview of the world pork industry. It will then look at what are seen to be major players in the global pork industry; specifically China, Brazil, Denmark, USA and Canada. Once the stage is set we will look at the South African market and then in particular the KZN market with an emphasis on determinants of profitability.

Chapter 2: Review of the literature with regard to the global pork industry with special emphasis on trends and determinants of profitability.

Chapter 1 of this dissertation started by looking at the concept of globalisation by extracting global trends in the pork industry. Once the global scene was set the South African domestic market was considered beginning with the main changes in South African agricultural marketing policy and subsequently the RSA pork industry. Chapter 1 concludes with a motivation for the study stating the research problem and the research objectives.

2.1 The global pork industry:

2.1.1 Introduction

Strong global economic growth over the past decade, rising incomes and changing dietary preferences in developing countries have seen a steady increase in meat consumption and trade. Table 2.1 below shows the increase in global pork consumption and exports.

Table 2.1: Global pork consumption and exports (percentage change)

	2000	2001	2002	2003 (P)	2004(F)	Overall
Consumption	-0.9%	2.2%	3.4%	1.3%	1.4%	7.6%
Exports	3.1%	3.8%	13.3%	1.3%	-1.5%	20.9%

Source: Adapted from, FAS, 2003: online

In a five-year period the world consumption of pork has increased by 7.6%. This is a 1.52% annual increase, a small yet steady increase. Exports of pork have increased more drastically by 20.9% in the five-year period at a 4.18% annual rate.

This overall production is increasingly concentrated in three major regions: the United States, the European Union (EU) and China producing on average from 1999 to 2004, 82% of the global production whereas in 1990 they comprised only 68% of world production.

The global pork market is essentially divided into two broad markets. The first being the high value pork market Japan, Western Europe and North America. "The markets in the countries importing high value pork are mature in the sense that there is little prospect for large growth in per capita consumption. Future expansion in these markets will tend to be in terms of quality attributes and product differentiation" (Weydmann, Foster, Online, 15 January 2004) The second being countries purchasing low valued pork for processing consisting mainly of Russia, Phillipines, Korea, Hong Kong and China. Here price rather than quality determines the source of pork imports.

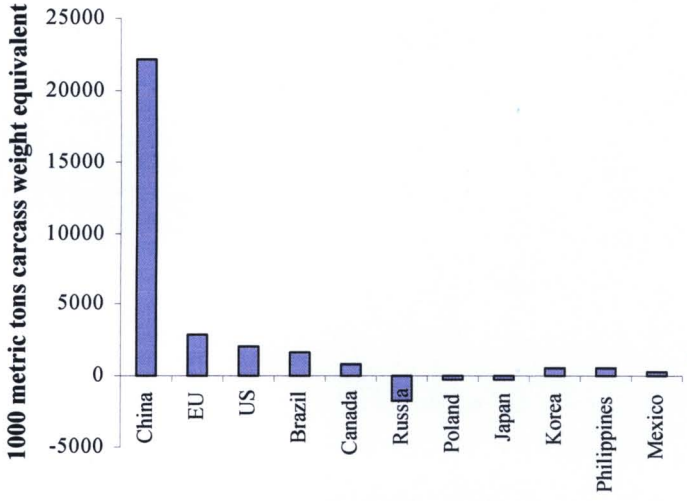

Figure 2.1: Increase in pork production 1999-2004
Source: Adapted from, FAS, 2003: online

Over the past decade, the bulk of the growth in the global pork industry has been concentrated in China and accounts for nearly 50 percent of global pork production. Figure 2.1 illustrates this showing the increase in pork production from 1994-2004. China's increase is by far the largest, almost doubling output.

Growing demand for pork products has led to an increase in trade (imports and exports) of approximately 4.8 times from 1990 to 2004. Similar to production, trade is concentrated the USA, Canada, Brazil and the EU supplying 84% of global export requirements in 2004. On the import side of the trade equation, concentration is also

evidenced with Japan, Russia and the USA accounting for 64% of global pork imports in 2004.

2.1.2 Production

Table 2.2 shows the global pork production. China is clearly the market leader producing over half of the world's production. The EU produces less than half of China's production with the USA producing less than half of what the EU produces. Brazil holds the fourth largest position and it is worth noting that while Brazil only produced 1050000 metric tons in 1990 it increased almost three times to 2670000 metric tons in fourteen years.

Table 2.2: Global pork production (1000 metric tons carcass weight equivalent)

	1999	2000	2001	2002	2003 (P)	2004(F)	% Change
Production							
China, Peoples Republic of	40056	40314	41845	43266	44100	44938	12%
European Union	18059	17585	17419	17825	17850	17900	-1%
United States	8758	8597	8691	8929	8931	8980	3%
Brazil	1835	2010	2230	2565	2600	2670	46%
Canada	1550	1638	1729	1854	1910	1940	25%
Russian Federation	1490	1500	1560	1630	1705	1760	18%
Poland	1675	1620	1550	1640	1740	1660	-1%
Japan	1277	1269	1245	1236	1260	1255	-2%
Korea, Republic of	950	1004	1077	1153	1153	1200	26%
Philippines	973	1008	1064	1095	1145	1175	21%
Mexico	994	1035	1065	1085	1100	1110	12%
Others	4128	3806	3683	3752	3710	3715	-10%
World Total	**81745**	**81386**	**83158**	**86030**	**87204**	**88303**	8%

Source: FAS, 2003: online

2.1.3 Imports

Table 2.3 below shows the level of global pork imports. It is important to note that China is not the largest pork importer; in fact its imports are minimal. The 13.4% increase in imports, 2.7% per annum, indicated a gradual increase in imports. The top six importing countries result in the majority of imports accounting for 86% of all imports. Japan is the clear leader with double the imports of the USA, its closest rival. Japan's imports increased by 25% over the five-year period 1999-2004, an expected trend because Japanese production has reduced slightly and Japan's consumption increased. The USA, although increasing its production, has also increased its level of imports, almost

doubling them. The Russian Federation has moved from the position of the second largest importer to the third largest importer, reducing its imports over the five-year period by 36% partially due to reduced consumption and increased domestic production. Mexico increased its imports by 81% a clear indication of Mexico's economic activity and increased consumption.

Table 2.3: Global pork imports (1000 metric tons carcass weight equivalent)

	1999	2000	2001	2002	2003 (P)	2004(F)	% Change
Imports							
Japan	919	995	1068	1162	1150	1150	25%
Russian Federation	832	520	560	800	600	530	-36%
United States	375	439	431	485	567	624	66%
Mexico	190	276	294	325	335	345	82%
Hong Kong	217	247	260	275	280	283	30%
Korea, Republic of	156	174	123	155	155	160	3%
Canada	65	68	91	91	77	80	23%
Australia	28	45	38	55	70	75	168%
China, Peoples Republic of	43	50	58	60	56	70	63%
European Union	54	54	55	65	60	60	11%
Taiwan	86	54	14	31	45	40	-53%
Others	195	200	201	248	196	167	-14%
World Total	**3160**	**3122**	**3193**	**3752**	**3591**	**3584**	13%

Source: FAS, 2003: online

2.1.4 Exports

The global export market increased by 21% over the five-year period 1994-2004. The most significant decrease was the market share lost by the EU which reduced its exports by 31%.

Table 2.4: Global pork exports (1000 metric tons carcass weight equivalent)

	1999	2000	2001	2002	2003 (P)	2004(F)	% Change
Exports							
Canada	554	658	727	863	975	980	77%
European Union	1390	1470	1235	1194	1000	960	-31%
United States	580	584	708	731	762	769	33%
Brazil	109	163	337	590	620	650	496%
China, Peoples Republic of	75	73	139	225	300	300	300%
Australia	37	49	66	78	75	80	116%
Hungary	131	143	118	125	90	80	-39%
Mexico	53	59	60	61	60	60	13%
Poland	235	160	88	93	120	60	-74%
Czech Republic	10	8	14	29	34	27	170%
Korea, Republic of	113	30	41	15	14	20	-82%
Others	23	14	6	4	11	16	-30%
World Total	**3310**	**3411**	**3539**	**4008**	**4061**	**4002**	**21%**

Source: FAS, 2003: online

In this same five-year period Canada has moved from third on the table to first with an increase of 77% in its imports. The increases in the exports of the USA, Brazil and China are all worthy of notice. The large percentage increases in the export market indicate an increased level of trade. Global pork consumption and trade is increasing. This is fuelled by better global economic conditions and reduced barriers to trade. Which bodes well for continued gradual increases in global pork demand.

2.2 The Chinese pork market:

2.2.1 Economic outlook

China's move toward a more decentralised economy began in 1978. This has resulted in the quadrupling of China's output. The country has the world's second largest GDP of 1.237 trillion US$ (2002), second to USA, with an average of $4390 (2002) (PPP) GDP per capita. China's economy is growing at a rate of 8% annually. Agriculture and industry have experienced the most significant gains, especially in coastal areas near Hong Kong and opposite Taiwan. In these areas foreign investment has helped spur output of both domestic and export goods (CIA, 2003, 20 January 2004)(World Bank, 2003, p.1).

China, with its large economy and being the largest producer and consumer of pork products, is an obvious area to look for changes that could impact on the global pork industry. With China's acceptance into the WTO in January 2001 a number of changes could be expected in the Chinese pork industry. "Barriers are breaking down in China, at least on the economic side. While the political scene remains rooted in communism, the country's leaders have seen the benefits of a more hands-off approach to commerce" (Miller, online, 07 March 2003). There is a clear indication that China's market will become more accessible.

China is the fourth largest nation, behind Russia, Canada and the United States. It is slightly smaller than the United States, but has only 10% arable land. The environment is a concern and potentially a constraint for China. A long-term threat to growth in the pork industry in China is the deterioration in the environment, notably air pollution, soil erosion, and the steady fall of the water table especially in the north. China continues to lose arable land because of erosion and economic development. (CIA, 2003, 20 January 2004) China must feed 13 people for each hectare of arable land. In comparison, Europe must feed 4.1 people, and the United States, only 1.4 people (Miller, online, 07 March 2003).

Like most countries, China's population is migrating from rural to urban areas. But in this case, people are heading from the north to factories in the south where they work 10-hour days, six days a week for $80 to $100 a month – a dramatically better wage than they could generate on the farm. Over time, this will serve to reduce backyard pork production, a large portion of China's production, while contributing to China's growing economy (Miller, online, 07 March 2003).

2.2.2 China's pork production and consumption

Table 2.5: China local consumption (1000 metric tons carcass weight equivalent)

	1999	2000	2001	2002	2003 (P)	2004(F)
Consumption						
China - production	40056	40314	41845	43266	44100	44938
China - imports	43	50	58	60	56	70
Pork available locally	40099	40364	41903	43326	44156	45008
China - consumption	40024	40291	41764	43101	43856	44708
Local consumption %	100%	100%	100%	100%	99%	99%

Source: Adapted from, FAS, 2003: online

Table 2.5 shows that virtually all pork produced in China is consumed there. With 1.2 billion people who eat about 34.4 kilograms of pork per person annually, China holds potential to be a most important pork export market (USDA, online, 23 January 2004).

Chinese consumers prefer pork above all other meats and it is the predominant source of meat protein. China's pork production and consumption mirror each other closely. Its rapidly expanding economy, growing middle class, and limited capacity to expand production, make exporters think that China is more likely to import pork than to export it. (USDA, 2000, p.1.) (Kelley, online, 11 December 2001).

Nearly all of China's pork production is of the backyard variety, and arable land available for production is an increasing problem. China is not expected to be able to produce economic quality pork in the long-term (Bloomberg, online, 01 February 2001). As the world's No. 1 pork producer China raises 447 million pigs a year, which still falls short

of its needs, especially since it exports pork to Hong Kong and Russia. Eighty percent of pork production occurs in backyard settings where farmers have a few sows and feed them sundry farm by products and waste. The consequence is low production costs allowing China to compete on a price basis. The meat is of poor quality, however (Miller, online, 07 March 2003).

Another 15% of the production comes from "specialized households," defined as those who market 30 to 100 hogs annually. Only 5% of the country's hogs are produced in large-scale, commercial production systems. Expectations are for commercial production to grow but it will come at a higher price. The reason is that China is a grain-deficit nation, with only 10% arable land. Commercial production could supply more pork, but it would erode the domestic product's low-cost advantage, as feed will have to be imported (Miller, online, 07 March 2003).

Environmental constraints aside, the Chinese have a pattern of pork consumption. Currently, the Chinese produce and consume nearly half of the pork in the world (see table 2.2). The current economic growth rate would seem to indicate that consumption will outpace production, creating a golden opportunity for the global pork industry to increase exports to China (Bloomberg, online, 01 February 2001).

2.2.3 Infrastructure and technology

The Chinese marketing structures are generally complex. The pork marketing channels are deeper, in other words they have more levels, with pork products changing hands many times, from importer, to a wholesaler or two, to cold storage, to a transportation company, then on to a wet market, hotel or restaurant (Miller, online, 07 March 2003). As a consequence co-ordination of the deep marketing channels is difficult.

An obstacle facing pork exports is cultural. Most pork in China is sold fresh, often at 'wet markets' where product stands are set up on the streets. The poor refrigeration infrastructure is a primary reason for this, and it is a significant barrier to trade. The poor refrigeration impedes exporting. The inadequate facilities place an added burden of risk

on the exporter. Because of poor refrigeration, some Chinese have carried a mistrust of chilled and frozen products. However, a growing part of the population is starting to move away from the wet markets and shop at supermarkets that carry chilled and frozen products and as the country's economy grows, this trend is expected to continue.

China's low level of meat exports is largely due to the country's poor quality standards as they do not follow those accepted for international trade. This is, however, changing as Chinese officials are taking initial steps to make China's meat acceptable for international export. A starting point is the construction of five, animal-disease-free zones. The intention is to keep those areas free of diseases such as Bovine Spongiform Encephalopathy (BSE) or "mad cow disease", swine fever and avian flu. This prevention, quarantine and monitoring framework will adhere to strict standards, following requirements agreed to with the World Trade Organization (Kelley, online, 11 December 2001).

A further issue that emphasises the problems faced in the infrastructure/customs is the existence of the 'grey channel'. The grey channel is not necessarily the cheapest option but it is the easiest. For a fee the grey channel or black market delivers what is required (Miller, online, 07 March 2003). A characteristic of this channel is the lack of documentation and legality making it an unacceptable channel for most organisations.

Considering the above, it appears as though China has a number of structural challenges, in order for it to become a viable export market. Exporting companies will have to contend with these challenges should they want their share of the Chinese market.

2.2.4 Market pressures

Access to the Chinese market is becoming easier. In accordance with the WTO mandates, China agreed to phase out its restrictive import and distribution procedures, reduce tariffs on pork and pork variety meats annually through 2004, and reduce subsidies. The United States and China have signed an Agriculture Cooperation Agreement in which China will accept pork from any Food Safety Inspection Service-approved packing plant. The USA

is the only country to have accomplished this. Canada, for example, has to get approval on a plant at a time basis (Miller, online, 07 March 2003).

Price is the biggest market driver, which works against pork imports. China is a commodity market, in which product quality and food safety are not yet priorities (Miller, online, 07 March 2003). As stated earlier, most of China's production is backyard production. This does not meet export safety standards. Buying feed grains to replace backyard feed will significantly erode the low cost advantage existent in Chinese pork production (Kelley, online, 11 December 2001). Advances in quality will be costly to Chinese producers, and it may be more economical for China to import pork from a low-cost producer like the USA, Canada or Brazil.

China's variety meat demand is a big advantage in exporting to that country, because it adds value to cuts that are under utilized elsewhere. For developed economies, China's need for variety meats is a potential to add value to carcases because the kidneys, hearts, stomachs, tongues, uteri, lungs, ears, feet and tails would otherwise have little or no value. It is purported that US$5 can be added to a carcass without increasing muscle meat prices to consumers (Miller, online, 07 March 2003).

Demand for muscle meat has the potential to grow, particularly in restaurants. A surging trend in Hong Kong and China are mid and upscale western restaurants. These restaurants serve products like steaks, chops and ribs. "This sector is in its infancy and has room to grow," says John Cravens, National Pork Board's foreign market director (Miller, online, 07 March 2003).

2.2.5 Problems faced by China

A problem in China is the country's population versus arable land. The United States, Brazil and Canada are able to produce additional quantities of pork, because they have the land needed to absorb the manure. China on the other hand, has a shortage of arable land. The population density of China also could be a negative factor, as odour and environmental issues become more prevalent there (Kelley, online, 11 December 2001).

Influencing China's trading interests is the country's lack of feed grains, which prevents it from producing pork competitively. It is probable that the United States, Brazil and Canada will be able to ship pork to China cheaper than the Chinese will be able to produce it themselves.

2.2.6 Conclusion

China is potentially a huge cash cow for several reasons. More of China's population is becoming urbanised out of rural areas and into cities. Traditionally, much of Chinese pork production was done in the backyard and by a large portion of the population. The large population, the high GDP growth rate and per capita pork consumption are an enticing package, and the Chinese membership of the WTO will ensure at least limited market access. However, the refrigeration infrastructure, the low standard of living, and complications like the grey channel trade, questionable labelling, permitting and inspection processes will continue to challenge pork export prospects.

2.3 The Brazilian pork market:

2.3.1 Economic outlook

Brazil is the fifth largest country in the world, the fifth most populous, and has the thirteenth largest GDP. It is larger than the continental United States and comprises one-half of South America (World Bank, 2003, p.1).

With a GDP of $452,387 million, (World Bank, 2003, p.1) Brazil is the largest Economic force in South America and takes its place as the fourth largest pork exporter globally. After the 1998 Asian crisis the Brazilian Central Bank announced in 1999 that the Real would no longer be pegged to the US dollar. The consequent devaluation helped moderate the downturn in economic growth in 1999 and a real GDP growth rate that averaged below 2% from 2000-2003 followed. The low rate of growth was due to the slowdown in major markets and the hiking of interest rates by the Central Bank to combat inflationary pressures in 2002, the CPI being 8.3% (CIA, 2003, 20 January 2004).

2.3.2 Brazilian pork production and consumption

The pork industry in Brazil has moved from a family backyard business to a modern system that is increasingly integrated and dominated by large packing companies. Pork is primarily produced in the three southern states of Brazil. This trend is changing and pork production is extending into other large areas where crop production takes place (IPPA, online, 20 January 2004).

Table 2.6: Brazil local consumption (1000 metric tons carcass weight equivalent)

Consumption						
Brazil - production	1835	2010	2230	2565	2600	2670
Brazil - consumption	1727	1826	1919	1975	1980	2020
Local consumption	94%	91%	86%	77%	76%	76%

Source: FAS, 2003: online

Table 2.6 shows that production in Brazil has increased significantly from 1999 to 2004 (46%). This is largely due to Brazil's export trade, the majority being with Russia

although their exports are starting to diversify slightly. Brazil produces approximately 24% of its production for the export market. This percentage has increased from the 6% produced for the export market in 1999. The growth in domestic consumption has been moderate following the trend in real GDP growth, at an annual increase of about 3%. This is despite the efforts of meat packers to promote domestic demand. The slow growth in demand is because of the loss in the consumer purchasing power, higher rates of unemployment, and competing meat alternatives, mostly chicken. "The outlook for 2004 calls for a small increase in domestic demand as current economic indicators show growth beginning in the first quarter of next year (2004), inflation under control, and a reduction in unemployment rates due to major social projects designed to increase income and improve the conditions of the poor" (Silva, 2003, p.9.).

Of the pork consumed domestically, 70% is processed with the remaining 30% consumed as fresh meat. Brazilian fresh pork consumption follows a seasonal trend with consumption peaking in the winter months (June-August). Pork consumption varies significantly within regions in Brazil and pork producers are trying to close the gap between the regions. "Currently, per capita pork consumption is concentrated in the South with per capita consumption at 18 kilograms, and Southeast at 15 kilograms, while the Center West (11 kilograms) and Northeast (6 kilograms) regions consume less pork" (Silva, 2003, p.9.).

2.3.3 Infrastructure and technology

As seen in table 2.7 about 43 percent of Brazilian pork production is concentrated among 10 large pork packers. Although Seara accounts only for 6 percent of total pork production in Brazil, the company alone ships 26% of all pork exports. The implication of this is that the pork industry is organised as shown by the size of the operators (Silva, 2003, p.9).

Table 2.7 Company market share in Brazilian pork industry

1	Sadia	2764	11.75
2	Perdigão	1694	7.20
3	Aurora	1522	6.47
4	Seara	1404	5.97
5	Riosulense	779	3.31
6	Avipal	436	1.86
7	Prenda	413	1.76
8	Frangosul	388	1.65
9	Cotrel	326	1.39
10	Sudcoop	301	1.28
			42.64

Source: US Meat Export Federation, 2003: online

Technology within the pork industry is for the large part mobile and as a result much of the technical expertise fueling Brazil's rising pork production is being transferred from developed nations such as North America and Western Europe. "These developments suggest that the Brazilian pork industry might evolve into a significant rival in the pork export market" (Weydmann & Foster, Online, 15 January 2004). The industry in Santa Catarina has evolved to one with a high degree of co-ordination between farmers and packers which has led to efficiency and quality improvements. There is an increased level of integrated pork production systems that are "common in Brazil". As a result the Brazilian pork industry becomes a more imminent threat (IPPA, online, 20 January 2004).

Table 2.8 above shows the competitive positions of the top exporting markets. It is clear from table 2.8 that Brazil has the worst rating in most categories. Food safety, animal disease and environmental constraints remain key competitive issues in the global market. The most significant for Brazil their Foot-and-Mouth Disease (FMD) status overshadows their low input cost advantages, excluding them from a number of high value export markets. History has shown how FMD outbreaks can erode market share examples being Denmark, Taiwan, Korea and the United Kingdom. Ron Plain,

University of Missouri agricultural economist, was quoted in the "Pork" magazine "Clearly the most important thing is herd-health status. Five years ago, Taiwan was among the world's top pork exporting countries. Today Taiwan imports pork, all due to a foot-and-mouth disease outbreak" (Kelley, online, 20 January 2004). FMD continues to prevent Brazil from exporting to some markets.

Table 2.8: Competitive Rankings for the USA, Canada, Denmark and Brazil

Category	Denmark	Brazil	Canada	U.S.
Feed costs	4	1	3	2
Labor costs	4	1	2	3
Pigs born alive/sow/year	1	4	1	3
Manure and odor management	4	1	2	3
Animal welfare attributes	1	4	4	4
Domestic transportation costs	1	4	2	2
International shipping	3	4	2	1
Animal health	2	4	1	3
Food safety	1	4	3	2
Flexibility and customer service	1	4	2	3
Trade access strategies and promotion	1	4	2	3
Ability to gain trade access	1	4	1	3
Utilization of trade access	2	4	3	1
Research funding	2	4	3	1

Ranked such that 1 = most competitive, 4 = least competitive

Source: Cravens, 2003: online

A change in that status would open doors to major importers such as the USA, Mexico, Hong Kong and Japan. Brazil's low feed and labour costs and a lack of environmental constraints give them the potential to be highly competitive on a global scale. This would in turn drive a significant increase in production. (Cravens, online, 28 January 2004)

Should one consider the ratings for the categories where Brazil does not receive a 1 rating, it appears as if the poor ratings are largely for infrastructure related categories. The most important category, when dealing with fresh meat as well as frozen products are, domestic transportation costs as well as international shipping infrastructure.

Typically, capital is a limiting resource to the expansion of intensive pork production in a developing country such as Brazil. However, because hog production technology and management systems are easily transferable, foreign investors have shown interest in investing in pork production in Brazil. This investment has reduced with the slowdown of the Brazilian economy. The investment is expected to gain momentum when the economic growth rate increases again. An important implication of the outside investment capital is that it will encourage the adoption of modern production, marketing, and management systems across the entire industry in Brazil that may lead to expanded production capacity in non traditional pork producing states (Weydmann & Foster, Online, 15 January 2004).

The Center West region has many infrastructure advantages:

1 Corn is generally cheaper in the Center West region,

2 The Center West region has a large land area suitable for manure disposal,

3 The state of Paraná is the largest producer of corn in Brazil, and is located close to the domestic population centers of São Paulo and Rio de Janeiro,

4 State governments in the Center West region also offer incentives to pig farmers,

5 Large operations that can achieve economies of scale are more feasible than in the South,

6 Some factors such as low population density, cheap land price, flat topography, dry weather, and soils deficient in nitrogen and phosphorus suggest a low cost to comply with environmental regulation in the Center West as well (Weydmann & Foster, Online, 15 January 2004).

The infrastructure advantages held by the Center West region provide substantive evidence that production in the Center West will increase rather than that in the traditional Southern region. These structural advantages will serve to further reduce the cost of pork in Brazil and make it even more price competitive.

2.3.4 Market pressures and Trade

It is important to understand that the per capita income in Brazil is insufficient to sustain a high level of pork consumption. As a consequence increases in pork production in Brazil have to come from increases in exports. The advantage of exports such as pork is that they add value to grain and low labour costs (Weydmann & Foster, Online, 15 January 2004).

The pork exports from Brazil are concentrated in Russia. Seventy Eight percent of the value exported and 79% of weight were exported to Russia in 2002. "Although the Russian market share of Brazilian pork exports dropped from 80 to 62 percent during Jan-Jul 2003, Brazilian pork exporters are optimistic that they will account for 77 percent of the Russian quota in 2003." The dominance in the Russian market is largely due to the competitive price of Brazilian pork (Silva, 2003, p.10.).

Brazil is aware of their vulnerability/exposure to risk as their export market is concentrated in Russia. The following quote illustrates that they are aggressively addressing this situation. "According to trade sources, the strategy of Brazilian pork exporters to overcome the impact of the Russian quota on pork imports was to diversify their export destinations through an aggressive market promotion effort and competitive prices. During Jan-Jul 2003, pork exports to other traditional Brazilian markets, such as Hong Kong, increased by 91 percent, Argentina by 294 percent, Uruguay by 48 percent, and the European Union by 30 percent. According to trade sources, exports to new markets, during Jan-Jul 2003, increased significantly, mostly to Armenia, Georgia, UAE, Haiti, and South Africa" (Silva, 2003, p.10.). These developments emphasize Brazil's intention of remaining in the export market and their ability to find new markets.

As with pork production, pork exports are concentrated among five major companies, which account for 72% of all exports (based on 2002 data): Seara (26%), Sadia (17%), Perdigao (14%), Pamplona (10%), and Frangosul (5%). (Silva, 2003, p.10.)

2.3.5 Problems faced by Brazil

Challenges faced by Brazil include:

1 The country's infrastructure,

2 Instability of the currency exchange rate,

3 Increasing the domestic market,

4 Control of disease status,

5 Installing reliable traceability systems (IPPA, online, 20 January 2004).

Brazil's disease status constitutes a barrier to Brazilian exports. The states located in the Center West region of Brazil are either FMD infected or considered FMD disease free, but have active vaccination programs. The USA, Japan, and EU refuse to import meat and animals from Brazil as long as the disease is not completely under control throughout the country (Weydmann & Foster, Online, 15 January 2004).

The following extract taken from the USDA Gain report, prepared by their agricultural specialist, Joao Silva, illustrates Brazil's intention to remedy the FMD status in the country. "Brazil has made significant progress in eradicating Foot-and-Mouth Disease (FMD). Currently, 15 states out of 26 (50 percent of the national territory) and 84 percent of the cattle herd are free of FMD. The Department of Animal Health (DDA), Ministry of Agriculture, Livestock, and Food Supply (MAPA), announced that Brazil completed two years without any outbreak of FMD in the national territory. According to DDA, the last outbreak was recorded on 18 August 2001 in the state of Maranhao. Government officials expect that by 2005 the entire country will be free of FMD with vaccination and will meet the deadline established by the National Plan of Eradication of Foot-and-Mouth Disease (PNEFA)" (2003, p.2.).

In 2002 the Brazilian authorities requested that European Commission on Food and Veterinary issues send a delegation to test for EU compliance. The conclusion of the assessment was that Santa Catarina cannot export pork to the EU because it does not comply with a number of EU requirements.

Some of the problems concerning the EU authorities were:

1 Feeding of waste foods,
2 Lack of contingency plans for FMD and CSF (Classical Swine Fever) outbreaks,
3 The distribution and use of veterinary drugs that are prohibited in Europe,
4 System failures in the certification of meat to preclude residues of such drugs,
5 The lack of confidence in the certification of meat process,
6 The lack of reliable traceability systems,
7 Poor controls over movement of animals, undermining certification processes,
8 An inability to identify breeding animals individually,
9 No herd of origin labeling implemented,
10 Inadequate surveys of CSF and FMD,
11 Insufficient capacity in the state laboratories to test for diseases,
12 Problems with processing plants

(European Commission, 2002, p.30).

2.3.6 Conclusion

The early 1990s saw the start of a transformation of the Brazilian swine herd. Previously the majority comprised mixed breeds of low-quality, lard-producing animals. The management practices were primitive, and poor sanitation was a problem. With the investment from North America and Western Europe in the pork industry, the modern segment of the pork industry has grown, and the new investments have brought with them a high-quality herd of meat-producing animals. This technology has improved management practices significantly and there is now a significant vertical integration between producers, processors, packers and exporters (FRD, online, 21 January 2004).

In recent years Brazilian pork production and exports have been rapidly increasing. The question remains, will Brazil impact on the larger exporting countries, Canada, Denmark and the USA? In the soybean industry in the 1970's, the world did not see Brazil as a significant competitor due to various domestic problems. In 2003 Brazil is a formidable competitor in the soybean complex. Quoting the Brazilian Association of Vegetable Oil

Industries (ABIOVE) "Brazil is responsible for some 26% of the world's soybean production, with the estimate of a production of 51 million tons in the 2003 crop. The country is the world's second largest producer and exporter of soybeans... In 2003 Brazil will takeover the world leadership of soybean complex exports, totalling around US$8billion."(ABIOVE, Online, 30 April 2004). This shows Brazil's ability to excel on the world market.

Brazil's ability to penetrate the high value pork export market is limited by its FMD status. With proper management this could change. Brazil's low labour and construction costs combined with its low cost of feed production and favourable climate give it some competitive potential. The mobility of modern pork production and management technologies as well as the existence of large scale production systems that imitate USA and Western European production systems all suggest that Brazil has all the intentions and access to the technology required for it to become a significant player in the export market (Weydmann & Foster, Online, 15 January 2004).

2.4 The Danish pork market:

2.4.1 Economic outlook

Denmark is a relatively small country 135th by landmass and, with a population of 5.37 million and a GDP of US$174,798 million it is classed as a modern market economy. The GDP growth rate is 1.1%(2003), which is slow but which reflects the state of the European economy. Denmark's geographic placing puts it in an optimal position to take advantage of the market in the EU but is sub optimal when it comes to exporting to the East (World Bank, 2003, p.1).

The Danish economy is stable, being a net exporter of food and energy. Denmark enjoys a comfortable balance of payments surplus and a high dependence on foreign trade. The Danish government has shown its intention of being independent from certain parts of the EU. Even when attaining the criteria necessary for joining, Denmark decided not to adopt the Euro as its currency although its currency the Krone is pegged to the Euro. Denmark offers comfortable living standards and extensive government welfare (CIA, 2003, 5 February 2004).

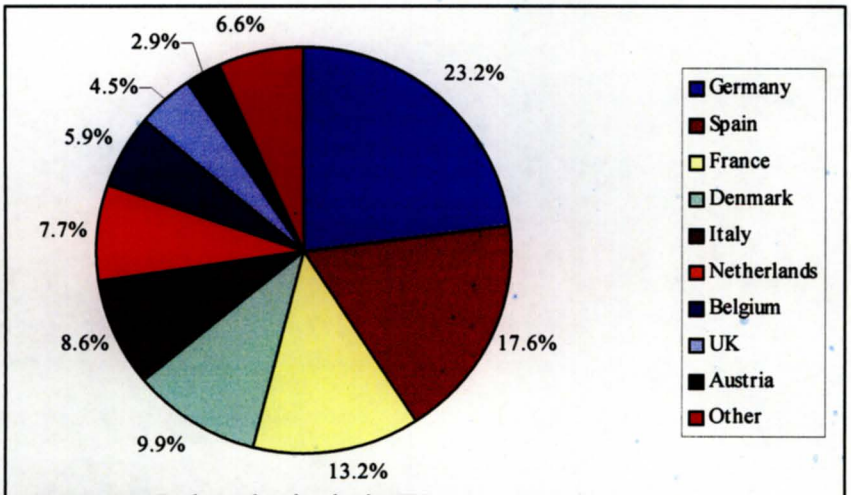

Figure 2.2: Pork production in the EU
Source: Danish Agricultural Council, Facts & Figures 2003

2.4.2 Danish pork production and consumption

The Danish pork industry exported 1.6 million tonnes of pork in 2002 and produced about 23 million pigs. This shows that Denmark is the largest exporter of pork in the

world. The importance of this can be emphasized when looking at figure 2.2 as this shows that Denmark accounts for only 10% of the production in the EU.

In 2002 approximately 86% of Denmark's production was exported. Pork exports account for on average in excess of 6% of the value of total exports from Denmark. This substantial contribution makes pork the largest single contributor to exports. One of the most important contributing factors to Denmark's success as an exporter of pork is its disease free status. "High veterinary standards have been vital in maintaining the export of Danish pig meat, and the industry invests significant resources to protect its high health status" (The Federation of Danish pig producers and Slaughterhouses (DS), online, 13 February 2004). This is in contrast to both China and Brazil as their disease status was, and is, their main barrier to trade.

Table 2.9: Danish pork production (1000) metric tonnes

Denmark pork production	1748	1836	1892
Denmark pork exports			1630
Exports as a % of production			86%

Source: The Federation of Danish pig producers and Slaughterhouses, online, 13 February 2004

In Denmark, as in most pork industries around the world, larger producers have replaced the smaller ones, with production almost doubling since 1970. More than 80% of total production is produced by 30 % of the producers. Denmark has restrictive environmental laws, that limit livestock numbers to the area of land available, and the shortage of suitable land on which to spread manure from pork production provides the largest obstacle for the Danish pork industry. There is very little land remaining in Denmark for the expansion of the pork industry and for this reason Denmark's pork industry is not expected to grow significantly in the future (DS[1], online, 13 February 2004).

Pork consumption per capita in Denmark is shown in Table 2.10, which illustrates the difference between the consumption of other countries and Denmark. Denmark is a clear leader in the consumption of pork per capita. We see that the country that comes closest to Denmark is over 10 kg's per capita behind Denmark.

Table 2.10: Pork consumption for selected countries

NORTH AMERICA						
Canada	30.3	29.8	31.5	32.5	31.1	31.3
Mexico	9.7	10.0	10.2	10.6	11.5	11.9
United States	29.0	28.7	31.0	31.8	31.0	31.2
SOUTH AMERICA						
Brazil	9.5	9.0	9.6	10.3	10.6	11.0
EUROPEAN UNION						
Austria	57.8	55.0	59.1	57.4	57.5	57.4
Belgium-Luxembourg	28.7	22.3	24.5	24.1	24.6	24.5
Denmark	69.7	69.6	71.4	75.6	76.5	76.3
France	34.9	35.4	38.2	37.8	37.6	38.2
Germany	54.8	53.3	55.9	57.7	56.8	56.8
Ireland	38.5	40.3	40.2	41.2	41.3	41.1
Italy	35.3	34.8	35.9	38.2	39.1	39.6
Netherlands	44.6	43.1	44.2	44.2	44.0	44.0
Portugal	38.3	28.8	30.8	40.7	41.5	42.7
Spain	56.3	57.8	60.8	64.2	65.5	66.2
Sweden	35.1	36.1	37.6	36.2	34.3	33.7
United Kingdom	23.6	24.2	26.0	25.2	23.9	24.3
EASTERN EUROPE						
Bulgaria	27.5	29.5	29.9	31.9	30.5	31.3
Czech Republic	67.5	64.7	66.4	65.7	60.7	60.3
Hungary	38.4	40.5	36.6	40.7	35.7	41.0
Poland	41.3	34.4	38.2	40.3	39.6	36.7
Romania	17.5	13.1	15.2	15.0	13.5	13.5
FORMER SOVIET UNION						
Russian Federation	14.5	14.0	12.8	13.5	12.6	12.7
Ukraine	14.1	14.6	14.0	14.4	13.9	14.1
OTHER ASIA						
China; Peoples Republic of	26.1	29.5	31.6	32.4	33.4	34.4
Hong Kong	51.2	54.1	56.2	56.1	61.2	64.4
Japan	16.9	16.6	16.6	17.1	17.2	17.5
Korea; Republic of	19.3	19.1	20.5	21.2	22.5	24.4
Philippines	11.9	12.2	12.4	12.8	12.9	13.3
Singapore	30.7	31.9	28.5	14.0	11.3	11.8
Taiwan	42.1	40.0	44.7	43.3	43.0	43.2
OCEANIA						
Australia	18.3	18.7	19.6	19.0	19.1	19.0

Source: Foreign Agricultural Service, Commodity and Marketing programs, 2001, online

2.4.3 Infrastructure and technology

The Danish pork industry is one of the leaders in infrastructure and technology. Of special importance is their ability to trace all pigs back to the source for quality assurance. On the Danske Slagterier web page the following assurance is given:

"Marking, registration and documentation is undertaken at all stages of the production of pork. The purpose is to assure the safety of Danish pork and, in particular, that:

- The meat is Danish
- The meat is free of food hazards.
- Danish meat comes from healthy animals.

The Danish system allows pork to be traced back to the slaughterhouse company and then back to a small group of farms" (DS[4], online, 5 February 2004). It is this sophistication that assists Denmark in maintaining its position in the high value export market.

The Danish pork industry's strength emanates from its centrally controlled, organised and producer-owned system. All activities are co-ordinated by an Umbrella Organization: Danske Slagterier. This system is run through co-operatives, one producer gets one vote, and as a result the industry is vertically integrated from primary producer to processing companies (Laursen, Hundahl & Strandskov, 1999, p.2.).

The co-operative structure of the industry obliges members of a co-operative slaughterhouse company, to deliver the majority of their pigs to the slaughterhouse they own. A reciprocal duty is imposed on the slaughterhouses, as they are obliged to take all of the pigs the farmers produce. "The co-operative system ensures stable supplies and production, which is important in establishing long-term contracts with customers across the world" (DS[2], online, 5 February 2004).

Figure 2.3 shows this level of integration, with only 11% of production going to independent slaughterhouses. Farmer co-operatives dominate breeding, feed, slaughter, processing and distribution systems.

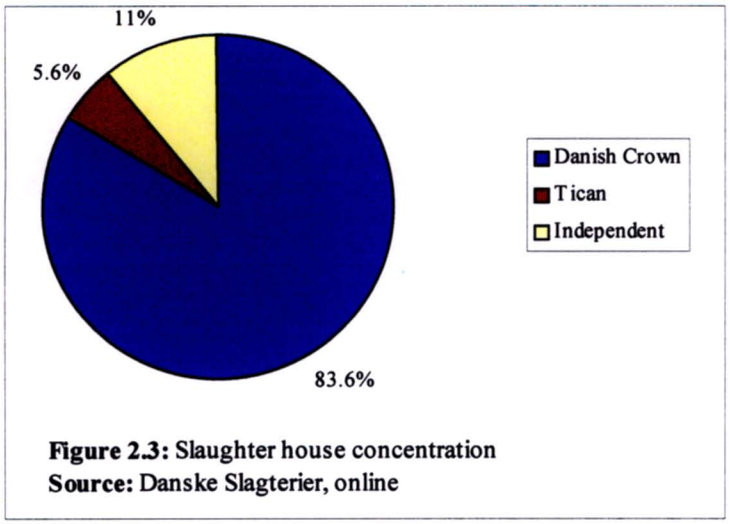

Figure 2.3: Slaughter house concentration
Source: Danske Slagterier, online

A favourable spin off of the co-operative nature of the industry in Denmark is the stability that it creates in the market. This makes it easier for the abattoirs and farmers to manage their businesses. Prices are set by a committee and these prices are determined by market conditions on the export market. A predetermined processing margin is deducted and a price is set for the farmer. This ensures that each farmer receives the same price for a given product specification. This structure results in a number of savings "on transportation costs as there is no price incentive for producers to send live pigs over long distances and it eliminates marketing costs such as the need for markets, middlemen or a network of buyers employed by the abattoir" (Laursen *et al*, 1999, p.1.). It is worth noting that the co-operatives pay an annual bonus, which will depend on the cost structures of the co-operative and this is what is used to keep the co-operatives competitive, as producers will move to co-operatives that pay the highest bonuses.

The strength of the Danish pork industry is its ability to meet customer specifications and adding value. Customers of Danish pork are prepared to pay the higher prices for the differentiated products. High value pork markets require an emphasis on soft product quality traits. This would include; animal welfare, traceability or product origin and the ability to cater for specific customer demands. In order to cater for the increasingly sophisticated demands the Danish pork industry has had to increase its focus on:

1 Specialisation in production,

2 Increased product development,

3 Larger market flexibility and improved responsiveness,

4 Monitoring technology,

5 Biotechnology (Laursen *et al*, 1999, p.40.)

The pressure on the industry to adopt the latest technology to remain cost and product competitive is evidenced in a new plant construction in Denmark, The investment for the new plant totals DKK2 billion ($270 million). (Plant Automation Technology, online, 10 February 2004) In the MAPP document it is further emphasised that attention must be paid to the optimisation of the full chain rather than a focus on costs at each stage to keep Danish pork production competitive (Laursen *et al*, 1999, p.43.).

The issues above are confirmed should table 2.8 be consulted. Denmark scores well in all aspects except its competitive rankings for the high costs of feed and labour, its odour and manure management and international shipping. The level of integration in the industry, the environmental requirements, the structure of the industry and the investment in technology infrastructure illustrate the advanced nature of Denmark's industry.

2.4.4 Market pressures and trade

The Danish pork industry is export driven and is the world's largest pork exporter with over 85 % of the Danish pig meat production being exported. Figure 2.4 shows the diverse nature of Danish exports; the principal markets being the EU-countries 63.1% of all exports, Germany accounting for 21% and the United Kingdom for 19%. Of the non-EU markets, Japan is the largest external market at 14.9%, Eastern Europe follows closely with 10.8%. China and the US are also important markets.

Of the Danish exports approximately 78% are exported as chilled or frozen cuts or bacon. Danish bacon now takes a smaller share of the export market with chilled and frozen cuts the most common. Bacon was at one time the main export product. Canned meats and processed products make up 8% of Denmark's export trade and the remaining 14% represents by-products.

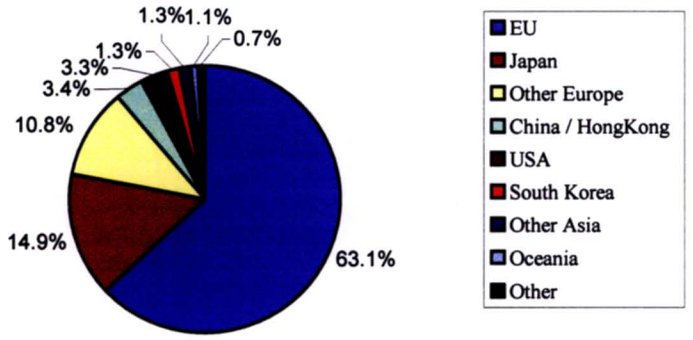

Figure2.4: Percentage share of Danish exports
Source: Danske Slagterier(DS[3]), Statistics:online.

Most Danish pig meat products are used as raw materials for meat processing customers in the importing countries. Continuous efforts are made to meet the demands of these customers by establishing quality measures throughout the production chain (DS[1], online, 5 February 2004).

The most important shift in consumer requirements is that customers no longer want bulk commodity products. They prefer "Tailor-made cuts, boneless, derinded, defatted or added value products. This is where Denmark's sophisticated facilities provide them with a competitive advantage. As indicated by Danske Slagterier their main strategy is to maintain its position as supplier of highly developed semi-processed cuts (DS[3], online, 5 February 2004).

2.4.5 Problems faced by Denmark

The problems faced by Denmark are highlighted by table 2.8. As noted earlier Denmark has a high cost of feed and labour. One of the most significant considerations is that of the environment and space as Denmark has little space left for increasing its production of pork. This implies that Denmark at 23million pigs produced annually is approaching its maximum capacity. Production is located in the West of Denmark, and if Denmark wanted to increase production they would have to use the only land available, located in the South near Copenhagen. This land is good quality land and has many other potential uses (ERS, 1996, p.16.).

In contrast to less developed countries Denmark has strict regulations when dealing with manure storage and spreading. Denmark has fixed seasons for slurry spreading, mandatory storage facilities for slurry, limits on nitrogen application and compulsory fertiliser plans. The strict legislation means that Danish pork producers have to bear costs of manure storage and other costs not incurred by many of their competitors (DS[1], online, 5 February 2004).

Geographic location inhibits Denmark's ability to sell fresh pork on the fastest growing segment of the very large and lucrative Japanese market. The transportation costs and short shelf life are prohibitive (ERS, 1996, p.16.). "Denmark seems to be facing an uphill battle in terms of cost of production, environmental constraints and the ability to ship chilled products around the world" (Cravens, online, 12 February 2004).

Danish legislation set limits on the number of pigs that can be produced by an individual herd. When determining the level of production the land available to spread slurry is considered. Further to this, any expansion of production must be approved by the local authorities (DS[1], online, 17 February 2004). Animal welfare is a further cost consideration, as being a member of the EU, Denmark has to comply with all welfare measures required by the EU which are often rigorous and costly.

The strength of the Danish currency can act as a barrier to trade by simply making Danish pork too expensive a problem in the price sensitive markets such as China and Russia. However the Danish pork industry has dealt with this easily in the past.

2.4.6 Conclusion

Denmark is the world's leading pork exporter, and defends its position by continuous advances in technology and softer issues which are required by developed nations, in particular the EU. Their cost structure does not favour them. However their ability to provide specific customer satisfaction and add value, facilitated by their vertically integrated industry, is their competitive advantage, and from the new investment in

processing plant it will continue to differentiate them in the near future. The regulations in place to preserve the environment make it clear that Danish pork production is close to maximum capacity and for this reason it is unlikely to increase production substantially in the future.

2.5 The USA pork market:

2.5.1 Economic outlook

With a GDP of US$10416818million the USA has the world's highest GDP. Its GDP is almost three times that of its nearest rival Japan. The USA economy is characterised by steady growth at 2.45%, low unemployment at 5.8%, CPI inflation at 1.6% and rapid advances in technology. "The USA economy is a market-oriented economy, and US businesses enjoy considerably greater flexibility than their counterparts in Western Europe and Japan in decisions to expand capital plant, lay off surplus workers, and develop new products" (CIA, online, 5 February 2004).

The USA has 288.4million people living in its 9,158,960 sq km of land and is ranked 3rd in the world in terms of area. The standard of living in the USA is among the top in the world, with a GNI per capita of US$35060 ranking it 5th in the world (World Bank, 2003, p.1). The outlook for the USA economy is good and the GDP growth of 2,45% is expected to continue in the near future.

2.5.2 USA pork production and consumption

The USA is the 3rd largest producer of pork in the world. The majority of its pork produced is consumed locally. This figure has moved from 94% in 1999 to an expected 91% in 2004. The significance of the export market is growing but is far from the level of exports, as a percentage of production, of both Denmark and Canada. Table 2.11 shows that pork production is expected to increase in the USA market in 2003 and 2004. This increase is expected to come from increased consumption of pork products and a small increase in the export market for USA pork.

Table 2.11 Local consumption (1000 metric tons carcass weight equivalent)

Consumption						
USA - production	8758	8597	8691	8929	8931	8980
USA - consumption	8596	8457	8388	8684	8733	8835
USA - imports	375	439	431	485	567	624
USA - exports	580	584	708	731	762	769
Local consumption	94%	93%	92%	92%	91%	91%

Source: Adapted from, FAS, 2003: online

Pork production in the USA is following what appears to be the world wide trend, where there are fewer farmers producing more pork. The USA pork industry continues to move towards large-scale production. "The number of producers selling less than 1,000 hogs annually declined by 73% between 1969 and 1992. While this group of producers has been declining rapidly, the producers selling more than 1,000 head annually increased by 320%" (Grimes & Plain, online, 02 March 2004). It is expected that larger pork producing firms will continue to increase their share of the industry. This phenomenon is partially due to the economies that exist on larger operations. The need to exploit economies of scale is further emphasised as the reason for the increasing size of production units in an article published by the Economic Research Service (ERS) department of USDA (ERS. 1996. p.15.).

Pork producers are moving away from the traditional corn producing areas, to areas that are dryer in the Western states, where they can dispose of manure more cost effectively and without transgressing environmental legislation (Grimes & Plain, online, 02 March 2004). According to Michael Boehlje, "environmental absorptive capacity" is considered the most site specific and least mobile of all resources and for this reason is hypothesised as a dominant determinant of regional location of the pork production industry (1995, p.1224.). Table 2.12 illustrates the percentage of production per state and the concentration of production in the central regions of the USA.

Table 2.12: Pork production per state (1000HD).

	2001	% Production
Iowa (IA)	26253	22.0%
North Carolina (NC)	17652	14.8%
Minnesota (MN)	13009	10.9%
Illinois (IL)	8339	7.0%
Missouri (MO)	7350	6.1%
Oklahoma (OK)	6443	5.4%
Indiana (IN)	6054	5.1%
Nebraska (NE)	5964	5.0%
South Dakota (SD)	3117	2.6%
Ohio (OH)	3111	2.6%
Kansas (KS)	2863	2.4%
Colorado (CO)	2686	2.2%

Source: National pork board, *Pork facts 2002/2003.* USA. P.14

The USA pork industry has consistently expanded since 2000 and this trend is expected to continue. The ERS (Economic Research Service, USDA) partially attributed the success of the USA pork industry to the following structural changes:

1 The new and significant infusions of financial capital,
2 Timely improvement in genetics and management practices,
3 Available farm labour and a plentiful land base,
4 Fewer and significantly larger production units,
5 Larger units are frequently operated under contract and,
6 Often located outside traditional hog production regions.
7 The restructured processing industry. (ERS, 1996. p.15.)

The indications are that the USA industry has geared itself to benefit from relative stability and reasonably constant growth.

2.5.3 Infrastructure and technology

US firms are at or near the forefront in technological advances, especially in computers, medical, aerospace, and military equipment, although their advantage has narrowed since the end of World War II (CIA, online, 5 February 2004). The high level of technological infrastructure has assisted in delivering what the customer wants. Especially important in

the pork industry is the fact that consumer demands are increasingly becoming more specific. "Consumers are demanding higher quality food products that offer nutritional benefits, convenience, and taste, rather than simply bulk or homogenous products." (Collins, Online, 24 November 2003)

Increasing concentration is a long run trend that continues throughout the agricultural sector, affecting all the elements of the supply chain: production, processing, distribution and marketing (State of Utah, online, 2004). A development in the pork industry that is seen as especially important is the increased level of coordination in the farm-to-consumer chain, manifesting itself in contractual arrangements, alliances and various levels of integration-both vertical and horizontal (Collins, Online, 24 November 2003) The increased concentration in the meat packing industry resulted in a simultaneous increased concentration (horizontal integration) in hog production, processing, and marketing including increased vertical integration of all of these functions. Consequently there are fewer, larger operations dominating production and processing. "The pork processing industry today is characterized by a decreasing number of companies, the most profitable of which operate very large, relatively new, capital-intensive processing and packing facilities" (ERS.1996.p.15).

The level of control that contracts exert over the pork producers evidences the level of technological intervention in the USA pork industry. Often production contracts specify the particulars of precisely how pork must be produced. These include careful control of the genetic characteristics, nutrition, medical conditions, and environment of the animals.

Considering table 2.5 on competitive rankings for different countries, it is evident the USA has the lead in international shipping and is placed second on domestic transportation costs. The USA is also ranked highly when it comes to food safety and its ability to utilise trade access. The above indicate that the USA has a sound and technologically advanced infrastructure, helping it maintain its strong position in the global pork industry.

2.5.4 Market pressures and trade

When looking at the domestic market the increased size of organisations in the USA and the increased coordination has resulted in a drastic change in the manner in which domestic prices are determined. As shown in table 2.13, pork sold on the spot market as a percentage has decreased substantially by decreasing from 35.8% in 1999 to a low of 13.5 % in 2003. By implication the majority of pork marketed in the USA is marketed by some form of contractual arrangement. Farmers no longer merely accept the prices on the open market, rather they produce according to contracts in which the price is negotiated.

Table 2.13 Marketing arrangements within the USA market.

	1999	2000	2001	2002	2003
	%	%	%	%	%
Hog or meat market formula	44.2	47.2	54.0	44.5	41.4
Other market formula	3.4	8.5	5.7	11.8	5.7
Other purchase arrangement	14.4	16.9	22.8	8.6	19.2
Packer-sold				2.1	2.2
Packer-owned				16.4	18.1
Negotiated - spot	35.8	25.7	17.3	16.7	13.5

*2002 and 2003 data based on USDA Mandatory Reports, 1999-2001 based on industry survey.

Source: U.S. Hog Marketing Contract Study, 2003, University of Missouri & Paragon Economics.

Considering the export market, the strong competitive position held by the USA in the world pork export market is attributed to a number of characteristics. The US Meat Export Federation (USMEF) lists the following as their competitive strengths:

1 The ability of the U.S. to supply large volumes of chilled pork by cut and product;

2 Recognition by the international trade that the U.S. has one of the strictest food safety systems in the world;

3 The ability of the industry to remain free of diseases such as FMD and Classical Swine Fever;

4 The ability of U.S. crop producers to supply the industry with high-quality and low-priced feed ingredients;

5 And the ability of the red meat industry to deliver a range of products (fresh and processed pork, beef and variety meats) to international buyers (USMEF, 2004, online).

Figure 2.5 corroborates what is said by USMEF It shows the export markets that the USA supplies. The largest market share is the Japanese market, a high value discerning consumer and consequently a much sought after, difficult to access, market. The graph does however highlight the lack of market share held in the EU and the significant presence held in the Far East.

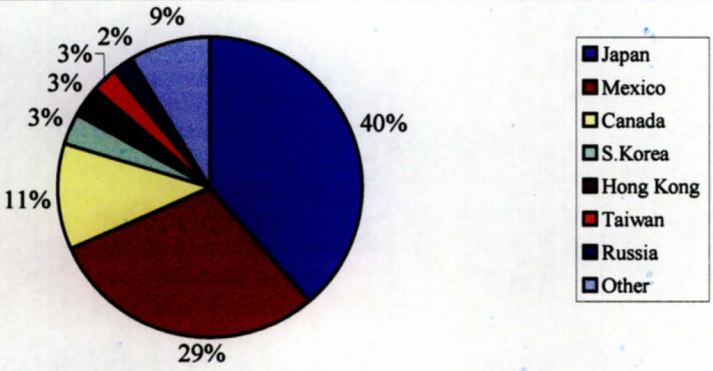

Figure 2.5: USA pork export markets
Source: Agriculture and Agri-Food Canada, 2003, online

The USA's high health standards, their ability to deliver more than just commodity products and their high level of infrastructure place them in a strongly competitive position when it comes to world trade and global competitiveness.

2.5.5 Problems faced by USA

The USA faces fewer problems than most countries with its large land mass suitable for manure disposal, cheap supply of feed grains and a high level of infrastructure and technology. That does not imply, however, that it has no problems at all.

The USA is ranked poorly when it comes to animal welfare, the only category that was rated with a 4 in the competitive rankings in table 2.5. This is an area that will need to be

addressed if the USA is intending to gain access to the EU market where animal welfare restrictions have a higher profile.

There is an increasing emphasis on the environment and tougher legislation. The continued trend toward fewer but larger operations, coupled with greater emphasis on more intensive production methods and specialization, is concentrating more manure nutrients and other animal waste constituents in some geographic areas (NPB, 2003, p.4.). The recently updated legislation impacts Concentrated Animal Feeding Operation's or CAFO's as they are subject to the National Pollutant Discharge Elimination System (NPDES) permit program. As a consequence of the concentration of farming operations the legislation was updated to ensure the quality of USA waters remain "fishable and swimable" (NPB, 2003, p.1.).

A Bovine Spongiform Encephalopathy (BSE) or "mad cow disease" outbreak was found in Washington State where a single cow was diagnosed with BSE. The consequence was the banning of imports from the USA by a number of countries resulting in the increased supply of meats in the USA and consequential lower domestic prices (Cattlemen's Beef Board & National Cattlemen's Beef Association, online, 15 March 2004).

The USMEF adds the following three items as competitive weaknesses of the U.S. pork industry:

1 The product specifications demanded by the large domestic market often differ from those demanded by international customers and this limits the export potential of some items

2 The lack of market access and sanitary agreements with a number of countries

3 Limits on the quantity of high-quality pork items for processing that the industry is able to export to Japan, the most lucrative and quality-conscious export market in the world, due to restrictions in market access. (USMEF, Online, 02 March 2004)

Although the USA has problems they do not seem as problematic as Brazil's FMD problems or Denmark's land constraint. On the whole the USA's problems do not seem insurmountable.

2.5.6 Conclusion

The USA's position as the third largest exporter of pork in the world is not surprising considering the advanced nature of the USA economy. The positioning of the USA facilitates its ability to supply pork products to both high value markets in the East and in Western Europe. The food safety reputation of the USA combined with relatively good animal health status and its large availability of suitable land all indicate that the pork industry in the USA should remain a strong global competitor in the future.

2.6 The Canadian pork market:

2.6.1 Economic outlook

Canada is the second-largest country in the world (after Russia) with 9,093,507 sq km of land. As a result of its degree of latitude approximately 85% of the population is concentrated within 300 km of the USA border. Canada is an affluent society with a GNI of US$28070 placing it 12th in the global ratings.

Canada's market-oriented economic system closely resembles the USA system. It is a high-tech industrial society that has seen impressive growth of the manufacturing, mining, and service sectors, all of which have seen the nation transform from a largely rural economy into one primarily industrial and urban. The 1989 USA/Canada Free Trade Agreement (FTA) and the 1994 North American Free Trade Agreement (NAFTA) significantly increased trade and economic integration with the USA (CIA, online, 23 February 2004).

In 2002 Canada had a GDP of US$715692million placing it 8th in the world and the estimated growth rate was 3.3%, unemployment relatively low at 7.6% and a trade surplus, all of which point to a strong economy able to sustain high standards of living in the near future.

2.6.2 Canada pork production and consumption

Canada is the 5th largest producer of pork in the world, but is expected to lead the world when it comes to pork exports in 2004, taking the place of the EU as the leading pork exporter. The significance of Canada's export market is seen in table 2.14 where the change from a 31% of production exported, in 1999, to an expected 47% of production exported, in 2004. This large increase in exports has fuelled the increase in the Canadian pork industry, which has increased from 1550 thousand metric tons in 1999 to 1940 thousand metric tons expected in 2004. Domestic consumption is about 31.3kg per capita a figure that has not changed dramatically in the last decade, indicating that the expansion in the industry has had to come from exports. The Canadian pork industry employs 35532 employees and the meat industry, of which pork represents 40%, is the third largest

industry in Canada. The pork industry is most certainly significant to Canada (Canada Pork International[2] online, 10 February 2004).

Table 2.14 Local consumption (1000 metric tons carcass weight equivalent)

Consumption						
Canada - production	1550	1638	1729	1854	1910	1940
Canada - consumption	1063	1047	1081	1073	1026	1035
Canada - imports	65	68	91	91	77	80
Canada - exports	554	658	727	863	975	980
Local consumption	69%	64%	63%	58%	54%	53%

Source: Adapted from, FAS, 2003: online

The production of pork in Canada is concentrated in 5 provinces of Canada, accounting for 96% of the production in Canada, with Quebec, Ontario and Manitoba accounting for more than 75% of Canadian production (Canadian Pork Council, online, 10 February 2004).

The trend towards fewer larger pig farms continues in Canada. Twenty seven percent fewer since 1996 and, the average number of pigs per farm increased from 523 (1996) to 902 (2003). At the same time the total number of pigs in Canada rose sharply. Just under 14 million were counted, a 26% increase from the last census. The contributing factors were: the demand for exports, more liberal trade agreements, the relative advantage of the low Canadian dollar, and abundant supplies of low-cost feed. Pig numbers in Canada have reached an all time high as a result (Statistics Canada, 2003, p.7).

2.6.3 Infrastructure and technology

Canada has a long history of pork exports and the industry has matured to the extent that pork is a major Canadian agri-food export. "The industry is served by a mature and committed export infrastructure, which includes trading houses, transportation and many other service components" (Canada Pork International[1], online, 10 February 2004).

More recently the Canadian industry has restructured focusing on those facilities that have high speed kill and the latest technology, resulting in fewer, better focused, more

modern cost effective plants. A similar trend was observed in Denmark with the reduction in the number of processing plants. A clear indication of the level of sophistication of the Canadian pork industry is the DNA traceability system that they are implementing. The GAIN report issued by USDA comments on this technology, indicating its significance. The technology allows Canadian pork marketed anywhere in the world to be traced back to the maternal sow. This innovation in food safety is expected to give the Canadian pork industry a major competitive advantage. It is expected that the "Made in Canada" brand will be promoted as a result. "The trace back system will be implemented at one of Maple Leaf's plants in the spring of 2004, and is targeted to provide fully traceable pork products to the Japanese market by the fourth quarter of 2004" (FAS, 2004, p.13).

The competitive rankings in table 2.5 rank Canada's infrastructure highly. Canadian domestic and international shipping costs are ranked 2nd and they are ranked 1st on their ability to gain trade access. The ability to gain trade access indicates the level of progression in their pork industry especially when access is often a barrier to trade for other countries.

Vertical integration in the Canadian pork industry is less prevalent than in other countries, however producers do belong to provincial pork marketing organisations. Although pork producers belong to pork marketing organisations they operate their farms independently from one another. The marketing organisations are under the control of the pork producers, but do not regulate supply. These organisations are responsible for the sale of all pigs delivered to the market in their province (Canada Pork International[3], online, 10 February 2004).

The Canadian infrastructure and its technology are of a high standard. It is this sophisticated economy that helps them remain at the forefront of global exports.

2.6.4 Market pressures and trade

With revenues amounting to over three billion Canadian dollars, the pork sector accounts for 30% of total livestock shipments making pork production a vital component of Canada's agricultural economy (Canada Pork International[4], online, 10 February 2004).

Canada's increasing pork industry is a direct result of their increased trade. Although Canada is expected to take the position as the leading exporter of pork products it must not be overlooked that Denmark actually exceeds Canada's exports but as it is included in the figures for the EU and exports a large percentage of its production to the EU it is not included in the USDA tables of exports, production, imports and consumption. For this reason Canada should rather be ranked 2nd in the world rankings.

Of the Canadian exports approximately 69% are fresh/chilled or frozen products, 10% are processed products and the remainder, 21% are by products. The market for Canadian products is concentrated in the USA representing almost 50% of the exports. Their 2nd most significant market is Japan at 20% after which we have Russia representing 4.8% of their market share. The large representation by "other" shows the diversity of their exporting operations. "For Canada, no market is too small. They push hard to gain access to markets like Australia or Cuba, then supply products to meet the customer's needs, even in the relatively small markets" (Cravens, online, 12 February 2004).

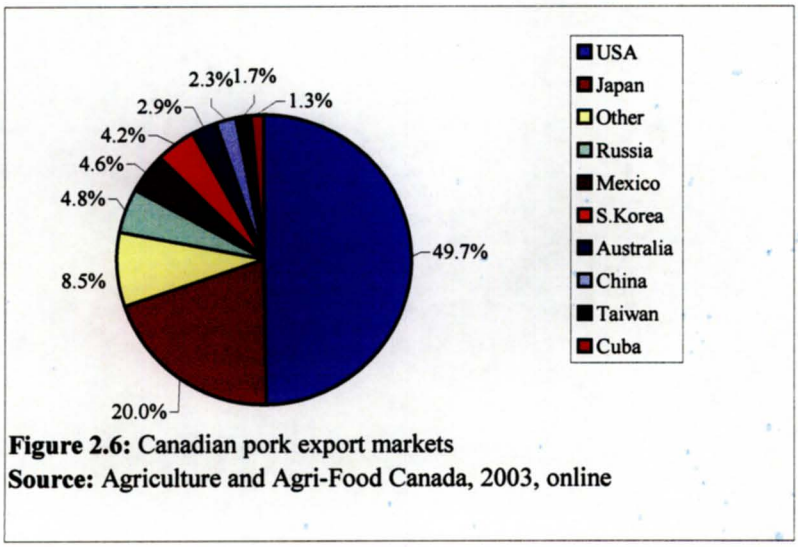

Figure 2.6: Canadian pork export markets
Source: Agriculture and Agri-Food Canada, 2003, online

As illustrated in table 2.8 the Canadian pork industry is the most effective in raising numbers of pigs per sow per year. This, as well as the country's record for good animal health and their ability to gain access to markets, stands them in particularly good stead for future exports. After Brazil Canada has the highest competitive rating for environmental constraints and with Canada's DNA traceability they are very competitive as far as food safety is concerned.

As "Food safety, animal disease and environmental constraints remain key competitive issues in the global market" (Cravens, online, 12 February 2004) we can see that Canada is geared up for future trade. Canada's success in the export market suggests that Canada is well positioned in terms of its current cost structures and abilities to meet customers' requirements. The following quote off the Canada Pork International web site illustrates their ability to use their infrastructure to increase their trade. "Buying pork and pork products from Canada is facilitated by a very efficient infrastructure which allows Canadian pork suppliers to serve their domestic and foreign customers well" (Canada Pork International[5], online, 10 February 2004).

2.6.5 Problems faced by Canada

Canada faces few looming problems. This does not imply that the Canadian pork industry will not experience resistance to unabated increases in production facilities. This is evident in Quebec where pork production will not be expanding until more stringent regulations are brought into being. A statement to this effect was issued by Quebec's environment minister Thomas Mulcair (FAS, 2004, p.13),

"The high level of reliance of the Canadian pork industry on the USA implies that additional supplies of pork and other meats in the USA will adversely affect the Canadian pork industry. This effect can currently be seen with the increased supply of beef in the USA due to a BSE outbreak. Lower USA beef exports due to BSE and increasing pork supplies are expected to negatively impact on demand for Canadian pork in USA markets.

Currency appreciations and devaluations are likely to impact on the Canadian pork industry. With almost 50% of Canada's production destined for the export market a currency fluctuation, for example, could have a significant impact on the Canadian pork industry. "A depreciating dollar (and an appreciating Canadian dollar) may boost USA pork exports causing increased competition for Canadian pork exports" (FAS, 2004, p.13).

2.6.6 Conclusion

Canada's strategic location between Russia and the USA via the north polar route gives it an advantage. Their ability to ship meat from both their East or West coast provides a further advantage. Canada has a relatively low cost of production and a good reputation for safety and quality. Their high animal health status gives them access to markets that the USA cannot supply and their strategic location gives them an advantage over Denmark when supplying fresh meat markets in the Far East (Cravens, online, 12 February 2004). Combined with their ability to use DNA traceability, Country-of-origin-labelling (COOL) is likely to increase their export market share, providing an outlet for pigs that otherwise would have been finished and processed in the USA or other countries (Cravens, online, 12 February 2004). The prospects for the Canadian pork industry look promising and it is most probable that Canada will at least maintain if not increase their export market share in the future.

2.7 Conclusion on the global pork industry:

In this chapter the world's leading pork producers have been analysed. This analysis shows that no single operating structure is a necessary concomitant for business success. This is evidenced by the success of Denmark's co-operative structure and the success of markets such as Canada, Brazil and the USA that do not use co-operative marketing structures. This is, however, not to say that integration nor co-operative agreements do not exist in these markets.

The context of the global pork environment is sketched with the first section on the global pork industry. This section shows that China is responsible for over half of the world's pork production, followed by the EU, USA, Brazil and Canada. These countries are also the world's leading exporters. It is for this reason that it was decided to analyse each of these countries' pork production with the intention of discovering how they sustain such large pork production and exports. This analysis is used in the following chapter where a summary table has been drawn up and used to compare to the South African pork industry with these leading pork-producing countries.

Section two of this chapter focuses on Chinese pork production. China as the world's leading producer makes it an important country in this analysis. China owes its success to its method of production, that of backyard production, a form of low cost production. The implication of this is that as China's economy follows the trend of urbanisation, China could experience a decline in the production of pork.

Section three focuses on Brazilian pork production. This market is of particular interest as its production has increased by 46% in a 5year time frame - the largest increase in the top producers in the world. The Brazilians have used exports to increase their domestic production. This is shown by the decrease in local consumption of domestic production from 94% to 76%. Brazil has the advantage of low cost feed, low cost labour and few constraints on manure and waste management.

Section four investigates the Danish pork industry. The Danish pork industry is the most successful in the EU and has sustained its dominance for many years. This market is characterised by its co-operative structures where the pork producer is integrated into the entire supply chain. This approach has resulted in the Danish pork industry exporting 1.6million tons of pork-more than any other country in the world. The Danish ability to utilise economies of scale and sophisticated technology has facilitated this leading position.

The fifth section deals with USA pork industry. The USA is simply a significant player in the market being the third largest importer, exporter and producer in the world. The success in the USA was attributed to the low cost of feed, utilisation of economies of scale in larger production units, the use of contracts and the restructuring of the processing industry.

The sixth section looks at the Canadian pork industry. This industry has experienced significant growth recently and is expected to rise to the top of the list of exporting countries. Canada has a high health status, low cost structure and good support from its infrastructure. It is Canada's high health status that provides it access to markets that the USA cannot supply.

This chapter has given numerous insights into how efficient pork-producing countries operate. This insight will be used in chapter 3 when drawing a comparison between the South African pork industry and the pork industries analysed in this chapter. The comparison will provide a sound analysis for the preparation of a questionnaire that incorporates all issues that could be relevant to a pork-marketing consortium in South Africa without excluding issues that relate to the global pork environment.

Chapter 3: The RSA pork market and the KZN pork market.

The most dominant international pork markets were reviewed in Chapter 2. The intention was to gain information about them that would assist in analysing the South African pork industry. With the South African market being an open market what is happening in global markets becomes more relevant as it is either impacting the South African market or will impact the South African market in the near future and hence pork production in South Africa. This chapter initially reviews the South African pork industry and thereafter compares the South Africa pork industry to the international pork markets analysed in the preceding chapter. The chapter concludes with a brief analysis of the pork industry in KwaZulu-Natal, introducing the two marketing consortiums that exist in the province. This chapter sets the foundation for the research methodology chapter that follows providing sufficient background information to construct a meaningful questionnaire.

3.1 The RSA pork market:

3.1.1 Economic outlook

South African GDP is US$104235million placing it 35th in the world with agriculture only 4.4% of that total. South Africa has the 28th largest population at 43.58million people with an average income per capita of US$9870, ranking it 74th in the world (World Bank, 2003, p.1). The South African National Treasury on 12 November 2003 forecast real GDP growth of 3.3% in 2004. With the inflation rate that has reduced from close to 10% in 2002 to below 6% in 2003, being within the South African Reserve Bank target inflation rates, South Africa can be classed as a middle-income, emerging market with an abundant supply of natural resources with moderate growth expectations in the future (CIA, online, 30 March 2004).

3.1.2 RSA pork production and consumption

The South African pork industry is a small industry by comparison to countries/unions such as China, the EU or the USA. Table 3.1 indicates that South Africa's production

would represent 0.29% of the Chinese production, 0.69% of the EU production and 1.39% of the USA production. This clearly illustrates South Africa's insignificance on the global market being only 0.15% of the global market.

Forty percent of commercial units in South Africa operate between 40 and 150 sows whereas the majority have 400 to 2500 plus sows, illustrating the importance of scale to turnover and profit. The size of piggeries varies widely, from 40 to 6000 sows per unit. Investment required for intensive housing averages R18000 per sow. Of the operational costs, feed costs account for the major portion making the enterprise extremely sensitive to feed price changes. A 1000 sow unit would cost (18000 x 1000) = R18 million to construct illustrating the capital intensive nature of the unit (SAPPO, 2003, p3).

Table 3.1: South Africa's positioning in global pork production (1000 metric tons carcass weight equivalent)

Production - RSA	**121**	
China, Peoples Republic of	41845	0.29%
European Union	17419	0.69%
United States	8691	1.39%
Brazil	2230	5.43%
Canada	1729	7.00%
Russian Federation	1560	7.76%
Poland	1550	7.81%
Japan	1245	9.72%
Korea, Republic of	1077	11.23%
Philippines	1064	11.37%
Mexico	1065	11.36%
Others	3683	3.29%
World Total	**83158**	**0.15%**

Source: FAS, 2003: online

Table 3.2 shows how the imports of pork in South Africa are significantly higher than the exports of pork. In 2003 the exports were approximately 4% of the imports. It is noticeable that the pork exports decreased from 2000 to 2001. This was as a result of the

foot and mouth outbreak excluding South African pork from the majority of the export markets.

Table 3.2: Pork imports and exports (Metric tons carcass weight equivalent)

Imports				9727	10427	8709	8195	15713
Exports				2232	932	536	834	641
Exports as % of imports				23%	9%	6%	10%	4%

Source: SAMIC, 2004: online

Production (Metric tons carcass weight equivalent)

Production tons	128 000	124 000	118 000	123 000	121 000	130 000	137 000

Source: NDA, 2004: online

No of pigs slaughtered (000's)

No of pigs slaughtered (000's)	2172	2062	2006	2145	1930	2000	2100

*=These statistics are now reported on a calendar year basis, source SAPPO.

Source: NDA, 2004: online

The decline in production of pork in South Africa from 1996/97 to 2000/01 is a 5% decrease. This is an illustration of how the domestic pork industry has contracted in that time period. This shrinking industry has forced domestic producers to reconsider current business practices and to look for more efficient alternatives. It can be seen in the increase in the production figures for 2001 and 2002 where the average carcass mass has increased. The 2001 and 2002 figures show an industry that has started to recover with an annualised increase from 1996 to 2002 of 1.2% (9.1/127.9/6). This is slow growth in the industry over the six-year period.

Table 3.3: Gross value of production R millions. (1000 tons)

Gross value	471.3(112.7)	539.8(126.5)	784.1(123)	873.5(111.6)

Source: (SAPPO, 2003, p4) (A.A.S., 2003, Stats SA)

Table 3.4 shows the distribution of the sow population in South Africa. Of particular importance is the size of the KZN market as can be seen it represents 16.6% of the overall South African market. The KZN market is analysed further at the end of this

chapter. With the exception of the southwestern part of the Western Cape, the pig populations are concentrated in the northern and eastern parts of the country. In the Limpopo province commercial pig production is primarily in the western and southern districts; in KwaZulu-Natal province in the midlands and two districts in the north; in the North West province mostly in the eastern parts; whereas in the Free State province populations are more or less evenly spread, apart from the southern and western areas (National Livestock Industry Strategy and Implementation Framework, 2003). There is a correlation between the concentration of major units and cities-most being within 100 km of cities where their markets and input suppliers are situated (SAPPO, 2003, p2).

Table 3.4: Distribution of pork production in South Africa

	Sows	%
Northwest	17050	17.1%
KwaZulu-Natal	16600	16.6%
Western Cape	16000	16.0%
Gauteng	13400	13.4%
Mpumalanga	11700	11.7%
Limpopo	11600	11.6%
Free State	7750	7.8%
Eastern Cape	4400	4.4%
Northern Cape	1500	1.5%
Total	100000	100.0%

Source: SAPPO, 2004: online

3.1.3 Infrastructure and technology

At a national level the industry is well organised through the South African Pork Producers Organisation (SAPPO). SAPPO is supported on the producer side by the Pig Breeders Society, the Pig Veterinary Society and SAMIC and on the processing side by the Red Meat Abattoir Association and the SA Meat Processors Association.

The position adopted by the South African government is that of a free market. For this reason South African farmers do not receive any form of incentives for the production of pork and receive little protection from imports. The co-operatives that existed before are no longer in place, however, producers, processors and packers are starting to integrate to

form operations that are better co-ordinated; this is a trend that has started in the last five years.

The following quote from the CIA world Fact book indicates the level of infrastructure in South Africa. "Well-developed financial, legal, communications, energy, and transport sectors; a stock exchange that ranks among the 10 largest in the world; and a modern infrastructure supporting an efficient distribution of goods to major urban centres throughout the region" (CIA, online, 26 March 2004). As can be seen by the large volumes of pork being imported into South Africa, the infrastructure is adequate to facilitate efficient imports and exports of pork products.

South Africa's high health status, the abundant supply of land and its semi-arid climate makes it ideal for the disposal of manure waste, assisting the South African pork industry to remain competitive. The marketing channels in South Africa are generally fragmented and are not near the scale of operations in countries such as the USA. This fragmentation inhibits gains that could be achieved by economies of scale. A further problem with this fragmentation and low level of integration is the inability of the South African pork marketer to guarantee traceability to the source of production, an important factor when exports are considered. This is changing with certain processing plants collaborating with producers to ensure that pigs are tattooed facilitating traceability (Hopkins, 2004). Production technologies are easily transferred and the technology applied in nutrition, housing and husbandry are at a par with international levels as a result of the ease on technological transfer.

The South African pork industry seems to be moving through a transition phase where it is consolidating and becoming more co-ordinated. Although the fundamentals of the South African pork industry with regard to infrastructure and technology are sound, there is room for improvement.

3.1.4 Market pressures and trade

The gross value of fresh and processed pork products is R873.5million (2001/02). Commercially produced pork is marketed primarily on the open market and as a result the prices for pork fluctuate according to the market forces of supply and demand. These market forces can lead to significant fluctuations in the price for pork. Figure 1.2 shows the pork price per kg over time and illustrates this well. Domestically the market pressures have been turbulent and have resulted in the national sow numbers decreasing from approximately 120000 sows to 100000 in 2003. The predominant causes were domestic shortages of maize in 2002, resulting in higher input costs, and the low value of the rand. Subsequent to this the rand strengthened and this resulted in a significant increase in imported pork. As seen in table 3.2 imported pork in 2003 almost doubled the quantity of pork imported in 2002.

The level of exports have steadily decreased from 1999 to 2003 as South Africa battles to compete against subsidised products from Brazil, the EU, Canada and the USA. The situation is exacerbated when non-tariff barriers are considered. South Africa's presence on the international pork market is insignificant. The size of South Africa's pork industry eliminates it from certain markets as it cannot supply the large volumes required by larger markets. This means if South Africa intends exporting it has to look for smaller niche markets or markets that are prepared to deal with smaller quantities (Hopkins, 2004).

As discussed in SAPPO's business and implementation plan, the health of the national pig herd is the biggest asset in the sustainability of a profitable and competitive industry. The pig industry faces strong competition in the export market with trade liberation and exposure to stringent international sanitary and phyto-sanitary standard (SPS) requirements (2003, p.13).

An essential part of international trade is reputation building and the development of networks within the international community. South Africa's ability to gain trade access is a problem and, a number of factors are responsible for this: non-tariff barriers, the lack

of capacity in terms of people and financing, and perceptions of the South African pork industry.

South African pork producers face strong competition both domestically and internationally as a result of South Africa's free market position. South African firms cannot afford to operate inefficiently or to provide a sub standard product. To increase its share of the consumer market domestically and its potential to export there can be no compromise when it comes to the safety and quality of the product (SAPPO, 2003, p.13).

3.1.5 Problems faced by RSA

The most significant problem faced by the South African pork industry is disease "control". South Africa has both African Swine Fever (ASF) and Foot and Mouth Disease (FMD). However, the diseases are confined to certain areas of the country only. Within South Africa a line can be drawn beyond which no FMD is found. FMD is transferred by animal contact and fencing can control the transfer of the disease. Other than the Kruger National Park South Africa is FMD free.

"South Africa lost its FMD-free status without vaccination after an outbreak of FMD virus type O was diagnosed on 14 September 2000 in a piggery in the district of Camperdown in KwaZulu-Natal" (NDA, Online, 26 March 2004). The outbreak was carefully controlled and the disease was eliminated. The consequence was the loss of South Africa's FMD disease free status, which was only reaccredited by the International Organisation of Epizootics (OIE) the international veterinary society in June 2002 (SAMIC, 2002, p.1).

Exports of South African pork are often blocked on the basis of the presence of ASF and FMD in South Africa. This is the case even when South Africa has met with the requirements of the OIE for safe meat exporting, a non-tariff barrier. (Hopkins, 2003)

In an interview Mr D. Hopkins (SAPPO Chairman) said that South Africa lacks capacity when dealing with international controlling bodies such as the WTO and the OIE. South

Africa also needs to communicate better with international markets, as often international markets do not understand South Africa's disease status. This is not to say that South Africa cannot export. For example, Singapore a high value market, has good trade relations with South Africa. Capacity does, however, need to be developed in this regard.

The more recent volatility of the South African rand has added to the business risk of South African pork production. Figure 1.1 illustrates how the rand depreciated by approximately 40% in 2001. This devaluation changed the environment in which the South African pork producer operated causing structural adjustments as a result of imports being more expensive to the South African processing companies. With the subsequent gradual strengthening of the rand the pork industry has had to readjust to a stronger rand. These adjustments do not facilitate stable and sustainable imports and exports.

From the aggregate industry perspective there appears to be poor co-ordination and no common goals between producers, input suppliers and those participating in the value adding chain. At worst there are sometimes clashes of interest, contributing to fluctuating prices (Visser, 2003).

SAPPO further identified the lack of statistics as being one of the weaknesses in the South African pork industry. This is partially due to the scrapping of the statutory levy on meat slaughtered. The levy served as a method of accurately determining the number of pigs slaughtered.

3.1.6 Conclusion

The South African pork industry is a small industry when compared to international markets and the country's exports are relatively small. The disease status of the county is something that will need to be carefully controlled to ensure a viable long-term export market. The industry has started to follow the international trends of the concentration of production, processing and horizontal integration. This concentration should see a change in the fragmentation of the industry although this will not be immediate. The South

African pork industry has few major infrastructure problems but does battle with a lack of capacity in certain areas.

3.2 Contrasting the globally dominant pork producing countries with South Africa and the implication thereof:

The South African pork industry was analysed with the intention of comparing it to the dominant pork producing countries in the world. Both the dominant pork producing countries in the world and the South African pork industry are summarised in table 3.5. This summary document has been discussed with the intention highlighting South Africa's position. The summary document has been discussed under broad headings incorporating various characteristics detailed in table 3.5.

3.2.1 The Economy

South Africa's free market position, the high level of infrastructure and moderate technology suggest that South Africa could be seen as a target for imports. The mature stage of development in the South African pork industry, characterised by the slow growth in the pork industry, and the moderate economic growth suggests that the South African producer will need to increase exports to increase production locally. The level of integration in the South African pork industry and the currency's ranking as moderate could inhibit this as both large volumes and stable exchange rates are characteristics which facilitate exporting. However, the South African exchange rate has been more stable in the last year and this could assist exporters should the trend hold.

3.2.2 The Health and the Environment

With the exception of ASF South Africa has a reasonably clean bill of health, not having some of the more devastating diseases found overseas. South Africa has a high level of assurances when it comes to drug residues in meat products but has a poor ability to trace meat back to its source, a problem when considering exports to high value export markets. This is however being addressed. Environmental pressures are low from both manure disposal and land availability. Should South Africa be able to overcome the

various trade barriers it would be a good position to take advantage of its health status and to promote the low impact on the environment.

3.2.3 The Raw Materials

South Africa is an importer of Soybean but an exporter of feed grain corn. This puts South Africa at a slight disadvantage when comparing it to countries that are self sufficient in production of both corn and soybean such as USA and Brazil. This could result in a higher cost of production per kg of pork. As a consequence South African pork producers will need to work hard to reduce costs of production to ensure their cost of production per kg remains below import price parity. If this does not happen South African pork production could face further imports of pork and further reductions in the domestic market share.

3.2.4 Production, cost, quality and economies of scale

As with leading pork producing countries South Africa's pork production is intensive. It has a medium ability to produce low cost pork as its costs of production are not the lowest in the world but are not as high as the costs in the EU. South Africa does, however, have the ability to produce high quality pork having the technology and genetics needed. For this reason South Africa can produce good quality pork at a medium price.

3.2.5 Trade

International trade involves shipping costs and for this reason geographical location is important. South Africa is moderately placed when it comes to trading with Europe and the Far East. However its ability to export is poor. Exporters easily access the South African market placing South Africa at a competitive disadvantage, especially when large markets such as the EU and the USA are difficult to access. South Africa's percentage of world production illustrates the insignificance of the South African market, with South Africa's exports on the world market being entirely insignificant. Even China with its poor quality status exports a larger percentage of domestic production than South Africa. This all indicates that South Africa should be able to establish export markets of some

sort, whether they are niche markets or markets where we can compete on other product attributes. The most interesting factor is that South Africa has a very low level of domestic consumption of pork, 2.6kg per capita per year. This is lower than Brazil with a consumption of 11kg per capita per annum. The implication is that a small increase in the domestic consumption of pork per capita would result in a significant increase in domestic demand. With South Africa's market being price sensitive it is important that producers focus on cost structures. This is becoming increasingly important now that importers have the ability to access cuts of pork and sell them as fresh meat due to new Carbon Dioxide vacuum packed meat technology.

There is no doubt that the South African pork industry has to make a large number of structural adjustments to ensure the pork industry is more competitive domestically and internationally. It is this drive that has influenced the members of Unipork Marketing SA and Penvaan Pork Wholesalers to start marketing their pork collectively. This should assist them in achieving product attributes believed necessary to make them domestically competitive. It is with this perspective that the KZN market will now be focused upon.

3.3 Pork Production in KwaZulu-Natal:

3.3.1 Distribution of pork producers

The KZN pork industry is made up of about 16600 sows. This is 16.6% of the national sow herd. The pork population in KZN is concentrated in two areas, in the midlands and northern regions. The midlands accounts for 13075 sows and the north 3525 sows, 79% and 21% of the KZN market respectively.

3.3.2 Market share

Figure 3.1 shows the split of the market share in KZN based on the size of the pork-producing units. The figure compares two time frames 2003 and 1998. If we look at the figure we see that there has been a very slight increase in the market share of the smallest units (about a percentage point). Whilst the only other category to increase is the 901-2000 sow category. The first observation that can be made is that the big units are getting bigger. There has been a substantial shift in market share where larger units used to

control 6% of the market, they now control 18% of the market- a 12% change in five years. If we were to take the largest two categories i.e. 401-900 sows and 901-2000 sows we see that the market share has increased by 5% from 41% of the market share in 1998 to 46% of the market share in 2003. The observed trend does seem to suggest that larger operations will, in line with international trends, continue to gain greater market shares.

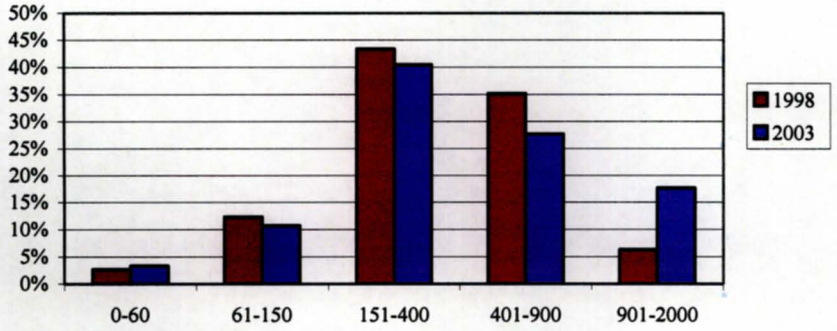

Figure 3.1: Market share of units in KZN
Source: Unipork Marketing SA, 2003

Figure 3.2 shows the breakdown of the number of units in KZN by size of the unit and it compares the number of units in 1998 to 2003. The first observation that can be made is that there are fewer pig farmers in 2003 than there were in 1998. The second observation is that most units are between 151 and 400 sows. There were 29 units in 1998 and 27 in 2003. The third observation is that the only category to increase the number of units was the 901-2000 sow category, by one unit. This puts forward a strong argument for the larger units' ability to succeed even when market conditions are adverse.

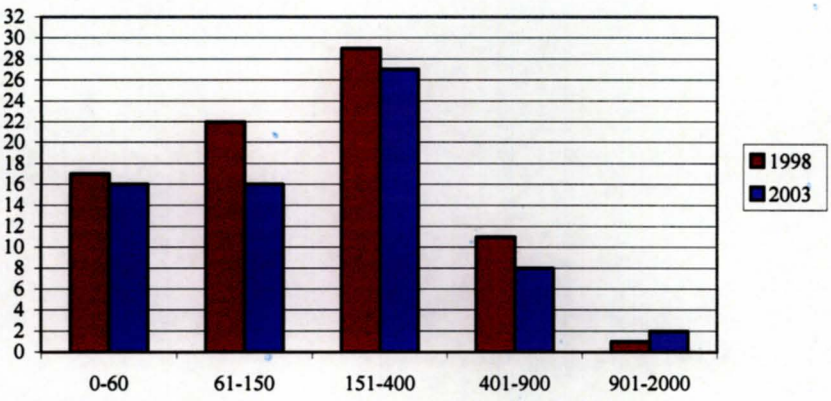

Figure 3.2: Size of units in KZN
Source: Unipork Marketing SA, 2003

3.3.3 Number of Abattoirs and processors

Figure 2.15 shows the market share of various abattoirs in KZN. This figure clearly illustrates the concentration of abattoirs with the two largest, Cato Ridge and Enterprise, making up 75% of the animals slaughtered in KZN. When interpreting the figure it is important to notice that Cato Ridge Total (CR-T) is the summation of two large processors- Frey's Fresh Meats and South African Livestock Association (SALA). A similar observation is made with Enterprise (ENT-T) where Esperanza (ESP) and Enterprise (ENT) both operate from the Enterprise premises.

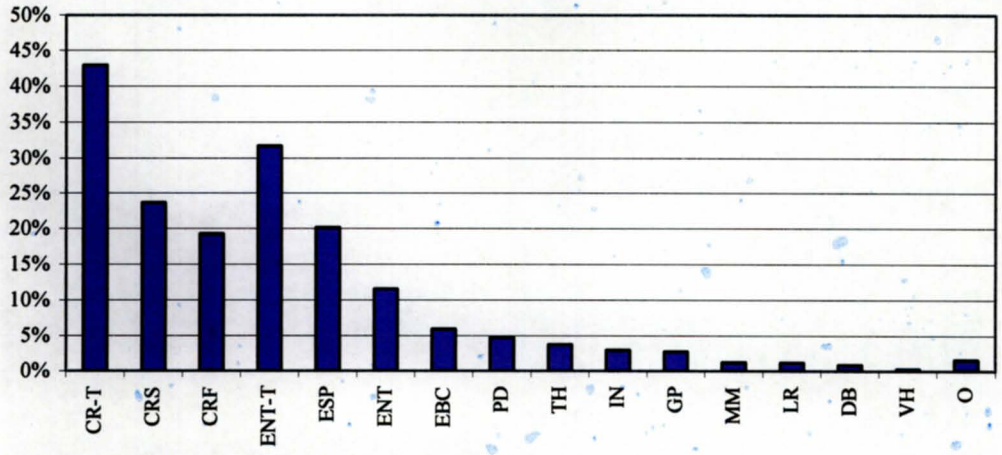

Figure 3.3: Abattoir market share in KZN
Source: Telephonic survey, Hopkins, 2004

An important change in KZN slaughtering is the decision of Eskort Bacon Factory to cease the slaughtering of pigs in Escourt and rather slaughter animals in Heidelberg. Eskorts' market share was recorded at March 2004 after they started decreasing the number of pigs slaughtered in KZN. The total number of pigs slaughtered in KZN would be approximately 350000 animals per year. Eskort when at full production would slaughter approximately 100000 animals, giving it a market share of 29%. This move on Eskorts' part has concentrated the slaughtering of pigs in KZN, with the bigger abattoirs doing larger volumes. Eskorts' move has concentrated bargaining power on the side of processing companies, placing the fragmented marketing efforts of the farmers at a larger disadvantage than ever before.

3.3.4 Concentration and integration of pork production in KZN

While the KwaZulu-Natal market has been experiencing change it has facilitated the need for producers to consider alternative methods of strengthening their position in the market. In KwaZulu-Natal there are two organisations that have been formed as a result namely Unipork Marketing SA and Penvaan Pork Wholesalers.

3.3.4.1 Unipork Marketing SA (Unipork)

This organisation is a relatively new organisation, having been established in 2003. It is an attempt by farmers or producers to stabilise the pork industry, to help ensure that pork production is viable in the long term. Unipork has 7 members representing 5000 sows in the KwaZulu-Natal pork industry. It is expected that Unipork will increase its shareholding to exceed 50% of the pork industry in KwaZulu-Natal if other interested parties are accepted into the Unipork consortium. Unipork is an organisation that collectively negotiates on behalf of the members of Unipork. Matters that Unipork would negotiate include the selling prices per kg of pork sold, supply contracts and the cost of feed, and it is expected that this scope would increase as Unipork establishes itself. To fund itself Unipork collects a marketing fee for the service that it performs. In the short time that Unipork has existed it has succeeded in achieving cost savings as well as certain improved prices.

3.3.4.2 Penvaan Pork Wholesalers

Penvaan Pork Wholesalers (PPW) is an organisation where a number of farmers have started working together. Over a period of time they have formed a private company called PPW. With an initial membership of 1200 sows they now represent 5000 sows after seven years of operation. Among the stated advantages of the arrangement are increased bargaining powers, economies of scale when it comes to transport and contracts with processing companies. Membership of PPW is voluntary with members not being shareholders. The voluntary membership ensures quality of service and timely payment as farmers have the option of going elsewhere. To fund itself PPW collects a marketing fee for the service that it performs.

The contracts start with the weaning figures that are supplied to PPW by the producers. This gives PPW the expected number of piglets that it must contract to sell. The contracts that PPW enter into are varied in nature, some being related to the market price, others are based on the cost of production. Contracts vary in length from 6 to 12 months. PPW market a consistent branded product; to ensure traceability they use only one genetic supplier, PIC, for their genetics. PPW provide a quality assurance on the feed and medication used and conduct audits to verify this. PPW representative, Dr Volker, said that it was their commitment to a quality product that kept the processors using their pigs when there was an over supply of slaughter pigs in the market.

3.4 Conclusion:

In this chapter the South Africa pork industry was reviewed in order to establish areas where the South African pork industry has competitive advantages and other areas where it has competitive disadvantages. The South African pork industry was analysed in the same structured manner as the globally dominant countries were examined in chapter 3. This involved looking at the economic outlook for South Africa, the levels of domestic production and consumption, the state of infrastructure and technology in South Africa, the market pressures and trade, then finally the problems that the South African pork industry faces.

The second section of this chapter then focused on a comparison of the dominant producers of pork in the world with the South African pork industry. This was accomplished by summarising key characteristics identified in the country analysis found in chapter 3. These characteristics were tabulated, see table 3.5 for the details. The characteristics in table 3.5 were then discussed under broad headings focusing on their implications for the South African pork industry. The comparison with the leading world producers was useful as it highlighted how the South African pork industry compared to the international pork producing countries.

Following this analysis the KwaZulu-Natal pork industry was reviewed. In particular the market share of KZN as a proportion to the South African pork industry and the split of the KZN market was discussed. This was followed by an analysis of the market share of abattoirs and processing companies. There-after the two marketing consortiums that exist in KZN were discussed in detail. These consortiums were focused upon in this study in order to establish if marketing consortiums have a stabilising effect in the industry. In chapter 4 the research methodology will be discussed.

Table 3.5: Summary of country analysis and the implication of this for South Africa

	Note	China	Brazil	Denmark	Canada	USA	RSA
Market type	1	Govt. controlled	Free market	Coop structures	Free market	Free market	Free market
Market stage of development	2	Growth	Growth	Mature	Mature	Mature	Mature
Level of integration	3	Low	High	High	High	High	Low
Currency stability	4	Stable	Medium	Stable	Stable	Stable	Medium
Growth rate per country	5	8%	2%	1.1%	3.3%	2.45%	3.3%
Technology	6	Low	Medium	High	High	High	Medium
Infrastructure - transport	7	Low	Medium	High	High	High	High
Health – disease status	8	Poor	Poor	Good	Good	Good	Medium
Health – food assurances e.g. drug residues	9	Poor	Poor	High	High	Medium/high	High
Health - traceability	10	Poor	Poor	High	High	Medium	Poor
Environmental pressure-availability of land	11	Low	Low	High	Low	Low	Low
Environmental pressure- manure disposal	12	Medium	Low	High	Medium	Medium	Low
Importer or exporter: Corn (2001)	13	Exporter	Neither	EU Imports	Importer	Exporter	Exporter
Importer or exporter: Wheat (2001)	14	Neither	Importer	EU net exporter	Exporter	Exporter	Exporter
Importer or exporter: Soybean (2001)	15	Importer	Exporter	EU Imports	Exporter	Exporter	Importer
Production method	16	Backyard	Intensive	Intensive	Intensive	Intensive	Intensive
Ability to prod. low cost pork – int. production	17	Low	High	Low	High	High	Medium/Low
Ability to produce high quality pork	18	Low	Medium	High	High	High	High
Ability to produce cost competitive quality pork	19	Poor	Medium	Low	High	High	Medium
Ability to utilize E of S in production	20	Poor	Medium	High	High	High	Medium
Global positioning – Europe	21	Poor	Poor	Good	Medium	Medium	Medium
Global positioning – Far East	22	Good	Poor	Poor	Medium	Medium	Medium
Ability to export	23	Poor	Medium	High	High	High	Poor
Market accessibility to exporters	24	Easy	Medium (NV)	Difficult	Medium	Difficult	Medium
Percentage of world production	25	50.1%	3%	2.2%	2.2%	10.1%	0.15%
Percentage of world exports	26	7.5%	16.2%	39.9%*	24.5%	19.2%	0.00%
Level of exports relative to production	27	Low 0.67%	High 24.34%	High 86.15%	High 50.52%	Medium 8.56%	Low 0.61%
Consumption habits (kg per capita) 2001	28	34.4	11	76.3	31.3	31.2	2.6
Local market drivers	29	Price	Mixed	Quality	Quality	Quality	Price

* = Denmark is included in the EU, only exports out of the EU are counted, Denmark's % is calculated as a percentage of total exports where the EU is seen as a single unit.

Notes: 24 The ability of another country to access that country's market. I.e. South Africa is easy to export. Brazil is NV due to the cost of production difference between RSA and Brazil.

Chapter 4: Research Methodology.

Based on the review of the literature in the previous chapters, it appears that the South African pork industry is following world trends. Some of these trends are fewer farms with larger outputs, high health units, consolidated or vertically integrated processing and packing units, customer focus, product traceability, exploitation of economies of scale, the presence of greater environmental pressures and competition from global competitors.

As an in-depth knowledge of the pork industry is required to accurately determine the trends identified in the literature review with regard to the South African context, it has been decided to conduct a study among successful businessmen and experts in their own rights within the pork industry rather than obtain a representative sample of people in the pork industry. The focus of the study is the KZN pork industry. The members of the only two pork-marketing consortiums in KZN, Unipork Marketing SA and Penvaan Pork Wholesalers, will be of particular interest as we are trying to determine whether their objectives and requirements will align with those of the processing companies.

This chapter deals with the research problem and objectives, the research design, the sampling method and the criteria used for selection, the survey technique used to collect the data and the questionnaire design.

4.1 Research problem and research question:

4.1.1 Research problem

To determine the potential stabilising effect - a stabilising effect being anything that sustains profitability for a prolonged period, of a pork marketing consortium on producers and processors in the pork industry in KZN.

4.1.2 Research question

Can a marketing consortium have a stabilising effect on the pork industry?

4.2 Research objectives:

4.2.1 The primary objective of the research is:

To determine whether the objective to sustain profitability for a prolonged period will satisfy the objectives of both members of members of marketing consortiums and processing companies.

Essential in determining the primary objective are:

4.2.1.1To determine what the objectives of the marketing consortiums are.

4.2.1.2To determine what the objectives of the members of the marketing consortiums are and whether they are aligned with the goals of marketing consortiums.

4.2.1.2To determine expectations and anticipated problems that the processors may have with marketing consortiums.

4.2.2 Secondary objectives are:

4.2.2.1 To determine what the reasons are for the potential members being interested in becoming members of a marketing consortium.

4.2.2.2 To determine what the reasons are for people declining to become members.

4.2.2.3 To identify factors that determine profitability, stability and sustainability in the pork industry and the impact they may have on the research problem.

The secondary research was based on a survey of the literature including, current agricultural journals, industry specific periodicals, interviews and telephonic conversations with various government officials, text books on international trade, the internet and newspapers. In order to substantiate the literature survey, a questionnaire based on the literature was empirically tested among selected experts in the pork industry.

4.3 Research design (data collection methodology):

Research design is a planned research activity based on a research question. The design guides the selection of the sources and types of information as well as the procedures for every research activity.

There are three types of business research: exploratory, descriptive and causal research (Zikmund W, 2003, p.54). Exploratory research is a means of finding out what is

happening and is a method of seeking new insights (Saunders M, Lewis P, and Thornhill A. 2003. p.97). This research can be regarded as exploratory research given the objective of this research, which is to determine what the objectives of pork marketing consortiums are and what the expectations of the processors are. A comparison of the outcomes will assist in determining whether expectations are sufficiently aligned to yield long-term business relations. Descriptive research attempts to portray an accurate profile of persons, events or situations (Saunders M. *et al.* 2003. p.97). This research has elements of both exploratory research and descriptive research but is not explanatory or causal, as it does not attempt to establish causal relationships between variables.

The study was conducted among the following four groups of experts:

1 Questionnaires sent to the current members of Unipork Marketing SA and Penvaan Pork Wholesalers.

2 Questionnaires sent to potential members of Unipork Marketing SA and Penvaan Pork Wholesalers to establish the reasons for their interest.

3 Questionnaires sent to pork producers who have refrained from becoming members of Unipork Marketing SA and Penvaan Pork Wholesalers to establish their reasoning for not prescribing to this business concept.

4 Questionnaires sent to pork processors to establish what their needs from pork producers are and what their reaction will be to the proposed selling consortium.

An exploratory survey was conducted amongst the members of Unipork Marketing SA, the purpose of which was to identify various expected benefits to the members of a marketing consortium and expected benefits that would be experienced by the processing companies dealing with a marketing consortium. This exploratory survey assisted in obtaining the general context of the research problem and to identify additional areas that needed consideration. The results from the exploratory survey were used to ensure completeness in the design of the questionnaire.

The empirical study via the target group of experts in the pork industry was conducted with questionnaires. The questionnaires were formulated using the secondary information from the literature survey as well as the insights available from the exploratory survey questionnaire. A Likert-type scale was used where a question was asked with the response requiring a rating from 1 to 5, one being strongly agree and five being strongly disagree. The reason for using a Likert scale was to standardise the responses and simplify the task for the respondents making the data easier to analyse and the respondents more inclined or motivated to respond. With each question there was space for the respondent to add in any comment that they felt would be relevant to the appropriate interpretation of the respective question. The comments were summarized and included in the analysis of each question. At the end of each questionnaire the respondents were prompted to respond to matters they felt were relevant that may not have been included in the questionnaire. The intention was to obtain all information that is relevant to the research problem. To establish appropriate conclusions on the questionnaire a selection of experts was interviewed to discuss the results of the research. These interviews assisted in ensuring that appropriate conclusions were made on the findings and that the result was a more sound analysis.

4.4 The sampling method and the criteria used for sample selection:

The concept behind sampling is that, from a sample of a population conclusions can be drawn on the entire population (Zikmund W, 2003, p.70). The universum of the population in this research has been regarded as all members of pork consortiums in KwaZulu-Natal. As the sample was aimed at the entire universum, namely all members of pork consortiums in KwaZulu-Natal, there was no need to apply any sampling technique when dealing with the marketing consortium members. The members of the two consortiums will represent more than 60% of the pork produced in KZN. The study also deals with respondents that are external to marketing consortiums. From these populations respondents will be selected based on the judgement of the researcher. The use of judgement implies that non-probability sampling has been applied (Burns A. Bush R., 2000, p.404).

This method of research was selected in order to gauge the opinions of experts in the pork industry in KwaZulu-Natal. The sample chosen for this research was experts in the pork industry in KwaZulu-Natal. Table 4.1 shows the samples and the respective market share held by each sample.

Table 4.1: Groups to be surveyed

Unipork members and prospective members	12	33%+
Penvaan members and prospective members	12	31%+
People declining membership of a consortium	5	10%+
Processing companies	5	80%

The first sample was members of Unipork and prospective members, which included the seven members, as well as a sample of five prospective members. The producers intending to become members were established with the help of Unipork management. The second sample was the members of Penvaan Pork Wholesalers' twelve members. The third sample was producers not interested in becoming members of a marketing consortium of whom five producers were selected. The producers not intending to become members of Unipork were selected on the basis of operation size. The fourth sample represented the pork processing companies. The processing companies include the largest five processing companies, excluding Eskort Bacon Factory due to their relocation exercise; this represents approximately 80% of the processing volumes in KZN. It was anticipated that consensus would not be achieved among the different experts and for this reason the Delphi study technique was not used.

Experts are classified as people who have been involved in the pork industry for five years and who are well informed. Farm owners and/or managers who have been involved in the industry for five years can be viewed as experts in the industry. Due to the skill, expertise and financial resources needed to operate a large piggery, large producers were considered experts. Also high profile managers and/or owners of processing companies are considered experts in the industry. Prominent persons in SAPPO or regional pork

organizations, RMAA, SAMIC, academic institutions and other trade institutions in South Africa are regarded as experts in the pork industry.

4.5 The survey technique used to collect the data:

Cooper and Emory (1995, p.269), stated that two approaches can be used to gather primary data. The one is through observation and the other is through question or survey. The observation approach is not suitable for the research needed to meet the research objectives. The question or survey approach is appropriate as it involves the questioning or surveying of experts in the pork industry and their responses are then summarised and analysed. Among the anticipated problems are: certain respondents may be unwilling to respond due to personal reasons, the questionnaire may ask questions to which the response may be considered confidential and there may be delays in replying/responding.

The questionnaire was administered by hand, mail, e-mail, telephone and telefax where possible the most expeditious method was used. The intention was to reduce response time and the inconvenience burden on the respondent. A covering letter was sent with the questionnaire. The contents of the letter included a brief introduction to the study, why it was being conducted, and what was required from the respondent. Each respondent was contacted telephonically prior to sending the questionnaire, requesting permission to send the questionnaire and relevant concerns were addressed at this stage. Thereafter the questionnaire was e-mailed, faxed, mailed or hand delivered to the respondent.

4.6 Processing of data:

The questionnaire was formulated from the data obtained from the literature review of secondary sources. After summarising the literature review in table 3.5 the questionnaires were designed. All areas thought to be relevant to both the trends being observed internationally, in South Africa and the research problem were included in the questionnaire. This was checked against the exploratory survey conducted to ensure nothing relevant was omitted. This final questionnaire was then piloted on experts within the industry. After careful consideration of the experts' comments the questionnaire was finalised.

On receipt of the questionnaires from the respondents, the responses were analysed and tabulated. Additional comments or responses were summarized after each graph and they were discussed. The responses to the section for general comments at the end of the questionnaire were summarized (after all the Likert scales were considered). Their impact on specific questions was included in the discussion of the responses to each question. In the final instance recommendations and conclusions on the research problem were made.

4.7 Reliability and validity:

4.7.1 Reliability

"Reliability is the tendency in a respondent to respond in the same or in a very similar manner to an identical or near identical question" (Burns A & Bush R. 2000, p.329).
The problem is that an unreliable measure will obtain different responses from respondents who have identical feelings or opinions. It is for this reason that it is desirable for the questionnaire to be reliable.

Reliability could be compromised in the following manner:

1 Instructions are not clear,
2 Respondents are confused by wording,
3 Respondents may not be motivated to respond,
4 There may be inadequate or too many response options,
5 Questions are not stated in the same manner each time.

The researcher has paid special attention to the reliability of the questionnaire. A pilot test was conducted with Mr D. Hopkins, SAPPO Chairman, and Mr B Gibbs, NPPO Chairman. Where instructions were unclear or the respondents were confused by the wording of a question the problems were resolved by discussion and subsequent adjustment of the questionnaire. The motivation of the respondents is expected to be high, as the information from the study will be shared with those respondents. The Likert scale was carefully considered, with the three point scale thought to be insufficient and the seven point scale thought to be excessive. As this study uses the Likert scale all

respondents will receive the very same questions. In a further attempt to ensure that the respondents answer reliably, respondents' responses that look to be unreliable will be contacted and a decision made on whether to remove the respondent from the study or resend the questionnaire to the respondent. It is submitted that considering the above the questionnaire should be free from random response error.

4.7.2 Validity

"Validity is the accuracy of responses to a measure" (Burns A & Bush R. 2000, p.332) or described in a question "is the relationship between two variables a causal relationship?" (Saunders M, Lewis P, and Thornhill A. 2003. p.101). The nature of research conducted in the pork industry is such that it is focused on a particular topic of profitability for example feed conversion ratios on growing pigs. One article that focused on a number of determinants of profitability was found in "Agricultural Outlook, published by the ERS". It dealt with the factors that determined the success of the USA, Denmark and Taiwanese export markets with the intention of using these success factors to determine which other countries could develop competitive pork export industries (Haley and Jones, 1996, p. 15). With this foundation numerous other sources were used to expand upon this research and further validate the questions in the questionnaire.

The preceding chapters focused on the determinants of profitability in both the international pork industry and the South African pork industry and the relevant determinants of profitability have been included in questions in the questionnaire based on the norms in these countries. The summary in Chapter Four, table 3.5, was used to ensure that potential questions were not omitted. Comments made in the exploratory survey were used as a second test for the questionnaire to ensure that all the important questions were included. The validity of the questions were then tested using face validity, in other words the researcher's judgement was used in determining whether the questions were appropriate for their intended purpose. A second researcher, S. Sony, was used to critique the research methodology including the questionnaire. This was done to add to the validity of the questionnaire. As this dissertation is an exploratory study and is qualitative it does not lend itself to rigorous validity testing. It is, however, submitted that

these questions are valid as they measure responses to matters that could affect, directly or indirectly, the profitability of a pork producer and hence the stability of the environment in which it operates.

4.8 The questionnaire design:

The questions in the questionnaire are not open-ended questions as they are questions that require a specific answer. This ensured that uniform answers were received which were easier to analyse in a structured manner without excluding respondents from adding explanations or comments to their responses. Respondents did, however, have the option of adding explanations or comments to their answer if they felt they need to do so.

4.8.1 Breakdown of the questionnaires is as follows

Refer to Annexure 2-4 where questionnaires will be attached to the dissertation. There are three questionnaires that have been used. The first questionnaire was sent to the current members of marketing consortiums and the farmers who are considering joining a marketing consortium. The second questionnaire is the one which that was sent to the farmers who are not members of a marketing consortium and are not considering membership of a marketing consortium. The third questionnaire is the questionnaire that was sent to the processing companies. It must be noted at this point that the questionnaires have a number of common questions and other questions that are only appropriate to the specific group of experts.

4.8.1.1 Questionnaire for members of a marketing consortium or producers wanting to become a member of a marketing consortium

This questionnaire has four sections, the first being a general section that is designed to collect data on perceptions of the pork market in general. The second section is designed to collect the objectives of farmers joining a marketing consortium. The third section is designed to collect information on what farmers think the marketing consortium should be doing. The fourth and final section is designed to collect information on the benefits that processing companies will experience and what relationship exists between the producer and the processor.

4.8.1.1.1 General questions on perceptions in the market

This section is made up of general questions. There are twelve questions dealing with issues of: price sensitivity, importance of quality, genetics, contracts, marketing consortiums, integration, market condition and bargaining power. These questions are repeated in all three questionnaires with the intention of gaining insight from all the experts into the market.

4.8.1.1.2 Objectives for joining a marketing consortium – members' objectives / perceived benefits

This section deals with the objectives of the producer who have decided to join a marketing consortium and were compared with the objectives of the marketing consortiums and the processors' responses. This is to give us insight into how the objectives of the producers' and the processors' goals align.

The focus of the questions is on what a marketing consortium can do for the producers and what it can do for the processors. The questions deal with the impact of marketing consortiums on: bargaining power; profitability to the producer; traceability; branding; input cost savings; economies of scale; stabilising production quantities / supply; processors; ability to process its own carcases; processing larger carcases; improving genetics; gaining additional markets and exporting; and contracts with retailers. These questions gradually move down the supply chain taking the questions from the producer to the retailer.

4.8.1.1.3 Objectives of a marketing consortium

Section three deals with the objective of a marketing consortium only. This section is included in the questionnaire only for members of a marketing consortium and producers who have decided to join a marketing consortium. The presumption is that other experts will not have the insight to answer the questions posed in this section. Questions deal with what a marketing consortium should be used for, or, in other words, what a marketing consortium's core business should be. Questions include: negotiation of better

selling prices; lower feed costs; providing grading information; development of specific genotype pigs; processing of pigs; forward integration; niche products and branding. The questionnaire then gave the respondent the option of adding additional objectives if they had not been adequately addressed above.

4.8.1.1.4 Processor expectations and anticipated problems

Section four deals with the perceived expectations of the processors and the anticipated problems that could arise from the existence of a marketing consortium. Questions deal with: impact of consortiums on the processor's profitability; consideration of alliances; value of predictable supply of pork; value of increased genetic carcass quality; premiums charged on niche products; the threat posed by marketing consortiums and the power relationship of retailers.

4.8.1.2 Questionnaire pork producers not wanting to become members of a marketing consortium

This questionnaire consists of three sections, using the majority of the questions in the first questionnaire. The section including the objectives of a marketing consortium was left out of this questionnaire as these producers are not considering membership of a marketing consortium and for this reason the questions are thought not to be relevant.

4.8.1.2.1 General Questions on Perceptions in the KZN Market

The first section repeats the general questions on perceptions in the KZN market. This section is no different from the questions asked in the questionnaire specifically for marketing consortium members as discussed above. The responses will add further to our understanding of the environment in which the KZN pork producer operates.

4.8.1.2.2 Objectives for joining a marketing consortium

The second section of the questionnaire deals with the objectives for joining a marketing consortium. It poses the same questions as the questions asked of the members of a consortium. It will elicit from the non-members their reasons for not wanting to join a consortium and should highlight why they feel that a marketing consortium will not

benefit them. This was used when drawing conclusions on the future of the marketing consortium.

4.8.1.2.3 Processor Expectations and Anticipated Problems

The third section of the questionnaire deals with processor expectations and anticipated problems. This section again asks the same questions that are asked of the members of a consortium with the exception of the question that asks if the respondent will at some point consider forming an alliance between themselves and a marketing consortium. This question was specifically included in an attempt to judge how the respondents feel about marketing consortiums.

4.8.1.3 Questionnaire for pork processing companies

This questionnaire has two sections only. The first section like the first two questionnaires is a general section. The second section incorporates all questions that are thought to be relevant to the processing company and its relationship with a marketing consortium.

4.8.1.3.1 General Questions on Perceptions in the KZN Market

The first section includes the questions on general perceptions in the KZN market. The questions asked are no different from the questions asked in the questionnaire specifically for members of a marketing consortium as discussed above, with the exception of question 13 which is the same question but is included under section two as it deals with marketing consortiums.

4.8.1.3.2 The Impact of Marketing Consortiums: Advantages & Disadvantages

The second section deals with the impact of marketing consortiums as well as their perceived advantages and disadvantages. This section excludes questions that relate to: the benefits received by the producers from input cost savings; the questions relating to a marketing consortium owned processing company; finally it excludes all questions relating to the objectives of a marketing consortium as these will not be known by the

processors. The questionnaire asks questions about how the processors are likely to respond to various aspects, advantages or disadvantages, which they may experience from their interaction with a marketing consortium.

The intention of this questionnaire is to compare the opinions of the processors to the opinions of the members of a marketing consortium to establish if they are sufficiently aligned to maintain a successful business relationship. It is for this reason that the questions in the processing questionnaire are all included in the questionnaire given to members of the marketing consortiums and the expected members of marketing consortiums. This means that all the questions can be compared and the differences discussed.

4.9 Conclusion:

This chapter outlines what was done in order to satisfy the research objectives. The chapter commences with the research problem, there after all the research objectives are discussed. This sets the context for the research methodology. The design of the research follows, elaborating on the four different groups of experts to be surveyed in the pork industry in KwaZulu-Natal. It is from these groups of experts that the empirical data was obtained. Sampling and the sampling technique is then discussed and of primary importance is that the universum of the population is considered to be the members of marketing consortiums in KwaZulu-Natal. The entire universum will be sent questionnaires. The survey technique decided upon was the Likert scale using the five-option scale. It was decided that the groups being interviewed would be sent different questionnaires although the questions were largely the same, with some omitted, as they would not be relevant to the specific group of respondents. The questionnaire - being the instrument used to collect the exploratory - data had been carefully scrutinised to ensure that it would fulfil its objectives. To add further reliability to the results of this survey the summarised results were discussed with a group of experts for further insight. These responses were included in the analysis. The responses from the questionnaire form the basis of the next chapter in which the data is analysed summarised and discussed.

Chapter 5: Empirical findings analysis and discussion.

5.1 Introduction:

In the previous chapters the world pork markets were summarized and then compared to the South African pork industry. Following this comparison the KZN pork industry was discussed looking specifically at marketing consortiums and the emergence of a new marketing consortium Unipork Marketing SA. The research method was then discussed, establishing a methodology that encompassed the findings in the literature review. This was used to generate and administer the questionnaire. This chapter records the responses that were received after administering the questionnaire. Each question asked of the respondents is recorded with a summary showing what the responses were from the relevant target group. The summary starts with the questions that were included in the questionnaire that was sent to the members of marketing consortiums. Questions that were specific to processing companies and members who were not members of a marketing consortium were included at the end of the chapter.

In this chapter each question has been discussed separately. There are two reasons for this; firstly a number of respondents requested an analysis of the final findings. Secondly, the detailed responses to each question would assist a researcher in a comparative study in the future on the same topic.

5.2 General Questions On Perceptions In The Market:

Question 1

THE SOUTH AFRICAN MARKET IS PRICE SENSITIVE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	11	0	0	1	0	17
Processor	2	3	0	0	0	0	5
Non-member	1	4	0	0	0	0	5

Pork Producers: Members of consortiums

The general perception of the seventeen respondents being members of marketing consortiums is that the pork industry is price sensitive. This perception is consistent with any commodity product as there is little differentiation between products and the

processor can easily switch between producers without significant implications. A phenomenon observed was that the larger volumes attributable to imported meat, in 2004, were easily absorbed without a drastic effect on the price of pork, strengthening the point that consumers are price sensitive and will consume more if the price is right. A respondent pointed out that although the wholesale market is price sensitive the consumer in the more affluent communities is less price sensitive.

Processing Companies

The processors agreed with the general sentiment of the producers. Respondents emphasised that pigs are a commodity product and the general rule with commodity-based products is that they are highly price elastic. An example was given of promotional activity on polony, where the price was reduced, resulting in high volumes being sold. A comment was made that processors are more sensitive than retailers.

Pork Producer: Non-member of consortiums

The respondents not wanting to be members of a marketing consortium agreed with the statement and it could therefore be concluded that the market for pork is price sensitive.

Question 2

THE SOUTH AFRICAN MARKET IS QUALITY SENSITIVE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	1	12	2	2	0	0	17
Processor	1	1	3	0	0	0	5
Non-member	1	4	0	0	0	0	5

Pork Producers: Members of consortiums

With thirteen people responding that the market is quality sensitive it did seem that there was a conflict with the statement above that infers that people care more about quality than price. Comments from the respondents did serve to elaborate on this. It would seem that the market is segregated between higher-income earning consumers who are prepared to pay for quality and low-income earners who are not prepared to pay for quality. There is another distinction between the fresh meat market and the processed meat market; the former being less price sensitive, or more quality sensitive, than the latter. The supermarkets, especially Woolworths, are very quality sensitive with producers having to go to extreme lengths to achieve appropriate levels of quality.

Processing Companies

The responses indicated that processors were neutral on this matter. The additional comments did however shed some light with a respondent stating that quality is secondary to price. The retailers were also seen to be more sensitive than processors to quality. It was conceded that a premium price is paid for branded products. This supported the idea that there are segments in the market that are quality sensitive.

Pork Producer: Non-member of consortiums

All the respondents agreed with this statement, with one respondent stating that some processors will only take products from producers supplying quality whereas others will take anything. This indicated that there are some processors who are discerning and others who are not.

Question 3

TRACEABILITY TO THE SOURCE OF PORK PRODUCTION MAKES A DIFFERENCE TO YOUR CUSTOMERS BOTH PROCESSORS AND RETAILERS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	3	7	6	1	0	0	17
Processor	0	2	2	1	0	0	5
Non-member	1	3	1	0	0	0	5

Pork Producers: Members of consortiums

An increasing trend internationally as established in the literature survey is the traceability of pork products back to the source. The general view from the producers was that traceability is important in theory, but largely not in practice. It seemed that this is desirable but not critical. Respondents stated examples of most recent imports not being traceable and when there is a shortage of pigs in the market, processors are indifferent to their source of pork. Certain respondents stated that traceability is not necessarily important to processors. It also seemed that traceability is, and will become, increasingly important in the future.

Processing Companies

No conclusion could be reached from the responses above. The respondents' comments referred again to the fresh meat and the processed meat market segments. When referring to traceability a respondent stated that in the processed meat environment the retailer

might have an interest only from a Hazard Analysis and Critical Control Point (HACCP) food safety perspective. The point was made that when the consumer buys the manufacturer's brand the consumer relies on that brand for quality. A reference was made to the fresh meat market where a beef marketing company have had some success in branding fresh beef. A comment made by a respondent was that retailers are more concerned about traceability than are processors. This comment supported the statements made by the producers that processors are not too concerned about traceability.

Pork Producer: Non-member of consortiums

The non-members agreed with the members of marketing consortiums as only one of the responses was neutral with the remainder agreeing that traceability is important.

Question 4

INCREASED CARCASS QUALITY WILL RESULT IN PROCESSORS WHO ARE MORE LOYAL TO QUALITY CARCASS SUPPLIERS OR WHO ARE PREPARED TO PAY MORE FOR THE PRODUCT.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	4	11	2	0	0	0	17
Processor	0	3	2	0	0	0	5
Non-member	2	3	0	0	0	0	5

Pork Producers: Members of consortiums

The vast majority of the respondents agreed that carcass quality is important as they either received more for the product or believed that their processor will be more loyal. This was provided that these carcases could be produced in appropriate quantities and were of a consistent quality. A comment was made that some processors were loyal only to price, if the price was not right they would buy elsewhere.

Processing Companies

There was some level of agreement with this statement with three of the respondents agreeing. One of the respondents clarified that, to the processor, quality would mean improved yields. This respondent elaborated that there was a debate going on marbling and its merits. This implied that the processors cared about quality.

Pork Producer: Non-member of consortiums

With all of the respondents agreeing or strongly agreeing, quality could be seen to be important with a respondent adding that continuity of supply and minimum deviation in the size of cuts from carcass to carcass were important.

Question 5

THE STABILITY OF THE SUPPLY OF PORK IS IMPORTANT TO THE PORK INDUSTRY AS A WHOLE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	11	6	0	0	0	0	17
Processor	3	2	0	0	0	0	5
Non-member	4	1	0	0	0	0	5

Pork Producers: Members of consortiums

It was obvious that the producers emphatically agreed that stability is important to the pork industry as a whole. As importation has become much easier, stability of supply is now less of a problem to processors, and currency fluctuations are more of a concern. It is widely understood that a fluctuating exchange rate results in an unstable trading environment as discussed in Chapter One. The issue of importation is another one that needs further exploration, with a respondent stating that it damages the local market, (see question thirteen for more on this concept).

Processing Companies

There was complete agreement on the importance of stability of the supply in the market. It was pointed out that the fluctuations in quantity of pigs on the open market caused wide spread price changes due to oversupply or shortfall in relation to quantity demanded. A respondent then stated this was why they have entered into contracts, based on the cost of production, with processors taking the risk of production-cost variation away from the producer.

Pork Producer: Non-member of consortiums

The non-members were of the same opinion as the members and the processors with no additional comments made.

Question 6

THERE IS A NEED FOR PRODUCERS, PROCESSORS AND RETAILERS TO WORK IN A MORE CO-ORDINATED MANNER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	13	4	0	0	0	0	17
Processor	2	3	0	0	0	0	5
Non-member	1	3	1	0	0	0	5

Pork Producers: Members of consortiums

It would appear that there was unanimous agreement on this matter within the producers with not a single respondent disagreeing. One respondent said that it is essential for long-term survival or viability of pork producing units. Whilst another respondent inferred that processors do not act in the best interests of the producers, even more so now that Eskort Bacon factory is no longer a Co-operative.

Processing Companies

All respondents agreed with this statement indicating that co-ordinating the local supply of pork is desirable. A respondent stated that this would assist in communicating problems experienced in the industry and facilitating joint problem solving. Respondents indicated that the competitor is imported fresh and processed pork from places such as Brazil. With the value chain starting at the farm and ending with the processor the entire chain needs to operate efficiently, and needs to be better than Brazil's, for example. The responses indicated that it is desirable to work in a more co-ordinated manner. This is in line with international trends identified in the literature review.

Pork Producer: Non-member of consortiums

Aside from the single response that was neutral, all respondents stated that working together is desirable. This was in accordance with the members of marketing consortiums and the respondents from the processing companies.

Question 7

FUTURE SUCCESS IN THE SOUTH AFRICAN PORK INDUSTRY IS DEPENDENT ON RETAILERS ENTERING INTO CONTRACTS WITH PROCESSORS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	7	7	3	0	0	0	17
Processor	0	1	1	2	1	0	5
Non-member	0	3	2	0	0	0	5

Pork Producers: Members of consortiums

The majority of respondents agreed that the success of the pork industry as a whole is dependent on retailers entering into contracts with processors. Comments among the respondents were that this is only one side of the argument and that it should also involve contracts with processors and producers as discussed in the next question. A respondent cautioned that being cost competitive would influence the future success of the industry. A further comment was made that a brand based on consumer demand has to be developed. The retailers will then value their suppliers more.

Processing Companies

The responses indicated a tendency to disagree with this statement. One respondent stated that supply and demand should be allowed to take its course. A further respondent stated that contracts are not expected in the short-term to medium-term although it sounds desirable. It was mentioned that some inroads have been made into category management. A respondent stated that processors must improve their relationship with retailers by being better than local and overseas competition. When consumers demand a brand this strengthens the processor's influence.

Pork Producer: Non-member of consortiums

With three responses agreeing with the statement and the other two being neutral it appeared that there was a tendency toward agreeing with this statement.

Question 8

CONTRACTS BETWEEN PORK PRODUCERS AND PORK PROCESSORS WILL BE IMPORTANT IN THE FUTURE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	11	5	0	0	0	1	17
Processor	0	4	1	0	0	0	5
Non-member	2	2	0	1	0	0	5

Pork Producers: Members of consortiums

The contracts between producers and processors were seen to be important to all the producers. This mirrored the structure of the industry in the USA where contracts between producers and processors were seemingly more important. The majority of the respondents favoured short to medium-term contracts with one respondent suggesting long-term contracts based on input costs. This again falls in line with the trends observed in the USA. A respondent stated that contracts are absolutely essential for long-term stability in the industry. A limitation to this was that seasonal fluctuations in production could complicate the contract process.

Processing Companies

The respondents agreed with the idea of contracts between producers and processors. The additional comments indicated the reservations that the processors have with contracts. A respondent indicated that contracts are a relatively new concept in the pork industry. For this reason the respondent would prefer short-term contracts, at least until they have been proven to work. A second respondent stated that the market has many uncontrollable variables and for this reason contracts would only work on a short-term basis. A respondent indicated that long-term contracts are desirable but with continual assessment of the cost model base. The respondent stated that it would be irresponsible to "allow" the pork industry to be uncompetitive due to a lack of cost control. The responses were in line with what is happening in the USA where contracts are prevalent.

Pork Producer: Non-member of consortiums

The non-members agreed with the members of marketing consortiums with the exception of a single respondent who disagreed with the idea of contracts. For the large part the respondents stated that medium-term contracts are the most desirable.

Question 9

IT WOULD ASSIST FARMERS IF THEY WERE INTEGRATED FURTHER ALONG THE PROCESSING CHAIN, WHETHER IN PARTNERSHIP WITH A PROCESSOR OR WITH SOME OTHER ARRANGEMENT.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	8	8	0	0	0	1	17
Processor	0	0	3	2	0	0	5
Non-member	0	3	2	0	0	0	5

Pork Producers: Members of consortiums

In this question a high level of agreement between the respondents occurred indicating that they feel a processing plant that is owned by a producer consortium is desirable. Respondents also mentioned that backward integration into a feed mill might also be important. A respondent felt that this level of integration was necessary to combat importation of pork products. Respondents made mention of Eskort Bacon Factory, which was run as a co-operative, stating that this could be classified as an alternative arrangement.

Processing Companies

When comparing the responses from the pork producer and the pork processor there is a clear difference in opinion. The processing companies can be quoted saying things like "All parts of the chain perform their own function", "We do processing best not farming", "Focus on centres of excellence." It would appear that the general opinion is that the businesses are significantly different in nature and pork producers should focus on their core business. There was a single respondent who responded by saying that non-management shareholding in vertically or horizontally integrated business might spread risk.

Pork Producer: Non-member of consortiums

The responses from the non-members indicated that they are less convinced on this matter. There were some respondents agreeing that some level of integration would assist the producer.

Question 10

IT IS IMPORTANT FOR PORK PRODUCERS TO PRODUCE THEIR OWN MAIZE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	2	4	5	4	0	2	17
Processor	1	2	1	1	0	0	5
Non-member	1	1	1	1	1	0	5

Pork Producers: Members of consortiums

With a large portion of the sample being neutral, it was clear that the respondents were unsure. When the responses are considered a number refer to maize production as another specialist farming enterprise that should be treated as its own cost centre and refer to the emphasis on core business. Other respondents made reference to the SAFEX, which allows one to buy and sell maize in the future thus hedging one's input costs. It was also said that in a perfectly competitive market all that maize production saves is transportation costs. A respondent agreeing with the statement said that it depended on the region. One can have a partnership or liaison with a maize producer, which could be in the form of a contract. However in KZN, homegrown maize is a big advantage. With maize being a large portion of the feed cost one respondent stated that own-grown maize reduced the risk of significant price fluctuations. Another respondent stated that it makes the producer less vulnerable when the maize price is high. A contrasting opinion was that home mixers do better by buying in at strategic times and not necessarily producing their own. It is clear from the comments that producers were in two minds when it comes to maize production.

Processing Companies

The responses to this statement were fragmented. The respondents did, however, point out that the producer would then be less susceptible to maize price fluctuations as a result of the rand dollar exchange rate or domestic shortages of the product. It would serve as a hedging device. A further respondent stated "Our regular suppliers have survived and are successful doing this." A further respondent stated that non-management shareholding in vertically or horizontally integrated business might spread risk. A comment dealing with country comparative advantage stated that all maize should be grown in Zambia and

further north due to higher dry land yield although SADC would need to cooperate better first.

Pork Producer: Non-member of consortiums

The responses to this question indicate that there was no agreement on this matter. The respondents stated that maize farming and pork production were two separate enterprises and they should be accounted for separately. Another respondent stated that maize must be charged to the pig enterprise at market value after which the only impact on the pig enterprise would be the saving of transport costs. For this reason whether maize is brought in or grown on the farm makes little difference. A further respondent stated that it was a form of hedging when input costs escalated.

Question 11

THE KZN MARKET WAS RUNNING OPTIMALLY WITHOUT MARKETING CONSORTIUMS SUCH AS UNIPORK MARKETING SA AND PENVAAN PORK WHOLESALERS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	0	2	2	6	5	2	17
Processor	1	1	3	0	0	0	5
Non-member	0	0	3	2	0	0	5

Pork Producers: Members of consortiums

It appeared that respondents did not feel that the market was running optimally before these marketing consortiums were established. Reference was made to the functioning of Eskort Bacon Factory as a co-operative. Eskort Bacon Factory moved the price of pork in favour of the producer before it was converted into a private company. The market no longer has Eskort to lead price-setting policies. Respondents made the point that the marketing consortiums have increased the producers' negotiating power and have stabilized the industry, stating that there has been too much fluctuation in the industry before. The instability was partially attributed to imports. A respondent stated that more marketing consortiums are desirable and that producers who work together are likely to achieve better prices.

Processing Companies

The response to this statement indicated indifference. The comments may assist in understanding this phenomenon. A respondent stated that marketing consortiums have

little impact on the market as supply and demand control price. Another respondent stated that supply and demand should prevail and marketing consortiums should not manipulate the market. Respondents did, however, say that co-operation and communication between producers was in their best interests to make sure they collectively produce the most cost efficient product. An interesting statement made was that the producers do not really compete against each other, as the product is not branded.

Pork Producer: Non-member of consortiums

The comments made by the non-members related to price control, stating that negotiated prices take out the peaks and troughs. This makes planning less complicated. Reference was made to prices of the product being contracted based on feed costs.

Question 12

WHEN DEALING WITH PRODUCERS AND PROCESSING FIRMS. PROCESSING FIRMS ARE IN A BETTER BARGAINING POSITION BY VIRTUE OF THEIR SIZE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	2	13	2	0	0	0	17
Processor	0	1	0	4	0	0	5
Non-member	0	4	1	0	0	0	5

Pork Producers: Members of consortiums

The responses to this question indicated that processors are seen to have the negotiating power in the supply chain. This power is seen to increase as their ability to access imported meat increases and also in times of over supply. This is more relevant as globalisation continues as mentioned in Chapter One and Three. It is thought that the respondents will effect a change to this by collaborative marketing with an optimistic respondent seeing a "win-win" situation. It was stated that processors were able to play producers off against each other. This is more difficult when producers are members of a marketing consortium.

Processing Companies

This statement was disagreed with and is in complete contrast to what the producers think. The comments from the respondents placed a high emphasis on supply and demand. About 60% of meatblock is pork thus processors are dependent on the product. A comment was that there are lots of small and medium processors that made it easy for

producers to take production elsewhere if they don't get a fair deal from the processor. Question 12 serves to indicate the diverging opinion of the processors and the producers.

Pork Producer: Non-member of consortiums

The responses for this question are similar to those stated in responses from members.

Question 13

TO HAVE A DOMESTIC SUPPLY OF PORK IS IN THE BEST INTERESTS OF ALL THE ROLE PLAYERS IN THE SOUTH AFRICAN PORK INDUSTRY.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	12	4	0	0	0	1	17
Processor	3	1	1	0	0	0	5
Non-member	3	2	0	0	0	0	5

Pork Producers: Members of consortiums

From the above responses it can be seen clearly that the pork producers believe that a domestic supply of pork is in the best interests of the South African pork industry. Among the benefits mentioned is employment in the local economy, in the pork industry and related industries. Other respondents stated that the consumer hardly benefits from cheap imports. The processors are the main beneficiaries, then the supermarkets and then the importers. Mention was also made of the fact that wealth is created by the application of human endeavour to natural resources thereby adding value. The principle resources referred to are agriculture and minerals.

Processing Companies

The majority of the processing companies agreed that a domestic supply of pork was in the best interests of the South African pork industry. Sixty percent of meat block is pork and this means that processing companies are reliant on it. Imported pork bears the following risks: animal disease risk, it can be stopped with short notice, and the volatile rand. These are factors that a domestic supply of pork eliminates.

Pork Producer: Non-member of consortiums

The respondents were all in agreement with the statement that a domestic supply of pork is in the best interests of all supply chain members.

5.3 Objectives For Joining A Marketing Consortium – Members Objectives/Perceived Benefits:

Question 14

A MARKETING CONSORTIUM WILL INCREASE PROFITABILITY TO THE PORK PRODUCER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	8	8	1	0	0	0	17
Processor	0	1	3	1	0	0	5
Non-member	1	2	1	1	0	0	5

Pork Producers: Members of consortiums

There was a strong level of agreement when it came to marketing consortiums increasing the profitability of the pork producer. Bargaining power and larger volumes were cited as potential benefits. One respondent indicated that it could involve vertical integration, another pointed out that better negotiated prices would need to be passed onto the producer.

Processing Companies

The response from the processor indicated that they were unsure. A respondent stated that all producers get paid the same, however, consortiums may help to control input costs. A further respondent stated that if information services were shared, a resultant decrease in the cost base would occur and profits would be higher than for non-co-operating individuals. From the comments it appeared that there are perceived benefits of belonging to a marketing consortium.

Pork Producer: Non-member of consortiums

The only comment that was made was that the overhead costs should remain low. This seemed to tie up with the other comments made above, where the emphasis was on cost reduction.

QUESTION 15

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	10	1	1	0	0	17
Processor	0	2	1	0	2	0	5
Non-member	0	1	2	2	0	0	5

THE INCREASED LEVELS OF COORDINATION BETWEEN PIG PRODUCERS AS A RESULT OF UNIPORK MARKETING SA AND PENVAAN PORK WHOLESALERS HAS GAINED THEM BARGAINING POWER AND HAS RESULTED IN HIGHER PRICES RECEIVED BY THE PRODUCERS FOR THE PIGS SOLD.

Pork Producers: Members of consortiums

A high level of agreement indicated that the producers agreed with this statement. The comments made by the producers indicated that the increased price received was not that significant or needs to be more significant, with a respondent mentioning the need to vertically integrate. Again there was a differentiation made between fresh meat and the processed meat market.

Processing Companies

The responses to this comment were quite different from the producers'. The comments indicated that the price was determined by supply and demand with imported pork playing a more important role in price regulation. A respondent stated that all farmers are paid the same price regardless of whether they are members of a consortium or not. One respondent stated that in their case they gave contracts to reduce producer risk and ensure supply. They emphasised that it would be irresponsible to pay more due to pressure, as eventually the whole chain would become unprofitable.

Pork Producer: Non-member of consortiums

The responses from the non-members indicated that they were not convinced or they disagreed that consortium members would receive higher prices.

QUESTION 16

IS THIS HIGHER PRICE SUSTAINABLE IN THE LONG-TERM?

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	2	9	1	1	0	3	17
Processor	0	1	1	0	0	3	5
Non-member	0	0	2	0	0	3	5

Pork Producers: Members of consortiums

The majority of the respondents agreed when it came to higher sustained prices in the long-term. Unipork members, however, do not have the benefit of hindsight, in the long-term. A respondent from Penvaan Pork Wholesalers stated that it has managed to partially stabilize the price and therefore achieved a higher average over the year.

Respondents did however feel that this did open up opportunities in new markets that could sustain higher prices. A further respondent stated that this would depend on imports.

Processing Companies

A respondent's reply was that only if demand for local pork exceeds supply would a higher price be sustainable. As soon as local prices exceed imported prices by R1.50 to R2.00 then processors would move to imported meat, reducing demand for local pork and causing prices to drop. This corroborates the statement made by another processor saying that prices should not be unreasonable.

Pork Producer: Non-member of consortiums

The response to this question was consistent with the response in question 15 where there was no consensus. From this question nothing could be inferred.

QUESTION 17

IS THIS HIGHER PRICE SUSTAINABLE IN THE SHORT-TERM?

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	1	11	1	0	0	4	17
Processor	0	1	1	0	0	3	5
Non-member	0	1	1	0	0	3	5

Pork Producers: Members of consortiums

The majority of respondents agreed that higher prices are sustainable in the short-term. This is consistent with question 16. A respondent stated that a higher price is not the only objective but rather a more stable market.

Processing Companies

No comments were made and nothing could be inferred from this response.

Pork Producer: Non-member of consortiums

A respondent stated that prices could be higher whilst there is a shortage of supply. Otherwise the response to this question was consistent with the response in question 15 and 16 where there was no clear consensus. From this question nothing could be inferred.

QUESTION 18

A MARKETING CONSORTIUM CAN FACILITATE TRACEABILITY AND CREDIBILITY OF PORK PRODUCTS SOLD.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	8	8	1	0	0	0	17
Processor	0	3	2	0	0	0	5
Non-member	1	3	0	1	0	0	5

Pork Producers: Members of consortiums

With problems like BSE, an increasingly important consideration was the traceability and credibility of pork products, especially in developed economies as was pointed out in the literature review. The respondents agreed that a marketing consortium could facilitate this. A respondent indicated that this is facilitated when the marketing consortium sets guidelines for pork production.

Processing Companies

The responses indicated that the respondents tend to agree with this statement. A respondent indicated that the following would add to the credibility of pork products sold: good genetics base, shared best practices, ingredients buying power, shared services like administration. A further respondent stated that traceability existed in all sources of supply, whether from a consortium or not. This last comment does not, however, take into account traceability to the level that some of the developed nations are employing as indicated in the literature review. The comments do seem to infer that traceability is not too important at this stage.

Pork Producer: Non-member of consortiums

The responses indicate that there is a large amount of agreement on this issue, with four out of the five agreeing. This was in line with the processors and the consortium members.

QUESTION 19

A MARKETING CONSORTIUM COULD BE USED TO DEVELOP A CONSISTENT AND CREDIBLE PRODUCT THAT COULD BE BRANDED.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	8	8	1	0	0	0	17
Processor	0	2	3	0	0	0	5
Non-member	0	4	1	0	0	0	5

Pork Producers: Members of consortiums

The respondents had a high level of agreement when it came to branding a product and using a marketing consortium to develop it. Respondents cautioned that this would require respondents to agree on uniformity of genetics, nutrition and health status of their herds, a potentially provocative area of debate, with the farmers not wanting to lose control of their businesses.

Processing Companies

The processors' comments made earlier where they responded that producers should not move into the processing field are important when interpreting the responses here. Respondents stated that it could perhaps work in the fresh meat market. A further respondent stated that product quality and quantity is at present largely inconsistent and price is the overriding factor over brand /quality. An important point made here was that an inconsistent product would be difficult to brand.

Pork Producer: Non-member of consortiums

The responses of non-members appeared to be following the trend set by consortium members' responses. This indicated that they believed that a marketing consortium could be used to develop a branded product.

QUESTION 20

A MARKETING CONSORTIUM WILL RESULT IN SAVINGS BEING EXPERIENCED IN INPUT COSTS SUCH AS FEED.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	10	3	2	2	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	4	1	0	0	0	5

Pork Producers: Members of consortiums

The majority of the respondents agreed that savings in input costs have been experienced. With Unipork Marketing SA already negotiating with feed providers this has achieved volume discounts. Two important restrictions were mentioned the first being that there are limitations in bargaining power and the second that it depended on where the emphasis of the consortium lies, should the consortium focus on marketing or negotiating better input prices? A respondent stated that the groups tended to share information and set common goals resulting in savings.

Pork Producer: Non-member of consortiums

Responses were similar to those of the consortium members. There were some problems identified, however, the first being that home mixers are in a different category. That is to say that home mixers will not gain from savings experienced in feed price negotiations. The second was that large producers could be in as good a position as possible to negotiate a good deal with other input providers.

QUESTION 21

A MARKETING CONSORTIUM WILL RESULT IN SAVINGS EXPERIENCED IN TRANSPORTATION COSTS AS PRICES PAID PER KG ARE AGGREGATED, MEANING THAT A FARMER CAN NOW SUPPLY THE CLOSEST MARKET.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	9	3	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	2	3	0	0	0	5

Pork Producers: Members of consortiums

The majority of the respondents agreed that savings in transport costs could be achieved. Some respondents stated that this was sometimes the case. A farmer supplying the closest market before and after will not really benefit. When working as a consortium benefits could be achieved where pigs have to be moved and there is a better logistical solution that is not available to an independent producer.

Pork Producer: Non-member of consortiums

The majority of the non-members were neutral with a respondent stating that the consortium comes at a cost for example marketing, administration, and management. A large producer would not necessarily have this cost.

QUESTION 22

THE CONSOLIDATED MARKETING FUNCTION WILL RESULT IN COST SAVINGS DUE TO THE CENTRALIZATION OF THIS FUNCTION.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	3	11	2	1	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	1	2	2	0	0	5

Pork Producers: Members of consortiums

Although the majority of the respondents agreed with the statement some of the respondents mentioned that it should not attract too large overheads. It was pointed out that marketing costs were not that large before, however, there are benefits where, for instance, the marketing consortium provides statistics on monthly trends. A case in point was the demise of Stock Owners, a co-operative, which has recently been liquidated. Other respondents stated that the cost of marketing the pigs was merely a few phone calls away at a nominal cost. From this it appeared that a marketing consortium will save costs assuming it does not have excessive overheads.

Pork Producer: Non-member of consortiums

This question resulted in an even spread of responses, indicating that there was little agreement on this matter. A large producer stated that once the market has been decided upon there were very few marketing costs as you know where the product is going and can focus on farming.

QUESTION 23

A MARKETING CONSORTIUM COULD ASSIST PROCESSING PLANTS BY SUPPLYING THE APPROPRIATE QUALITY AND QUANTITY OF MEAT, STABILIZING PRODUCTION QUANTITIES.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	7	10	0	0	0	0	17
Processor	2	1	2	0	0	0	5
Non-member	1	2	1	1	0	0	5

Pork Producers: Members of consortiums

The stabilisation of production is desirable for processing plants as discussed in the literature survey. This is further evidenced by the increase in the use of contracts in the USA and Canada. All the respondents agreed with this statement signalling that it is important in South Africa as well. This will make it easier for producers to order as they would be able to order from a central location.

Processing Companies

The responses indicated that stable quantities of carcases were desirable. Respondents indicated that if the marketing consortium could regulate supply it would assist processing companies. The comment was made that every year at Christmas, producers have lower volumes and high demand and the reverse is true for January to May. The comment was made that marketing consortiums are not having this impact at this point.

There was less emphasis placed on carcass quality with only one respondent stating that consistent quality supply is important.

Pork Producer: Non-member of consortiums

The majority of the respondents agreed with this matter with no additional comments being made.

QUESTION 24

A MARKETING CONSORTIUM COULD BETTER SUIT PROCESSING COMPANY NEEDS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	10	2	0	0	0	17
Processor	0	3	1	1	0	0	5
Non-member	0	1	3	1	0	0	5

Pork Producers: Members of consortiums

Respondents stated that the marketing consortium could better suit the needs of the processing company. A point was made that the marketing consortium provides a forum for communication between producers and processors where the needs of the market in the future can be discussed and planned for. Respondents raised the point that it would depend upon the consortiums' ability to provide: numbers, breed mix, traceability, consistency of carcases type i.e. weight range etc...It was pointed out that without consortiums the processors have to deal with a large number of small and inconsistent suppliers.

Processing Companies

The majority of the processors agreed with the statement. A respondent stated that they have equally good negotiations with individuals and sometimes even less complex negotiations. Guaranteed supply and quality of production were seen as an area where they could benefit.

Pork Producer: Non-member of consortiums

The respondents again did not seem convinced that a marketing consortium would assist a processing company. The response that was made was that processors might prefer to contract with large suppliers rather than a consortium. This comment ties in with the comment made by a processing company that negotiations with a consortium can sometimes be more difficult than negotiations with independent farmers.

QUESTION 25

A MARKETING CONSORTIUM OWNED PROCESSING UNIT WILL INTEGRATE FARMERS FURTHER UP THE SUPPLY CHAIN INCREASING PROFITABILITY.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	8	6	3	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	3	2	0	0	0	5

Pork Producers: Members of consortiums

There was a high level of agreement with the statement, but there were also numerous comments. The response was that it depended on how the processing company was managed and marketed. Reference was made to Eskort Bacon Factory and how it used to

run as a co-operative, where the pork producer had input as to how the company was run and shared in its profits. A respondent stated that a starting point could be a slaughter unit rather than a processing unit. Respondents stated that it would not need to be wholly owned, this could facilitate a partnership with a current processing company. An added benefit would be that price decreases to the farmer would be quickly passed on to the consumer. A further caution was that every division in the chain is a specialty on its own. A marketing consortium should stay with marketing and specialize in that field. Another respondent stated that farmers need to vertically integrate and beneficiate their product, a worldwide trend.

Pork Producer: Non-member of consortiums

The majority of respondents agreed with this comment and made no additional comments.

QUESTION 26

A MARKETING CONSORTIUM OWNED PROCESSING UNIT WILL FACILITATE THE SLAUGHTERING OF LARGER PIGS AND THUS RESULT IN GAINS ASSOCIATED WITH SELLING LARGER PIGS?

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	7	3	2	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	2	2	0	1	0	5

Pork Producers: Members of consortiums

The majority of the respondents agreed with this statement. This was in accordance with the literature survey, which stated that larger carcases yield higher efficiencies. A respondent stated that the benefits of improved recovery on downgraded carcases could be passed on to producers or at least shared. Currently larger carcases are downgraded receiving a lower price per kilogram. It is important to note that there was a higher level of neutral and disagree responses than in most questions.

Pork Producer: Non-member of consortiums

The responses indicated a tendency to agree with the statement with the respondent who disagreed stating that slaughtering larger carcases can be achieved outside a consortium.

QUESTION 27

A MARKETING CONSORTIUM WILL RESULT IN IMPROVED GENETICS AS A RESULT OF CLOSER NEGOTIATION WITH GENETIC SUPPLIERS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	7	9	0	1	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	1	2	1	1	0	5

Pork Producers: Members of consortiums

Respondents generally agreed that the genetics would be improved by negotiation with genetic suppliers. A single respondent disagreed stating that it would not be as a result of negotiating with genetic suppliers but by collective negotiating between them to settle for a single genetic program. Another respondent made the point that in order to sell a branded product the consortium has no choice, but to have uniform genetics.

Pork Producer: Non-member of consortiums

In this case there was a tendency to disagree with this statement. With the comment being made that any producer can do this, the producers do not have to be part of a consortium. The producer does have the option to purchase from any supplier.

QUESTION 28

MARKETING CONSORTIUMS WILL ASSIST PROCESSORS TO GAIN ACCESS TO ADDITIONAL MARKETS, INCLUDING THE EXPORT MARKET?

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	4	7	5	1	0	0	17
Processor	0	1	2	2	0	0	5
Non-member	0	4	0	1	0	0	5

Pork Producers: Members of consortiums

The majority of respondents agreed with the statement. This is in line with the trend noticed in Brazil where large groups are gaining access to the export market. Respondents mentioned that the continuity of supply would be important as well as traceability and the guarantee of hormone and antibiotic-free meat. This again agreed with the literature review where Canada and Denmark have advanced systems to ensure

traceability to source of production. A concern raised was that a marketing consortium will interfere with processing companies' exports, although when the size of the South African pork export market in global terms is considered, as discussed earlier, that seems unlikely.

Processing Companies

The responses from the processing companies indicated that they are divided on this issue with more people disagreeing than agreeing with the statement. It was pointed out by a respondent that price and quality would determine access to additional markets. Another comment made was that, the level of co-operation in the value chain and how it works together would determine the accessibility to international markets.

Pork Producer: Non-member of consortiums

The responses from the non-members indicated that they agree with this issue. Mention was made that this tied up with traceability as discussed earlier.

QUESTION 29

A MARKETING CONSORTIUM WILL FACILITATE MARKET ACCESS, PROVIDING SUFFICIENT SCALE OF OPERATION, THIS WILL GIVE THE MARKETING CONSORTIUM THE ABILITY TO BID FOR CONTRACTS WITH, SAY, CHECKERS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	3	11	2	1	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	0	4	1	0	0	0	5

Pork Producers: Members of consortiums

This question insinuated that the marketing consortium either has its own slaughtering facility, processes meat or works in close association with a processing company. This is the trend noticed in the literature review. From the responses the respondents seemed to agree with this statement. A respondent did state that dealing with a chain store is a specialist function and that a marketing consortium cannot negotiate on behalf of a processing company. A further consideration was that chain stores market nationally and the marketing consortium may have to market nationally to enhance the value of a brand.

Pork Producer: Non-member of consortiums

It was interesting that the non-members seemed to agree with the statement that a marketing consortium would facilitate market access. This response is encouraging for the members of a marketing consortium as it indicated that there is a potentially large benefit attributable to marketing consortiums.

5.4 Objectives Of A Marketing Consortium:

QUESTION 30

A MARKETING CONSORTIUM WILL ASSIST YOU IN INCREASING PRODUCTION / INCREASING YOUR HERD.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	1	13	3	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

The producers responded that the growth in production can come from two areas the first is better production and the second is growth in herd size. As a result of networking, experience and knowledge can be shared which is beneficial. It was also stated that growth would come as members integrated into the markets. This does, however, assume that there is sufficient demand to support the increased production. Stable prices would enable the producer to plan for the future.

QUESTION 31

A MARKETING CONSORTIUM SHOULD BE USED TO NEGOTIATE BETTER SELLING PRICES FOR THE PRODUCER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	7	9	0	0	0	1	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

All respondents agreed that a marketing consortium should negotiate better selling prices for the producer, with a single response indicating that a consistent price would also be

preferable. This would make planning for the future easier. A further respondent stated that the consortium would be able to negotiate the best prices in the market.

QUESTION 32

A MARKETING CONSORTIUM SHOULD BE USED TO NEGOTIATE LOWER COSTS OF FEED FOR THE PRODUCER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	7	7	1	1	0	1	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

There was a high level of agreement in this area with one respondent adding that it should be within certain parameters and should not alienate suppliers, and a further respondent indicated that perhaps the consortium should consider investing in a mill if the feed providers did not co-operate.

QUESTION 33

A MARKETING CONSORTIUM SHOULD PROVIDE PRODUCERS WITH ADDITIONAL INFORMATION ABOUT GRADING TO ASSIST THE FARMER RUN HIS BUSINESS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	6	9	1	0	0	1	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

The responses to this question indicated that the marketing consortium is expected to disseminate useful information that should be used to improve the producers' performance. It was also stated that group comparisons are useful and monitoring the grading at different abattoirs is essential.

QUESTION 34

A MARKETING CONSORTIUM SHOULD COLLABORATE CLOSELY WITH A PIG BREEDER TO DEVELOPMENT SPECIFIC GENOTYPE PIGS MORE SUITABLE TO PRODUCERS' REQUIREMENTS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	10	0	1	0	1	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

The response to this question indicated that producers require the genetic providers to engage in and implement genetic programs tailored to meet with the needs of the market.

QUESTION 35

A MARKETING CONSORTIUM SHOULD COLLABORATE CLOSELY WITH A PIG BREEDER TO DEVELOP SPECIFIC GENOTYPE PIGS MORE SUITABLE TO PROCESSORS' REQUIREMENTS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	9	2	1	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

Most of the respondents agreed with this statement. It is, however, interesting that fewer agreed with this statement than agreed with the previous question. A comment made was that genetic companies do their own market research, as they have to plan well in advance, with one respondent stating that the requirements of a processor are very important.

QUESTION 36

A MARKETING CONSORTIUM SHOULD START TO PROCESS PIGS FURTHER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	6	5	3	2	0	1	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

Although the majority agreed with this statement a large number of respondents were either neutral or disagreed. An interesting comment was that if shortening the supply chain is part of producing pork economically the pork producer has to be involved. Other respondents pointed out that if the marketing consortium wanted to brand its product it

will need to integrate into pork processing. The core function of the marketing consortium was firstly the marketing of pigs. Thereafter there was a split in the responses, the first set of respondents wanted it to process and market pork and the second set of respondents stated that processing is a specialised function and that the producers should not try and control the entire industry.

QUESTION 37

A MARKETING CONSORTIUM IS THE START OF A PROCESS OF FORWARD INTEGRATION WHERE THE PORK PRODUCER STARTS TO TAKE OVER THE PROCESSING.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	6	4	4	2	1	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

The trend picked up in the literature review was that pork producers are linking up with or integrating with processing companies. Integration implies involvement financially but not necessarily operationally. However certain respondents were quick to point out that processing and retailing are highly specialized and capital intensive. Producers could lose significantly if they make mistakes due to inexperience in this field. A respondent pointed out that the producers would be going back to the model under which Eskort Bacon Factory operated, a co-operative type structure. A respondent who disagreed with the statement pointed out that producers should focus on efficient production.

QUESTION 38

A MARKETING CONSORTIUM SHOULD FACILITATE THE ORGANISATION AND PROMOTION OF SPECIFIC NICHE PRODUCTS SUCH AS ANTIBIOTIC FREE MEAT.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	6	8	3	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

Respondents agreed on this matter, with a few respondents stating that the market will demand this.

QUESTION 39

A MARKETING CONSORTIUM SHOULD BE USED TO DEVELOP A BRANDED PRODUCT.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	9	8	0	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Pork Producers: Members of consortiums

Again the respondents agreed with this statement. A respondent did, however, mention that they should only take it as far as branded carcases or cuts of meat.

5.5 Processor Expectations And Anticipated Problems:

QUESTION 40

MARKETING CONSORTIUMS COULD ASSIST THE MARKET BY INCREASING THE PROFITABILITY TO THE PORK PROCESSOR.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	2	13	2	0	0	0	17
Processor	0	1	4	0	0	0	5
Non-member	0	3	1	1	0	0	5

Pork Producers: Members of consortiums

The majority of the respondents agreed on this matter. With a respondent stating that it could come about by branding. Additional comments were that if the processor were to get higher lean yields from a carcass or more consistency in carcases this could add value to the processor. It was indicated that the producers feel that the processors have the larger slice of the pie.

Processing Companies

The processors seemed not to have an opinion on this matter. Although a respondent stated that if the marketing consortium results in stable supply, good quality and cost effective supply to the processor versus individual farmers who may not achieve these

desirable benefits, then the consortium would be advantageous. The respondent then stated that there is no evidence to date to suggest that a marketing consortium would increase the profitability of the processing company.

Pork Producer: Non-member of consortiums

With three out of the five responses indicating that a marketing consortium can help processing companies, the responses appeared to agree with the producers.

QUESTION 41

YOU WOULD CONSIDER SOME KIND OF ALLIANCE BETWEEN YOURSELVES AND A PROCESSING COMPANY AT SOME STAGE IN THE FUTURE, IF NOT PLEASE ELABORATE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	5	9	3	0	0	0	17
Processor	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Non-member	1	3	1	0	0	0	5

Pork Producers: Members of consortiums

The majority of the respondents agreed with this statement. This indicated that producers were willing to collaborate with processors if they felt that it would be mutually beneficial. This was highlighted by a response "Only if both parties win out of the alliance". A respondent stated that this is an area where black economic empowerment should be considered.

Pork Producer: Non-member of consortiums

The response from the non-members indicated that they are prepared to enter into an alliance with a processing company. This indicated that there is potential for a larger level of integration to take place in the pork industry. This again followed an international trend established in the literature review.

QUESTION 42

PROCESSORS ARE PREPARED TO PAY A PREMIUM FOR A CONSTANT / PREDICTABLE SUPPLY OF PIGS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	3	11	3	0	0	0	17
Processor	0	4	1	0	0	0	5
Non-member	0	3	0	2	0	0	5

Pork Producers: Members of consortiums

Although the respondents agreed with this comment there was scepticism in their responses, with respondents stating that the premium is not large and that it depends upon which processor they are dealing with. Other respondents stated that they sometimes do pay a premium and other times do not depending on the market conditions. A respondent speculated that this would change when they realize they need a constant supply of quality pork

Processing Companies

The response to this question is of importance to the pork producer as the processors agreed that they were willing to pay a premium for a consistent supply of pigs. A respondent stated that quantity demanded dictates price, however, a constant supply leads to a more constant price. They did, however, add a qualification. A premium will only be paid if the price of the product does not affect the processors' ability to be competitive in the market. One of the respondents stated that they give contracts based on a cost model; in their case they give contracts to reduce the risk to suppliers and ensure supply.

Pork Producer: Non-member of consortiums

The responses to this statement indicated that there is a distinct divide in the opinions of the non-members. This was interesting, as it was completely different from the members of marketing consortiums and the processors' responses.

QUESTION 43

PROCESSORS ARE PREPARED TO PAY MORE FOR INCREASED CARCASS QUALITY.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	2	14	1	0	0	0	17
Processor	1	4	0	0	0	0	5
Non-member	0	4	0	1	0	0	5

Pork Producers: Members of consortiums

There was general agreement with this statement, with respondents stating that it is dependent on the market conditions, in other words, what the levels of supply are. It was stated that this premium is not significant and that it depends upon which processor you supply. Another respondent stated that when there was a greater percentage of meat, processors were prepared to pay more for the product.

Processing Companies

There was general agreement with this comment

Pork Producer: Non-member of consortiums

The majority of respondents agreed with this statement. This implied that they believe that processors are prepared to pay a premium for increased carcass quality.

QUESTION 44

PROCESSORS ARE PREPARED TO PAY A PREMIUM FOR SPECIFIC NICHE PRODUCTS SUCH AS ANTIBIOTIC FREE MEAT.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	1	5	10	1	0	0	17
Processor	1	2	2	0	0	0	5
Non-member	0	1	3	0	1	0	5

Pork Producers: Members of consortiums

The majority of responses were neutral indicating that most respondents were unsure. The general comments indicated that processors are unwilling to pay a premium for these products. However, specific markets such as Woolworths and Wimpy may very well be prepared to pay for "organically grown" meat. The point was made that all meat has to be residue free, including antibiotics, as this is current South African law. A second respondent stated that the more a producer goes "organic" the better.

Processing Companies

The general response seemed to indicate that they agreed with this statement. The additional comments substantiated this with the comments like "If a market segment can be identified that will pay more for the finished product made from niche products" or "when consumers demand such products". There was the inference that this was something that would come in the future. A processor stated that it is too difficult to ensure/guarantee this type of product as there are too many producers to police.

Pork Producer: Non-member of consortiums

The responses from the respondents indicated that there was no clear answer as the majority chose a neutral position.

QUESTION 45

MARKETING CONSORTIUMS ARE A POTENTIAL THREAT TO PROCESSING ORGANISATIONS.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	0	2	4	10	1	0	17
Processor	0	0	1	3	1	0	5
Non-member	1	0	2	2	0	0	5

Pork Producers: Members of consortiums

The majority of respondents did not regard marketing consortiums as being a threat to processing companies. Respondents mentioned that processing companies do not want to negotiate their current autonomy. Other respondents commented that the producers should work more closely with processors, as they are reliant on one another. It was conceded that it could be a perception with processors who have not dealt with marketing consortiums before. A single respondent stated that control of over 50% of the KZN market would be conceived as a threat. A respondent stated that the processors have formed a consortium and are colluding to keep the prices down.

Processing Companies

The sentiment of the processing companies seemed to be the same as that of the producers. The respondents' comments varied substantially. One of the responses was that each performs important but different roles within the supply chain. Another responded that if they started processing they would then become a competitor. They added that too many competitors leads to price decreases due to the limited market in

which they operate. Another comment was that it depended entirely on whether or not the consortiums conducted themselves in the best long-term interest of the value chain.

Pork Producer: Non-member of consortiums

There was a split in the responses with a large number of the respondents replying with a neutral position.

QUESTION 46

WHEN DEALING WITH RETAILERS THE RETAILERS HAVE THE BALANCE OF NEGOTIATING POWER.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	1	14	1	1	0	0	17
Processor	0	3	1	1	0	0	5
Non-member	2	2	0	1	0	0	5

Pork Producers: Members of consortiums

The producers had a high level of agreement when it comes to this statement with one comment that it is a worldwide problem. A respondent stated that if consortiums align themselves with processors it could help to even the playing field. The power of branded products was emphasised here, with the statement that the development of brand loyalty ensured that the customer demanded products.

Processing Companies

The processors seemed to agree with this statement. One respondent made the point that they had strong brands that the consumer wanted to see on the shelf. However the extent of shelf space given might have an impact. Again there was reference made to supply and demand. When demand exceeds supply processors have more bargaining power.

Pork Producer: Non-member of consortiums

The majority of respondents believed that the retailers have the balance of negotiating power. This is not peculiar to South Africa.

QUESTION 47

IN THE FUTURE CONTRACTS WITH A MARKETING CONSORTIUM WILL BE IMPORTANT TO YOUR SUCCESS AS A PROCESSOR.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Processor	0	1	1	3	0	0	5
Non-member	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Processing Companies

The general response was that contracts would not be important to the success of the processor in the future. Again reference to the duration of contracts was made. This was, however, dealt with in question 8.

QUESTION 48

YOU WOULD CONSIDER SOME KIND OF ALLIANCE BETWEEN YOURSELVES AND A MARKETING CONSORTIUM AT SOME STAGE IN THE FUTURE, IF NOT PLEASE ELABORATE.

	S Agree	Agree	Neutral	Disagree	S Disagree	No Response	Total
Member	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Processor	1	2	1	1	0	0	5
Non-member	0	1	0	4	0	0	5

Processing Companies

The responses to this question indicated that there were differing opinions from the processors' side. A respondent stated that it has its own marketing team. Another respondent stated that they do have alliances in the form of contracts and information sharing. Respondents stated that depending on the organisation an alliance in the form of a shareholding could be complex.

Pork Producer: Non-member of consortiums

The responses to this question indicated a clear majority who would not consider an alliance between themselves and a marketing consortium. Some of the reasons quoted were: firstly, they wish to deal directly with processors; secondly, the producer values independence; thirdly, it is believed that the market is a free market and when there is an oversupply the processors will look for pigs outside of the consortium; fourthly, an alliance between the producer and processor is more important than an alliance between a

marketing consortium and a producer. A respondent did say that if the marketing consortium is also a processing company then they would consider an alliance.

The following additional comments were made:

Processors must realize that if they don't protect their local producers and use cheap imports, soon the finished product will be imported. This may put the processors out of business. Marketing consortiums should stick to their marketing and help fellow farmers become more efficient. Processing and retailing are specialist fields and should be left to people who have experience in that field. Marketing consortiums should not go back to what Eskort Bacon Factory used to be and failed. However rather than start another pork processing company, it should buy an existing one.

5.6 Conclusion:

In this chapter the responses to the questionnaires have been summarized and discussed. The chapter was subdivided into four different sections. The first section being a section that dealt with questions that were general questions relating to the pork industry. In this section it was determined that the price of a kg of pork is very important. Co-ordinated markets were seen as desirable when they resulted in stability. Providing a quality carcass increased processor loyalty and carcass traceability was preferable. Integration using contracts was seen as acceptable and maize production was not seen as a key success factor. There was unanimous agreement that a domestic supply of pork was in the best interests of all role players.

The second section dealt with objectives and the perceived benefits of a marketing consortium. The marketing consortium was perceived to increase profitability which was as a result of increased bargaining power, higher prices, savings in input costs such as: feed, transport and centralization of the marketing function. It was also agreed that the control over larger volumes would facilitate access to additional markets including the export market.

The third section was a section where the objectives of a marketing consortium were considered. The intention was to establish what the objectives of a marketing consortium should be. The majority of the respondents viewed the areas where perceived benefits would arise as being the areas where the marketing consortium should become involved. A area where there was of little concern was processing.

The fourth section focused on the processors' expectations and anticipated problems. The section commenced with a question analyzing perceptions of alliances between producers and processors, most respondents agreeing with entering into an alliance. Processors were unsure of how a marketing consortium could benefit them. There was, however, agreement that a predictable supply and quality carcases would benefit processors. Retailers were seen to have the majority of bargaining power and marketing consortiums were not seen as a threat to processing companies. Finally, with reference to questions 47 and 48 that were only asked of the specific target groups. Question 47[1] asked if marketing consortiums would be important to the future success of a marketing consortium and question 48[2] asked if non-members would consider an alliance with a marketing consortium. The response rates to these questionnaires were pleasing and it would appear that valuable information has been gathered. In the next chapter the results will be summarized, conclusions will be drawn, caveats and problems discussed, recommendations made and recommendations for further research provided.

[1] See Question 26 in Annexure 4
[2] See Question 31 in Annexure 3 and Question 27 in Annexure 4

Chapter 6: Conclusion, recommendations, caveats and suggestions for further research.

6.1 Introduction:

In chapter 5 the results of the survey were summarised and briefly discussed. This chapter serves to elaborate on the responses and to relate them to the research objectives and literature review as discussed in Chapter One, Two and Three. The primary objective of the research is: to determine whether the objectives of the members of a marketing consortium will align sufficiently well with the objectives of the processing companies to allow for the expected gains of the marketing consortiums to be realised. In this chapter each section covered in the questionnaire will be related to this objective and the secondary objectives as discussed in the first chapter. Relevant trends established in the literature will be discussed in relation to the conclusions made.

6.2 Discussion of the Empirical findings:

6.2.1 General Questions On Perceptions In The Market

The general questions on the perceptions in the pork industry in KZN indicated that domestic supply of pork and the stability of the supply is important. This was emphasised by the comment that was made when a processor stated that 80% of meat block is pork. It was not surprising therefore that the respondents agreed with the statement indicating that co-ordinating the local supply of pork is desirable. This does seem to indicate that a marketing consortium could be useful if it were to stabilise the market by co-ordinating pork producers. It is important to consider the trend in the USA, Brazil and globally where there is an observable increase in the size of pork producing farms as a consequence they are better co-ordinated, the largest single owned piggery being larger than the entire South African pork industry (USMEF, online, 01 December 2003) (NPB, 2003, p.14).

In the literature review operating structure was shown to be irrelevant by Denmark's ability to operate a co-operative structure successfully whereas the other global producers are free market based (IPPA, online, 20 January 2004) (DS^2, online, 5 February 2004). At

this point cognisance of the response to the question that dealt with whether the market was running optimally before marketing consortiums were introduced should be taken. This indicated that processors were relatively happy with the status quo, however, producers believed that marketing consortiums were helpful. There appeared to be a difference of opinion here.

The consensus in all the responses indicated that pork is price sensitive as expected of a commodity product. The literature review indicated that large-scale producers operating in the USA and Canada have been successful marketing commodity products such as pork and chicken by branding the product (Kotler, 2003, p.24). From the empirical findings the indication is that there were market segments that needed to be considered such as: higher-income earning consumers who are prepared to pay for quality; low-income earners wanting cheap meat; the fresh meat market; and finally the processed meat market. Consensus was reached when asked about quality, with the respondents stating that quality is important. A respondent stated that it was secondary to price. Quality is increasingly important as latest developments in carbon dioxide vacuum-packed meat enables exporting countries such as Brazil, the USA and Canada to export pork as "fresh" meat. The only defence is to have a higher quality domestic product at a comparable price. The importance of the quality of meat can be seen by the responses to the traceability criteria. The advanced methods used by both Canada and Denmark to ensure traceability emphasise the importance of traceability most especially when South African pork producers decide to export pork (DS^4, online, 5 February 2004) (FAS, 2004, p.13). While this is especially important internationally it does seem to be less important to processors locally. This indifference may be a short-term phenomenon as the comment was that retailers are more concerned than processors about traceability. When asked about processors who are more loyal to quality carcass suppliers or who are prepared to pay more for quality carcases there was a high level of agreement among respondents with producers and processors agreeing with the statement. This would imply that if a marketing consortium could ensure continuity of supply and minimum deviation in the size of cuts from carcass to carcass it may achieve more loyal processors or processors that are prepared to pay more for the product or perhaps even both.

The notion of contracts has been discussed on a number of occasions. The first leg of contracts would be between the processors and the producers and the responses indicate that they are important with only a single respondent disagreeing. PPW have used this extensively, with success. This would indicate that contracts are likely to become more prevalent in the future. The problematic area is the cost model base that should be used PPW indicated that they use a number of different contracts. This is emphasised further by table 2.13 where, in the USA, it can be seen that there are numerous different contract models (University of Missouri & Paragon Economics, online, 10 January 2004). A respondent stated that it would be irresponsible to "allow" the pork industry to be uncompetitive due to a lack of cost control. In this regard it is important to note that there is room for improvement as South Africa is a medium/low cost producer (Hopkins, 2004). The inference is that the contracts have to benefit both parties, as the alternative is imported meat. Contracts between retailers and processors seem unlikely although the producers regarded contracts as desirable. The comment that was made was that processors must make retailers need them by being better than local and overseas competition this stresses the importance of branding. The significance of which is increasing with the introduction of carbon dioxide vacuum-packed meat. This could mean that a domestically branded product may be placed on a shelf with a Brazilian branded product, a Canadian branded product or even a USA branded product (DS[1], online, 5 February 2004).

Danske Slagterier stated that their main strategy is to maintain its position as a supplier of highly developed semi-processed cuts (DS[4], online, 5 February 2004). Seventy eight percent of Denmark's exports are chilled and frozen bacon or cuts of pork in other words they are exporting differentiated products. A marketing consortium could assist the domestic economy in this regard by negotiating good contracts with processing companies as well as providing a quality product to ensure a superior product to imports and other local suppliers.

Integration, vertical and horizontal, is often spoken about. Denmark being the extreme example, however, the scale of operations in Canada, Brazil and the USA result in these countries making use of high levels of integration and co-ordination (Laursen et al, 1999, p.2) (Grimes and Plain, online, 02 March 2004). Integration is frequently implemented to eliminate a level in the supply chain with the ultimate goal of increasing profitability. Not surprisingly the producers and the processors have differing positions on this matter, when it comes to producers integrating into processing. The general consensus of the processors was that they should "focus on centres of excellence" or core business. As shown in Table 2.13, 18% of pork produced in the USA is owned by the processing companies' the argument of core business may not hold or may have to be redefined for the pork industry. This argument is strengthened when we observe that 43% of Brazilian pork production is concentrated among 10 large pork packers (University of Missouri & Paragon Economics, online, 10 January 2004). The majority of producers did, however, think that integrating into a processing facility was a good idea. This is mirrored in the responses to the question where it was asked as to who has the bargaining power. Vested interests could play a role in the responses, the processors and producers wanting autonomy. It was stated in the literature review that for the Danish pork industry to remain competitive attention must be paid to optimising the entire supply chain rather than focus on costs at each stage of production. International trends do indicate that more integration will take place in South Africa in the medium-term (Laursen *et al*, 1999, p.43). The producers stated that processors had the balance of power and the processors stated otherwise. Backward integration into a feed mill was mentioned as an alternative, which may very well be a superior alternative in the short-term. Other forms of integration such as producing their own maize were discussed with mixed responses. Producers stated that it was a specialised function on its own. An important consideration is cost of production, with the cost of South African pork having a moderate cost of production, as shown in table 3.5, any advantage that would result in a lower cost of production must be utilised to its full extent. This would allow South Africa to be competitive with low cost producers such as Brazil the USA and Canada (Cravens, online, 28 January 2004) (USMEF, online, 10 January 2004). As indicated in the findings this may very well result in regional strategies where, for example, in KZN maize

production is an advantage but in Gauteng this may not be the case. A marketing consortium could assist in the integration of the pork producer into processing. This could be achieved by guaranteeing production volumes needed by the processing plant to be viable. This applies equally for the backward integration into a feed mill.

6.2.2 Objectives For Joining A Marketing Consortium – Members' Objectives/Perceived Benefits

The critical consideration in any business decision is that of profitability, in other words, does a marketing consortium add to profitability? The literature review identified economies of scale as being an important trend when considering profitability (ERS, 1996, p.15). Producers were in agreement with the idea that a marketing consortium added to profitability by increasing bargaining power through the larger volumes being traded. The caveat to this was that it was conditional upon overheads remaining low. When asked if a marketing consortium resulted in higher prices received by the producers, the producers agreed but the processors disagreed. The producers who agreed considered the higher prices sustainable in both the short-term and the long-term.

A key component to increased profitability is input costs. Considering firstly, the largest of these costs, feed costs, respondents agreed that savings have been achieved with feed providers due to volume discounts. It was stated that home mixers are in a different category, and are unlikely to benefit from this. It was also mentioned that large producers are in a better position to negotiate and the difference in feed prices might be minimal. Secondly, savings could be achieved when the group shares information and set common goals resulting in savings. Thirdly, it was agreed that better logistics would result in the circumstances where pigs have to be moved. Fourthly, the centralization of the marketing function will save costs assuming it does not have excessive overheads. Fifthly, the marketing consortium may facilitate the slaughtering of larger pigs, which would improve recovery on carcasses downgraded due to size.

Unstable trading environments can influence profitability. To counteract this a marketing consortium could provide a better product for both the processor or a marketing

consortium owned processing company. This could be done by firstly, providing appropriate numbers of carcases, stabilizing supply (stability of supply and production was attributed to the Danish success facilitating long-term contracts with customers across the world) (DS^2, online, 5 February 2004); secondly, by providing the desired breed mix through a good genetic base; thirdly, providing traceability resulting in credibility of the product; fourthly, ensuring consistency of carcases weight range and fifthly, making use of shared best practices. The result would be more loyal processors, and a stabilization of the pork industry environment. The increased co-ordination resulting from the marketing consortium may result in economies of scale, which are important for exports. As shown in the literature where pork exports in Brazil are concentrated among five companies, which account for 72% of all exports and account for 28% of production (Silva, 2003, p.10).

Integration was again a feature included in the questions assessing the respondents' objectives for joining a marketing consortium. The general response was one of agreement with all the items discussed below. Firstly, a marketing consortium could be used to provide a consistent and credible product this was found to be important in the literature. Brazil was excluded from the EU, as it did not have a system based on herd of origin labelling (European Commission, 2002, p.30). Denmark, however, can trace a product back to a small group of farms and Canada can trace the pork product back to the maternal sow (FAS, 2004, p.13). It was further agreed that the marketing consortium's products could be branded at the very least in the fresh meat market. Secondly, integration further up the supply chain was expected to increase profitability. Eskort Bacon Factory's demise was mentioned, as an unsuccessful attempt, but there was a perceived benefit from being able to beneficiate their product. Thirdly, the ability to gain access to additional markets, including the export market was seen to be a possibility. South African pork industry is so small that it is unlikely to have an impact globally but exports could have a large impact domestically; Brazil and Canada have used this strategy to increase their pork industries (Neydmann and Foster, online, 15 January 2004). Processing firms stated that price and quality determine access to additional markets. Fourthly, the marketing consortium would in all likelihood facilitate market

access, providing sufficient scale of operation. This would give the marketing consortium the ability to bid for contracts with, for example, Checkers.

This response is encouraging for the members of a marketing consortium as it indicates that there is a potentially large benefit attributable to marketing consortiums assuming that the objectives or perceived benefits are realized.

6.2.3 Objectives Of A Marketing Consortium

The literature showed that both co-operative structures and free market systems worked well, the level of contracts in the larger free market systems would indicate that they needed to be organised to prosper. A marketing consortium can have three principle objectives these would be: firstly, functions relating to marketing; secondly, functions relating to forward integration into processing; thirdly, backward integration into feed production or feed price negotiation. Integration is observed in the Danish pork industry where producers are fully integrated into processing and distribution of pork products. Significant levels of integration were observed in both Brazil and the USA (IPPA, online, 20 January 2004) (Laursen *et al*, 1999, p.2).

All respondents agreed that the marketing consortium should negotiate selling prices per kg of pork for the producers. This would include attempting to achieve better selling prices for the consortium members.

The question of whether the marketing consortium should have as its objective to process pigs highlighted the differing opinions on this matter. The majority of respondents agreed that it could be an objective of a marketing consortium, however, there was a higher level of neutral and disagree responses. Arguments against this objective were largely based on the concept of focusing on a business's core function. In the case of a marketing consortium that would be the marketing of pigs. It is appropriate to consider that 18% of pork production in the USA is owned by processors and in Brazil 43% of pork production is concentrated in ten processors (USMEF, online, 10 January 2004) (University of

Missouri & Paragon Economics, online, 10 January 2004). Respondents warned that processing and retailing are highly specialized and capital intensive. If the marketing consortium were to integrate into processing there was general agreement that the consortium should be used to develop a branded product.

With the exception of a single respondent it was agreed that the marketing consortium should be used to negotiate lower costs of feed. The members did however state that this should not alienate feed suppliers. An investment in a feed mill was referred to if the feed providers did not co-operate.

The principle objectives discussed above do not consider the administrative functions of a marketing consortium. The scope of the administration function is considered below. Respondents agreed that the marketing consortium should provide additional information such as grading statistics to assist the producer. Producers indicated that the marketing consortium should facilitate information-sharing assisting in the implementation of best practices or benchmarking ensuring better production. The literature review showed that there was little information on the South African pork industry available in South Africa. This makes it difficult for South African firms to benchmark, an increasingly important management tool. Administration functions would include negotiating with genetic suppliers to find specific genotype pigs more suitable to producers' requirements.

6.2.4 Processor Expectations And Anticipated Problems

The long-term viability of marketing consortiums would be influenced by the reaction of the processor to the marketing consortium. It is for this reason that processor expectations have been examined. It was conceded by processing companies that a marketing consortium could add to the profitability to the pork processor by helping them achieve; higher lean yields from a carcass; providing a more consistent carcass; stable supply; good quality and cost effective supply.

The members and non-members indicated that they were willing to form some kind of alliance between themselves and a processing company. This indicates that producers are

willing to collaborate with processors in the form of contracts and information sharing. The indication is that it will not be long before South African firms are following international trends where there is a higher level of contracts and co-ordinating agreements. As stated in the literature on the USA often production contracts specify the particulars of precisely how pork must be produced. These include careful control of the genetic characteristics, nutrition, medical conditions, and environment of the animals (State of Utah, online, 12 January 2004). The willingness indicated that there is potential for a larger level of integration to occur in the pork industry.

Questions were asked relating to processors paying a premium for certain services. It was agreed that: processors are prepared to pay a premium for a constant / predictable supply of pigs; pay more for increased carcass quality; there are specific niche products such as hormone free / antibiotic free meat. There were qualifications expressed, for example, the consumer would have to demand the product and the processor's ability to be competitive should not be affected. Traceability and health status are vitally important and will be increasingly important if South Africa wants to export in the future, countries have been excluded from export markets due health status as seen in the literature review.

The perceived power relationships that the different functions in the supply chain have are useful to assist in understanding the environment in which the pork industry operates. The retailers are seen to have the balance of bargaining power. This is seen to change only when there is a good brand name and customers demand the specific brand. The perception from the producers is that the processors have the balance of negotiating power. The processing companies have a differing view, which is that the producer has the balance of negotiating power especially when there is a shortage in the market. The perception of marketing consortiums in the market was considered important as a processing company that viewed a marketing consortium as a potential threat may be reluctant to deal with a marketing consortium. The majority of respondents did not see the marketing consortium as a threat.

6.2.5 Conclusion

The principle objective of this research was to determine if there was potential to develop a mutually beneficial working relationship between marketing consortiums and processing companies. This lower cost could mean international competitiveness. From the perspective of the producer there are perceived benefits such as marginally higher prices as well as cost reductions achieved through negotiations with feed companies. There are additional benefits in information sharing and the potential to benchmark. This suggests that the marketing consortium will be beneficial to the producer in the long run. From the perspective of the processing companies there are perceived benefits of a constant, consistent and quality supply. As indicated in the literature review this is exceptionally important if exports are being considered. A constant, consistent and quality supply should result in higher lean meat yields for the processor. The implication is that processors could gain from contracting with a marketing consortium that is supplying constant, consistent and quality carcases. The positive sentiment in favour of contracts from both the processors and producers and the belief that marketing consortiums are not a threat to processing companies suggest that there is a potential for mutual benefit. Denmark showing high levels of success by integrating along the supply chain. This suggests that marketing consortiums have a place in the economy. This is confirmed where organised and co-ordinated markets are successful in world pork production and exports. It is anticipated as happened in the USA that as packing plants concentrate there will be a simultaneous concentration of pork production.

6.3 Recommendations:

6.3.1 The South African pork industry needs to consider the impact of the availability of better statistics. Information on the South African pork industry is difficult to find and this may deter future investment.

6.3.2 The marketing consortium needs to keep its overheads low in order to ensure its long-term survival. The cost of running a marketing consortium was mentioned a number of times by respondents.

6.3.3 A number of respondents stated that the marketing consortium should "Focus on core business". Processing of meat is a specialised function and the strategy to move into processing meat could cause significant financial loss if not made without careful consideration.

6.3.4 The marketing consortium should minimize the barriers to entry of the consortium. A larger market share would assist it in negotiating with processors or feed companies and for this reason market share should be seen as one of its primary objectives.

6.3.5 If vertical integration is being considered, both backward and forward integration should be considered. The construction of a feed mill may initially be preferable to a processing facility.

6.3.6 The aim of the marketing consortium should be to achieve good working relationships with processors and feed providers. This should be a "win win" relationship, as stated by a respondent if there is an oversupply and the marketing consortium has too much power then processors may seek alternative sources of supply.

6.3.7 A predetermined processing margin should be considered as a method of allocating resources to processing plants. This coincides with the accounting treatment of a cost centre and mirrors what is happening in Denmark.

6.4 Caveats:

6.4.1 Sample sizes were small. This meant that only inferences could be made, however, no statistical tests could be performed.

6.4.2 The research confined itself to the KZN market. It may be useful to expand this research to other provinces.

6.4.3 The time frame was limited. This constrained the sample sizes, as a deadline date was set.

6.4.4 The scope of the study was confined to a dissertation in partial fulfillment of a MBA degree.

6.4.5 A single large processor refrained from responding to the questionnaire.

6.4.6 A single large non-member refrained from responding to the questionnaire.

6.5 Recommendations for further research:

6.5.1 The impact of imports on the level of employment in the pork and related industries.

6.5.2 It would be useful to establish the prevalence of contracts within the pork industry and the types of contracts that are being used.

6.5.3 An investigation into the most appropriate method for determining a pricing formula for a Kg of pork. This will be useful to provide processors with a guideline pricing formula.

6.5.4 The pork industry is capital intensive. This forms a barrier to entry. The question then is how to facilitate the access of black emerging producers into the pork industry. Large feed companies and large processing companies dominate the pork industry this can result in smaller producers being squeezed from both sides, for example, their input costs and the price of their product.

6.5.5 The impact of herd health status on the profitability of a herd should be explored. This should be taken further to the cost versus benefit of depopulating an entire piggery.

6.5.6 The correlation between successful pork production and maize production should be investigated to determine if there is a correlation. This should also be extended to various provinces and regions.

6.5.7 Currently there is little industry information available, which makes it difficult to benchmark a business. Research should be performed to establish how best to provide producers with industry information.

6.5.8 Marketing consortiums are forums that facilitate dialogue between processors and producers. Further research could be done on the most appropriate method of achieving dialog between the processors and producers.

References

1 ABIOVE, 2004, *About Abiove.*
[Online] Available from:
http://www.abiove.com.br/abiovus.html
[Accessed 13 February 2004]

2 Agriculture and Agri-Food Canada (AAFC). 2003. *Hogs & Pork Sector Statistical Briefer.* p.1.
[Online] Available from:
http://www.agr.gc.ca/redmeat/hogbe03.pdf
[Accessed 13 February 2004]

3 BBC news, 2003, *Q&A: Why did trade talks collapse?*
[Online]. Available from:
http://news.bbc.co.uk/1/hi/business/3103782.stm
[Accessed 02 December 2003]

4 Bekker H, 1999, *The SA Feed Industry: 1900 - 2000 - Past, Present and Future*, AFMA Matrix, October - December, Also available on line from:
http://www.afma.co.za/AFMA_Template/1,2491,767_420,00.html

5 Bloomberg. 2001. *China Plans to Increase Meat Outputs, but Decrease Pork's Portion.* Pork (Magazine). 01 February 2001
Online available from:
http://www.porkmag.com/news_editorial.asp?pgID=675&ed_id=291&component_id=805
Accessed 21 January 2004

6 Boehlje M, Clark K, Hurt C, Jones D, Miller A, Rickert B, Singleton W & Schinckel A, 1997, *The Changing Pork Industry*, Feed & Grain, October/November, USA. p.15.
Online available from:
http://www.agecon.purdue.edu/cab/research/articles/porkindustry97.pdf

7 Boehlje M. 1995. *Vertical coordination and structural change in the pork industry*: Discussion. American Journal of Agricultural economics. Dec 1995. Vol. 77 Issue 5. p.1224. 4p.

8 Briedenhann E, 2002, *The influence of the weak rand*, AFMA Matrix, January - March, Also available on line from: http://www.afma.co.za/AFMA_Template/mrt_influence.htm

9 Burns A.C., Bush R.F., 2000, *Marketing Research 3rd Edition*, USA New Jersey: Prentcie Hall. P699.

10 Canada Pork International[1], *Canadian Pork Exports*, current data.
[Online] Available from:
http://www.canadapork.com/english/pages/frmsts/page03.html
[Accessed 22 January 2004]

11 Canada Pork International[2], The Canadian hog processing industry current data.
[Online] Available from:
http://www.canadapork.com/english/pages/frmsts/page03.html
[Accessed 22 January 2004]

12 Canada Pork International[3], *Marketing Hogs in Canada,* current data
[Online] Available from:
http://www.canadapork.com/english/pages/frmsts/page03.html
[Accessed 22 January 2004]

13 Canada Pork International[4], *Hog Production in Canada,* current data
[Online] Available from:
http://www.canadapork.com/english/pages/frmsts/iifrmsts/pages/indinf02.html
[Accessed 22 January 2004]

14 Canada Pork International[5], *Marketing of Canadian pork,* current data.
[Online] Available from:
http://www.canadapork.com/english/pages/frmsts/page03.html
[Accessed 22 January 2004]

15 Canadian Pork Council, 2003, *Statistics, Hogs Marketed in Canada by Province 1984-2002 in Thousands of Heads.*

[Online] Available from:
http://www.cpc-ccp.com/stats.html
[Accessed 10 February 2004]

16 Cargo Info Africa, 2002, Data on *Meat of swine, fresh or chilledcarcasses and half carcasses.* [Online]. Available from:
http://www.cargoinfo.co.za/index.asp?inc=customs
[Accessed 01 December 2003]

17 Cattlemen's Beef Board & National Cattlemen's Beef Association, 2004, *Current BSE investigation.*
[Online] Available from:
http://www.bseinfo.org/current.htm
[Accessed 15 March 2004]

18 Central Intelligence Agency (CIA). 2003. *The World Factbook, Brazil.* USA. Updated 18 December 2003
Online available from:
http://www.cia.gov/cia/publications/factbook/geos/ch.html
Accessed 22 January 2004

19 Central Intelligence Agency (CIA). 2003. *The World Factbook, Brazil.* USA. Updated 18 December 2003
Online available from:
http://www.cia.gov/cia/publications/factbook/geos/br.html
Accessed 22 January 2004

20 Central Intelligence Agency (CIA). 2003. *The World Factbook, Canada.* USA. Updated 18 December 2003
[Online] Available from:
http://www.cia.gov/cia/publications/factbook/geos/ca.html#Econ
[Accessed 22 January 2004]

21 Collins K(Chief Economist), U.S. Department of Agriculture, 2001, *Statement of Keith Collins Chief Economist, U.S. Department of Agriculture before the U.S. Senate Committee on Appropriations Subcommittee on Agriculture, rural development and related agencies May 17, 2001*, p.1, Also available on line from: http://www.usda.gov/oce/speeches/051701co.html

22 Cooper D.R., Emroy W.C., 1995, *Business Research Methods 5th Edition*, USA: Richard D. Irwin, Inc. p.681.

23 Cravens J, Foreign Market Development, National Pork Board, *Targeting Exports*, National hog Farmer, 15 May 2003.
[Online] Available from:
http://nationalhogfarmer.com/magazinearticle.asp?magazinearticleid=175008&magazineid=17&siteID=5&releaseid=11268&mode=print
[Accessed 12 February 2004]

24 Cravens J. 2003. *Targeting Exports.* National Hog Farmer, 15 May 2003,
Online available from:
http://nationalhogfarmer.com/magazinearticle.asp?magazinearticleid=175008&magazineid=17&siteID=5&releaseid=11268&mode=print
28 January 2004

25 Daniels J. Radebaugh L. 2001. *International Business Environments and Operations 9th Edition.* New Jersey. Prentice Hall. p.810.

26 Dunham R. B., 1996, *The Delphi Technique*, p.17.
[Online]. Available from:
http://www.medsch.wisc.edu/adminmed/2001/orgbehav/delphi.pdf
[Accessed 10 June 2004]

27 Easysoft and I.N.D.S., "Market Master: Stock Market Analysis and Charting Software for Windows", Easysoft, www.easysoft-inds.co.za, 1987 and daily up to date data feed.

28 Economic Research Service (ERS) USDA. 1996. *The US as A Key Player In Pork Export Markets, World Agriculture & Trade*, Agricultural Outlook. December. p.4. [Online] Available from:

http://www.ers.usda.gov/publications/agoutlook/dec1996/ao236c1.pdf
[Accessed 10 February 2004]

29 European Commission. 2002. *Final Report of a Mission Carried Out in Brazil From 4 to 14 March 2002 In Order to Evaluate Animal and Public Health Controls Over The Production Of Fresh Pig meat*. Health & Consumer Protection Directorate General. DG (SANCO)/8529/2002 MR.
Online available from:
http://europa.eu.int/comm/food/fs/inspections/vi/reports/brazil/index_en.html
Accessed 28 January 2004.

30 Federal Research Division (FRD). 1997. Brazil, Country Study. Federal Research Division of the Library of Congress. USA.
Online available from:
http://countrystudies.us/brazil/72.htm
21 January 2004

31 Foreign Agricultural Service (FAS), updated 2002, *Livestock and Poultry World Markets And Trade October 1997. The Global meat complex: Trends and implications*, [Online]. Available from:
http://www.fas.usda.gov/dlp2/circular/1997/97-10LP/oct97lp1.htm
[Accessed 12 January 2004]

32 Foreign Agriculture Service (FAS), USDA. 2003. Production, Supply & Distribution online, *Meat, Swine*. USA.
Online available from:
http://www.fas.usda.gov/psd/complete_files/default.asp
01 February 2004

33 Grain South Africa (GSA), 2003, Grain and Parity Prices (updated daily)
[Online]. Available from:
http://www.grainsa.co.za/market_info_prices.asp?MarketCatId=6
[Accessed 30 June 2003]

34 Greenough & Associates Inc., and Mitura Economic research Inc., Saskatchewan Agrivision Corporation Inc. (SAC Inc.), *The Pork Industry a SAC Inc. State of the industry Fact Sheet*, 2002, p.3.
[Online]. Available from:
http://www.agrivision.sk.ca/Archives-PDF/FactSheets/Pork.pdf
[Accessed 09 January 2004]

35 Grimes G, Plain R. 1995. *Industry information, The US Swine Industry – Where to from here?* Article in the proceedings of the Swine Strategies '95 held in the summer of 1995. Utah.
[Online] Available from:
http://www.governor.state.ut.us/dea/publications/web_hog/USSWNIND.htm
[Accessed 02 March 2004]

36 Haley M and Jones L, 1996, *The U.S. as A Key Player In Pork Export Markets*, Agriculture Outlook/December 1996, ERS, p.4.
[Online]. Available from:
http://www.ers.usda.gov/publications/agoutlook/dec1996/ao236c1.pdf
[Accessed 10 June 2004]

37 Haley, M. & Jones, L. 1996. *The U.S. as a Key Player in Pork Export Markets*. Agricultural Outlook, Economic Research Service, United States Department of Agriculture. December.
Online available from:
http://www.ers.usda.gov/publications/agoutlook/dec1996/ao236c1.pdf
Accessed 20 January 2004.

38 Hill C.W., 2003, *International Business, competing in the global marketplace 4th Edition,* New York: McGraw-Hill Companies, Inc. p.703

39 Hopkins D. V. N., 2003 & 2004, SAPPO, Chairman, ongoing discussions.

40 Iowa Pork Producers Association (IPPA). *Iowa pork producers study agriculture in Brazil*. USA. 2002
Online available from:

http://www.iowapork.org/download/Producers_study_in _brazil.doc
Accessed 20 January 2004

41 Kelley T. 2001. China Eyes Meat Exports, Pork (Magazine) 11 December 2001
Online available from:
http://www.porkmag.com/news_editorial.asp?pgID=721&ed_id=989&component_id=868
Accessed 21 January 2004

42 Kotler P., 2003, *Marketing Management Eleventh Edition*, Upper Saddle River, New Jersey: Prentice Hall, p. 706

43 Laursen C, Hundahl L & Strandskov J, 1999, *Vertical Co-ordination in the Danish Hog/pork Industry the,* Aarhus School of Business. Centre for Market Surveillance, Research and Strategy for the Food Sector. Aarhus. Denmark. p.55.
[Online] Available from:
http://www.mapp.asb.dk/WPpdf/wp61.pdf
[Accessed 07 February 2004]

44 Malhotra N.K., Birks D.F., 2000, *Marketing Research An Applied Approach European Edition.* England, Harlow: Prentcie Hall. P.736.

45 Miller M. 2003. *China: A Land of Opportunity.* Pork (Magazine) 07 March 2003
Online available from:
http://www.porkmag.com/news_editorial.asp?pgID=722&ed_id=1817&component_id=869
Accessed 21 January 2004

46 Miller M. 2003. *China: Investing in Future Trade*, Pork (Magazine) 07 March 2003
Online available from:
http://www.porkmag.com/news_editorial.asp?pgID=728&ed_id=1814&component_id=875
Accessed 21 January 2004

47 National Department of Agriculture (NDA). 2001. *National Directorate Veterinary Services. Submission to the Foot and Mouth Disease & Other Epizootics Commission of the OIE for the Re-Instatement of a Foot and Mouth Disease Free Zone Without Vaccination.*
[Online] Available from:
http://www.nda.agric.za/docs/fmd_final/fmdreport.htm#1.3
[Accessed 26 March 2004]

48 National Department of Agriculture (NDA), 2003,*National Livestock Industry Strategy and Implementation Framework (First Draft)*. Pretoria.

49 National pork board, *Pork facts 2002/2003.* USA. P.34
[Online] Available from:
http://www.porkboard.org/docs/2002-3%20PORK%20FACTS%20BK.pdf
[Accessed 15 March 2004]

50 Plant Automation Technology. Current data. Industry projects. *Danish Crown New Pork Processing Plant Automation,* Denmark.
[Online] Available from:
http://www.plantautomation-technology.com/projects/danish_crown/
[Accessed 10 February 2004]

51 Raath J, 2001, *Policy and Structural Development in the Red Meat Industry in South Africa,* Paper delivered at the Group on Meats and Feeds, Canberra, Australia, Monday 14th May 2001
[Online] Available from:
http://www.ifap.org/canberra/Meat/MF311.htm
[Accessed 10 February 2004]

52 Republic of South Africa, 2002, *Abstract of Agricultural Statistics,* Pretoria: National Department of Agriculture, Directorate: Agricultural Statistics, Also available on line from:
http://www.nda.agric.za/docs/abstract2003.pdf

53 Saunders M., Lewis P., Thornhill A., 2003, Research Methods for Busioness Students 3rd Edition, England Harlow: Prentcie Hall. P504.

54 Silva J. F. USDA. Global Agriculture Information Network (GAIN). *Brazil, Livestock and Products, Annual 2003 – GAIN Report #BR3609.* USA. 28 August 2003.
Online available from:

http://www.fas.usda.gov/gainfiles/200308/145985853.pdf
Accessed 21 January 2004

55 South African Grain Information Service, 2003, *Maize Tariff.*
[Online]. Available from:
http://www.sagis.org.za/
[Accessed 03 December 2003]

56 South African Meat Industry Company (SAMIC), 2002, *Annual report,* p.12.
[Online]. Available from:
http://www.samic.co.za/downloads/AnnRep.zip
[Accessed 30 June 2003]

57 SAPPO. *Business and Implementation plan for the pork industry*, Draft. 2003. P36. Pretoria.

58 South African Pork Producers Organisation, 2003, *About SAPPO,*
[Online]. Available from:
http://www.sapork.com/1about.html
[Accessed 28 November 2003]

59 State of Utah, Governor's Office of Planning and Budget, Demographic and Economic Analysis, *Employment and Population Impacts of Circle Four Farms: Four Development Scenarios (Industry context)*, August 14, 1996, Also available on line from:
http://www.governor.state.ut.us/dea/publications/web_hog/H5.HTM
[Accessed 12 January 2004]

60 Statistics Canada. 2003. *Farming Facts 2002,Fewer Farms but More Pigs*, p.22.
[Online] Available from:
http://www.statcan.ca/english/freepub/21-522-XIE/21-522-XIE02001.pdf
[Accessed 10 February 2004]

61 Sweeten J, Miner R & Tengman C. *CAFO Fact Sheet series, Fact Sheet #1: A Brief History and Background of the EPA CAFO Rule*. National Pork Board. P.4.
[Online] Available from:|
http://www.porkboard.org/FS--History%20and%20background%20final.ps.pdf
[Accessed 02 March 2004]

62 The Federation of Danish Pig Producers and Slaughterhouses (DS). Cross functional controls, Traceability. Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/smcms/Danish_English/Danish_Quality/5_cross_funct_contr/5_5_traceability/Index.htm?ID=4083
[Accessed 13 February 2004]

63 The Federation of Danish Pig Producers and Slaughterhouses (DS^1). *Pig Production,* Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/view.asp?ID=3422
[Accessed 05 February 2004]

64 The Federation of Danish Pig Producers and Slaughterhouses (DS^2). *slaughtering and meat processing,* Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/smcms/Danske_Slagterier_UK/The_Danish_Pigmeat/Slaughtering_process/Index.htm?ID=3391
[Accessed 05 February 2004]

65 The Federation of Danish Pig Producers and Slaughterhouses (DS^3). *Stastistics, Denmarks Exports of Pig Meat,* Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/smcms/Danske_Slagterier_UK/Statistics/DK_Export_of_pigmeat/Index.htm?ID=1075
[Accessed 07 February 2004]

66 The Federation of Danish Pig Producers and Slaughterhouses (DS^4). *Cross Functional Controls, 5.5 Traceability*. Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/smcms/Danish_English/Danish_Quality/5_cross_funct_contr/

5_5_traceability/Index.htm?ID=4083
[Accessed 07 February 2004]
67 The Federation of Danish Pig Producers and Slaughterhouses, *The Danish Pig Meat Industry*, Denmark.
[Online] Available from:
http://www.danskeslagterier.dk/view.asp?ID=3422
[Accessed 13 February 2004]
68 University of Missouri and Paragon Economics, *U.S. Hog Marketing Contract Study*, January 2003.
[Online]. Available from:
http://www.porkboard.org/docs/2003stdy.doc
[Accessed 15 March 2004]
69 U.S.A. National Pork Board, 2003, *Pork Facts 2002/2003*
[Online]. Available from:
http://www.porkboard.org/publications/pubIssues.asp?id=65
[Accessed 30 June 2003]
70 US Meat Export Federation. 2003. *Brazil – Pork Industry, Highlights*. USA.
Online available from:
http://www.usmef.org/misc_news/international_market/03_brazilpork_industryhighlights.pdf
01 February 2004
71 US Meat Export Federation (USMEF). 2003. Unified Export Strategy. Analysis of U.S. and World Market Situation.
[Online] Available from:
http://www.usmef.org/Misc_News/03_1121_Pork_UnifedExportStrategy.pdf
[Accessed 02 March 2004]
72 USDA, Foreign Agricultural Service (FAS). Fact Sheet, *Permanent Normal Trade Relations With China, What's at Stake for Pork?* USA. April 2000.
Online available from:
http://www.fas.usda.gov/info/factsheets/China/6pork.pdf
Accessed 21 January 2004
73 USDA. *Livestock Tables, Rank: 288, Per Capita Pork Consumption*. USA. 24 October 2003.
Online available from:
http://www.fas.usda.gov/dlp/circular/2001/01-03lp/porkpcc.pdf
Accessed 21 January 2004
74 Volker, Dr T. Managing Director. PPW. Interview, 30 June 2004.
75 Weydmann C. & Foster K. 2003. *Does Brazil Pose a Threat to the U.S. Pork Industry?, Purdue Agricultural Economics Report.* Purdue University. Internal paper. USA.
Online available from:
http://www.agecon.purdue.edu/extension/pubs/paer/May2003/brazil.asp
Accessed 15 January 2004
76 World bank. 2003. Data & Statistics, Quick reference tables. *GNI per capita 2002 (Atlas method and PPP). July 2003.*
Online available from:
http://www.worldbank.org/data/databytopic/GNIPC.pdf
Accessed 22 January 2004
77 World bank. 2003. Data & Statistics, Quick reference tables. *Population 2002. July 2003.*
Online available from:
http://www.worldbank.org/data/databytopic/POP.pdf
Accessed 22 January 2004
78 World bank. 2003. Data & Statistics, Quick reference tables. *Total GDP 2002. July 2003.*
Online available from:
http://www.worldbank.org/data/databytopic/GDP.pdf
Accessed 22 January 2004
79 Zikmund W.G. (Oklahoma State University), 2003, Business Research Methods 7th Edition, USA: Thompson Learning (South West Division). P.748.

ANNEXURE 1

Alexander Hopkins
University of KwaZulu-Natal
Private Bag X01
Scottsville
3209

UNIVERSITY OF
KWAZULU-NATA

03 August 2004

«title» «init» «surname»
«Farm_name»
«address»
«town»
«code1»

Dear Sir

The researcher, in partial fulfilment of his studies towards an MBA, has formulated this questionnaire/survey document. The subject under review is the stabilising impact of marketing consortiums in KZN. The questionnaire is based on a review of literature on this topic. The researcher would greatly appreciate your cooperation in filling out the questionnaire in its entirety. This will aid the researcher in the correlation and analysis of the responses.

As a study of this nature has not been conducted in South Africa before, your responses and comments are very important in this research and could contribute substantially to the base of knowledge on the pork industry. All the information provided by you would be highly confidential. A summary of the findings will be made available to all respondents who express the wish to view the findings. Please return the completed questionnaire in the self addressed envelope.

Thank you in advance for your kind cooperation.

Kind regards

Alex Hopkins CA (SA)

School of Accountancy–Pietermaritzburg Centre

Postal Address: Private Bag X01, Scottsville 3209, South Africa

Telephone: +27 (0)33 260 5392 **Facsimile:** +27 (0)33 260 5347 **Email:** **Website:** www.ukzn.ac.

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westvi

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

FOR THE PURPOSES OF THIS QUESTIONNAIRE A REFERENCE TO A MARKETING CONSORTIUM WILL REFER TO AN ORGANISATION SUCH AS UNIPORK MARKETING SA OR PENVAAN PORK WHOLESALERS WHO MARKET PORK ON THE BEHALF OF A NUMBER OF PRODUCERS.

TO INDICATE YOUR SELECTION PLACE A CROSS IN THE APPROPRITE BOX.

SECTION 1: GENERAL QUESTIONS ON PERCEPTIONS IN THE MARKET:

Question 1:

The South African market is price sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 2:

The South African market is quality sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 3:

Traceability to the source of pork production makes a difference to your customers both processors and retailers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 4:

Increased carcass quality will result in processors who are more loyal to quality carcass suppliers or who are prepared to pay more for the product.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please comment if you believe there are additional factors the processor might find valuable.

_____

_____

_____

Question 5:

The stability of the supply of pork is important to the pork industry as a whole.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 6:

There is a need for producers, processors and retailers to work in a more coordinated manner.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 7:

Future success in the South African pork industry is dependent on **retailers** entering into contracts with **processors**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

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ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 8:

Contracts between pork **producers** and pork **processors** will be important in the future.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

If agreed what type of contracts: Short term, medium term, long term or other

_____

_____

_____

Question 9:

It would assist farmers if they were integrated further along the processing chain, whether in partnership with a processor or with some other arrangement.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 10:

It is important for pork producers to produce their own maize.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please justify your answer:

_____

_____

_____

Question 11:

The KZN market was running optimally without marketing consortiums such as Unipork Marketing SA and Penvaan Pork Wholesalers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

How do you think that it could be run more efficiently?

_____

_____

_____

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 12:

When dealing with producers and processing firms. Processing firms are in a better bargaining position by virtue of their size.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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Question 13:

To have a domestic supply of pork is in the best interests of all the role players in the South African pork industry.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

SECTION 2: OBJECTIVES FOR JOINING A MARKETING CONSORTIUM – MEMBERS OBJECTIVES/PERCEIVED BENEFITS:

Question 14:

A marketing consortium will increase profitability to the pork producer.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 15:

The increased levels of coordination between pig producers as a result of Unipork Marketing SA and Penvaan Pork Wholesalers has gained them bargaining power and has resulted in higher prices received by the producers for the pigs sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

If you agree with 15 above: answer questions 16 and 17 else skip to question 18.

Question 16:

Is this higher price sustainable in the **long-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 17:

Is this higher price sustainable in the **short-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 18:

A marketing consortium can facilitate traceability and credibility of pork products sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 19:

A marketing consortium could be used to develop a consistent and credible product that could be branded.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 20:

A marketing consortium will result in savings being experienced in input costs such as feed.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please comment as to why you believe this is or is not the case.

Question 21:

A marketing consortium will result in savings experienced in transportation costs as prices paid per kg are aggregated. Meaning that a farmer can now supply the closest market.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 22:

The consolidated marketing function will result in cost savings due to the centralization of this function.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please state what other Economies of Scale you think a marketing consortium might achieve.

_____

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_____

Question 23:

A marketing consortium could assist processing plants by supplying the appropriate quality and quantity of meat, stabilizing production quantities.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 24:

A marketing consortium could better suit processing company needs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please elaborate on these areas.

_____

_____

_____

Question 25:

A marketing consortium owned **processing** unit will integrate farmers further up the supply chain increasing profitability.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 26:

A marketing consortium owned processing unit will facilitate the slaughtering of larger pigs and thus result in gains associated with selling larger pigs?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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_____

Question 27:

A marketing consortium will result in improved genetics as a result of closer negotiation with genetic suppliers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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_____

Question 28:

Marketing consortiums will assist processors to gain access to additional markets, including the export market?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 29:

A marketing consortium will facilitate market access, providing sufficient scale of operation, this will give the marketing consortium the ability to bid for contracts with say Checkers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 30:

A marketing consortium will assist you in increasing production / increasing your herd.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

SECTION 3: OBJECTIVES OF A MARKETING CONSORTIUM:

Question 31:

A marketing consortium should be used to negotiate better selling prices for the producer.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 32:

A marketing consortium should be used negotiate lower costs of feed for the producer.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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Question 33:

A marketing consortium should provide producers with additional information about grading to assist the farmer run his business.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 34:

A marketing consortium should collaborate closely with a pig breeder to development specific genotype pigs more suitable to **producers'** requirements.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

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ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 35:

A marketing consortium should collaborate closely with a pig breeder to development specific genotype pigs more suitable to **processors** requirements.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 36:

A marketing consortium should start to process pigs further.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please elaborate if you disagree

Please state what you believe a marketing consortium's core business is.

Question 37:

A marketing consortium is the start of a process of forward integration where the pork producer starts to take over the processing.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 38:

A marketing consortium should facilitate the organisation and promotion of specific niche products such as antibiotic free meat.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 39:

A marketing consortium should be used to develop a branded product.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

SECTION 4: PROCESSOR EXPECTATIONS AND ANTICIPATED PROBLEMS:

Question 40:

Marketing consortiums could assist the market by increasing the profitability to the pork **processor**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 41:

You would consider some kind of alliance between yourselves and a **processing company** at some stage in the future, if not please elaborate.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 42:

Processors are prepared to pay a premium for a constant / predictable supply of pigs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

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_____

_____

Question 43:

Processors are prepared to pay more for increased carcass quality.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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_____

ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

Question 44:

Processors are prepared to pay a premium for specific niche products such as antibiotic free meat.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 45:

Marketing consortiums are a potential threat to processing organisations.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 46:

When dealing with retailers the retailers have the balance of negotiating power.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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ANNEXURE 2

QUESTIONNAIRE FOR: MEMBERS OF A MARKETING CONSORTIUM OR PRODUCERS WANTING TO BECOME A MEMBER OF A MARKETING CONSORTIUM

IF YOU HAVE ANY ADDITIONAL COMMENTS PLEASE ADD THEM TO THIS PAGE.

YOUR TIME AND EFFORT IS APPRECIATED, RESEARCH LIKE THIS CANNOT BE DONE WITHOUT YOUR ASSISTANCE.

THANK YOU FOR YOUR HELP.

KIND REGARDS

ALEX HOPKINS CA(SA)
SENIOR LECTURER – UNIVERSITY OF KWAZULU-NATAL

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

FOR THE PURPOSES OF THIS QUESTIONNAIRE A REFERENCE TO A MARKETING CONSORTIUM WILL REFER TO AN ORGANISATION SUCH AS UNIPORK MARKETING SA OR PENVAAN PORK WHOLESALERS WHO MARKET PORK ON THE BEHALF OF A NUMBER OF PRODUCERS.

TO INDICATE YOUR SELECTION PLACE A CROSS IN THE APPROPRITE BOX.

SECTION 1: GENERAL QUESTIONS ON PERCEPTIONS IN THE MARKET:

Question 1:

The South African market is price sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 2:

The South African market is quality sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 3:

Traceability to the source of pork production makes a difference to your customers both processors and retailers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

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Question 4:

Increased carcass quality will result in processors who are more loyal to quality carcass suppliers or who are prepared to pay more for the product.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please comment if you believe there are additional factors the processor might find valuable.

Question 5:

The stability of the supply of pork is important to the pork industry as a whole.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 6:

There is a need for producers, processors and retailers to work in a more coordinated manner.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 7:

Future success in the South African pork industry is dependent on **retailers** entering into contracts with **processors**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 8:

Contracts between pork **producers** and pork **processors** will be important in the future.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

If agreed what type of contracts: Short term, medium term, long term or other

_____

_____

_____

Question 9:

It would assist farmers if they were integrated further along the processing chain, whether in partnership with a processor or with some other arrangement.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 10:

It is important for pork producers to produce their own maize.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please justify your answer:

_____

_____

_____

Question 11:

The KZN market was running optimally without marketing consortiums such as Unipork Marketing SA and Penvaan Pork Wholesalers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

How do you think that it could be run more efficiently?

_____

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ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 12:

When dealing with producers and processing firms. Processing firms are in a better bargaining position by virtue of their size.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

_____

_____

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Question 13:

To have a domestic supply of pork is in the best interests of all the role players in the South African pork industry.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

_____

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ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

SECTION 2: OBJECTIVES FOR JOINING A MARKETING CONSORTIUM:

Question 14:

A marketing consortium will increase profitability to the pork producer.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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Question 15:

The increased levels of coordination between pig producers as a result of Unipork Marketing SA and Penvaan Pork Wholesalers has gained them bargaining power and has resulted in higher prices received by the producers for the pigs sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

If you agree with 15 above: answer questions 16 and 17 else skip to question 18.

Question 16:

Is this higher price sustainable in the **long-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 17:

Is this higher price sustainable in the **short-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 18:

A marketing consortium can facilitate traceability and credibility of pork products sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 19:

A marketing consortium could be used to develop a consistent and credible product that could be branded.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 20:

A marketing consortium will result in savings being experienced in input costs such as feed.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Please comment as to why you believe this is or is not the case.

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 21:

A marketing consortium will result in savings experienced in transportation costs as prices paid per kg are aggregated. Meaning that a farmer can now supply the closest market.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

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Question 22:

The consolidated marketing function will result in cost savings due to the centralization of this function.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Please state what other Economies of Scale you think a marketing consortium might achieve.

_____

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Question 23:

A marketing consortium could assist processing plants by supplying the appropriate quality and quantity of meat, stabilizing production quantities.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 24:

A marketing consortium could better suit processing company needs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please elaborate on these areas.

_____

_____

_____

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 25:

A marketing consortium owned **processing** unit will integrate farmers further up the supply chain increasing profitability.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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Question 26:

A marketing consortium owned processing unit will facilitate the slaughtering of larger pigs and thus result in gains associated with selling larger pigs?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

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Question 27:

A marketing consortium will result in improved genetics as a result of closer negotiation with genetic suppliers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

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ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 28:

Marketing consortiums will assist processors to gain access to additional markets, including the export market?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

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Question 29:

A marketing consortium will facilitate market access, providing sufficient scale of operation, this will give the marketing consortium the ability to bid for contracts with say Checkers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Additional comments:

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ANNEXURE 3

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SECTION 3: PROCESSOR EXPECTATIONS AND ANTICIPATED PROBLEMS:

Question 30:

Marketing consortiums could assist the market by increasing the profitability to the pork **processor**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 31:

You would consider some kind of alliance between yourselves and a **processing company** at some stage in the future, if not please elaborate.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 32:

You would consider some kind of alliance between yourselves and a **marketing consortium** at some stage in the future, if not please elaborate.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 33:

Processors are prepared to pay a premium for a constant / predictable supply of pigs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

Question 34:

Processors are prepared to pay more for increased carcass quality.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 35:

Processors are prepared to pay a premium for specific niche products such as antibiotic free meat.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 36:

Marketing consortiums are a potential threat to processing organisations.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 37:

When dealing with retailers the retailers have the balance of negotiating power.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 3

QUESTIONNAIRE FOR: PORK PRODUCERS NOT WANTING TO BECOME MEMBERS OF A MARKETING CONSORTIUM

IF YOU HAVE ANY ADDITIONAL COMMENTS PLEASE ADD THEM TO THIS PAGE.

YOUR TIME AND EFFORT IS APPRECIATED, RESEARCH LIKE THIS CANNOT BE DONE WITHOUT YOUR ASSISTANCE.

THANK YOU FOR YOUR HELP.

KIND REGARDS

ALEX HOPKINS CA(SA)
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ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

FOR THE PURPOSES OF THIS QUESTIONNAIRE A REFERENCE TO A MARKETING CONSORTIUM WILL REFER TO AN ORGANISATION SUCH AS UNIPORK MARKETING SA OR PENVAAN PORK WHOLESALERS WHO MARKET PORK ON THE BEHALF OF A NUMBER OF PRODUCERS.

TO INDICATE YOUR SELECTION PLACE A CROSS IN THE APPROPRITE BOX.

SECTION 1: GENERAL QUESTIONS ON PERCEPTIONS IN THE KZN MARKET.

Question 1:

The South African market is price sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 2:

The South African market is quality sensitive.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 3:

Traceability to the source of pork production makes a difference to your customers both retailers and consumers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 4:
Increased carcass quality will result in processors who are more loyal to quality carcass suppliers or who are prepared to pay more for the product.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please comment if you believe there are additional factors the processor might find valuable.

Question 5:
The stability of the supply of pork is important to the pork industry as a whole.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 6:
There is a need for producers, processors and retailers to work in a more coordinated manner.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 7:
Future success in the pork industry is dependent on **retailers** entering into contracts with **processors.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 8:
Contracts between **pork producers** and **pork processors** will be important in the future.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

If agreed what type of contracts: Short term, medium term, long term or other

_____

_____

_____

Question 9:
It would assist farmers if they were integrated further along the processing chain, whether in partnership with a processor or with some other arrangement.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

Question 10:
It is important for pork producers to produce their own maize.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please justify your answer:

_____

_____

_____

Question 11:
When dealing with producers and processing firms. Processing firms are in a better bargaining position by virtue of their size.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 12:

To have a domestic supply of pork is in the best interests of all the role players in the South African pork industry.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

SECTION 2: IMPACT OF MARKETING CONSORTIUMS: ADVANTAGES & DISADVANTAGES.

Question 13:

The KZN market was running optimally without marketing consortiums such as Unipork Marketing SA and Penvaan Pork Wholesalers.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

How do you think it could be run more efficiently?

_____

_____

_____

Question 14:

The increased levels of coordination between pig producers as a result of Unipork Marketing SA and Penvaan Pork Wholesalers has gained them bargaining power and has resulted in higher prices received by the producers for the pigs sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

If you agree with 14 above: answer questions 15 and 16 else skip to question 17.

Question 15:

Is this higher price sustainable in the **long-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

_____

_____

_____

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 16:
Is this higher price sustainable in the **short-term**?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 17:
A marketing consortium can facilitate traceability and credibility of pork products sold.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 18:
A marketing consortium could be used to develop a consistent and credible product that could be branded.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 19:
A marketing consortium could assist processing plants by supplying the appropriate quality and quantity of meat, stabilizing production quantities.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 20:
Processors are prepared to pay a premium for a constant / predictable supply of pigs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 21:
A marketing consortium could better suit processing company needs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please elaborate on these areas.

Question 22:
Marketing consortiums will assist processors to gain access to additional markets, including the export market?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 23:
Marketing consortiums could assist the market by increasing the profitability to the pork **processor**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Please elaborate.

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 24:
Marketing consortiums will increase profitability to the pork **producer**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 25:
A marketing consortium could better suit processing company needs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 26:
In the future contracts with a marketing consortium will be important to your success as a **processor**.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 27:
You would consider some kind of alliance between yourselves and a marketing consortium at some stage in the future, if not please elaborate.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

Question 28:
Processors are prepared to pay more for increased carcass quality.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 29:
Processors are prepared to pay a premium for specific niche products such as antibiotic free meat.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

Question 30:
A marketing consortium is a potential threat to your processing organisation.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

What percentage market share in KZN would you consider significant enough for your processing organisation to consider a marketing consortium as a potential threat?

Question 31:
When dealing with retailers the retailers have the balance of negotiating power.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Additional comments:

ANNEXURE 4
QUESTIONNAIRE FOR: PORK PROCESSING COMPANY

IF YOU HAVE ANY ADDITIONAL COMMENTS PLEASE ADD THEM TO THIS PAGE.

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