

NEW ZEALAND PORK
INDUSTRY BOARD

Ryan, Amanda (2000)

The Role of New Zealand Pork in the Future of
the Pork Industry

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INDUSTRY.



New Zealand
PORK

KELLOGG RURAL LEADERSHIP PROGRAMME 2000 REPORT

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NOVEMBER 2000

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THE ROLE OF NEW ZEALAND PORK IN THE FUTURE OF THE PORK INDUSTRY.

INTRODUCTION

The New Zealand Pork Industry has changed rapidly in the last ten years, but even more so in the past three years. The first section of this report is an attempt to document some of the changes to the industry and the role of the New Zealand Pork Industry Board in these changes. It builds on the Profile of the New Zealand Pork Industry written by former CEO David Dobson in 1996.

The New Zealand Pork industry is becoming co-ordinated and increasingly industrial¹ in its production and distribution, with a focus on consumers and consumer requirements. A review of the changes to the American pork industry has shown how some of these changes have resulted in an almost completed integrated industry. There is evidence of some of these changes occurring in the New Zealand pork industry with consolidation of farms, abattoirs and processors, emergence of producer groups and differentiation of products.

An interpretation of what the industry could look like in five years time gives an indication of the commercial focus that the industry could achieve, as well as the dramatic change of focus and paradigm shift in thinking that would be required to reach it. It also gives some intimation as to what the role of the New Zealand Pork Industry Board should undertake in the future, given that the object of the Board is... *“to help in the attainment, in the interests of pig producers, of the best possible net ongoing returns for New Zealand pigs, pork products and co-products”*.

¹ The application of modern industrial manufacturing, production, procurement, distribution and coordination concepts to the food and industrial product chain. (Boehlje 1995)

2. THE NEW ZEALAND PORK INDUSTRY – A review of the past ten years and current initiatives

The New Zealand Pork Industry Board² has met a number of industry challenges in the past ten years. The Board members and the executive staff have been extremely proactive and farsighted in researching the challenges in order to provide the best possible advice and assistance to producers.

The following are examples to show the depth and breadth of the issues in the industry and the resulting attempts to answer the challenges.

2.1 Cost of production

The pork industry originally developed in New Zealand in conjunction with the dairy industry, with pigs being fed waste whey. With whey now being a valuable resource, New Zealand pork producers can no longer rely on the dairy industry as a feed source. The industry now uses grains such as barley and wheat, with the addition of protein sources. As feed is the most expensive factor in an intensive livestock industry (an estimated 60 - 70 percent), the cost of the feed influences the cost of production.

The New Zealand arable industry is not as closely associated with the pork industry as some countries such as the United States, where large areas of grain growing are mirrored by large numbers of intensive livestock industries. The New Zealand arable industry only accounts for 0.30% of the total land area in use for farming (MAF Agricultural Statistics 1999). Arable producers often have contracts to supply grains to a specification set by the

² Note in 1998 a resolution was passed at the Industry Conference for the New Zealand Pork Industry Board to be refereed to as New Zealand Pork.

buyer and supply grain to the flour milling, brewing and poultry layer and broiler industries.

It is estimated that about 80 percent of New Zealand pig producers home mill (Feed Manufacturers Association, pers comm). That is they mix the pig feed on-farm and use one or more of the following means to source feed:

- Buy grain on contract
- Buy grain on the open market. This may be the surplus to other industries needs, and is rarely grown to a pig producer's specification. Producers will generally buy on price, although they may have informal contracts with arable suppliers
- Producers may grow the grain themselves
- Some producers supplement their grain with imports such as barley from Australia

Some farms buy-in ready made commercial feeds that are usually pelleted and created to meet specific nutritional requirements of the pigs at the various stages in their growth.

Due to this on-farm variability it is hard to determine the average cost of production of pork. In 1987 the Monogastric Research Centre (MRC) at Massey University started trying to understand the costs of production by developing a Monthly Analysis of Input and Output Prices (MIOP) report. This report tracks the cost of production and resulting cash situation of a hypothetical 180 sow farm in Waikato and a 180 sow farm in Canterbury. Every month the current input prices for feed, and a local schedule³ price per kilo of pig is slotted into the equation. Once this is processed with other indices in the model which are regarded as relatively stable such as power and freight per pig sold, the

³ The schedule price is the price paid at anyone time by a buyer and is based on a matrix of two factors: the weight of the dressed pig (without head and internal organs)) pig immediately following slaughter and a measurement of the depth of

current situation of the farm can be determined. Thus if the cost of feed increases and the schedule price decreases the farm will show a higher cost of production per kilo or pig produced and possibly a net farm cash deficit.

The MIOP report gives a cost of production based on two actual values and hypothetical values for expenditure. Additional work was required to determine more accurately the cost of production for each farm and to have a New Zealand average to see whether the New Zealand pork industry was internationally competitive. Therefore in the 1998/99 financial year, New Zealand Pork contracted the Monogastric Research Centre to undertake a “benchmarking” project. By monitoring on-farm trends in the financial and physical performance of the New Zealand pork industry, an industry average and best practice information could be communicated to the industry, and provide the means by which producers could improve and reduce their cost of production.

Massey University identified the following 5 key indices for the Pork Profitmark project:

- Cost of production (\$/kg meat),
- Average daily gain (kg/day),
- Herd fed conversion ratio (kg feed / kg meat),
- Kilograms of pigmeat sold per sow per year (kg),
- Pigs marketed per sow per year.

Unfortunately it was only possible to gather complete data from nine farms instead of the anticipated 30. This almost certainly skewed the data and the data set was not large enough to be able to give a New Zealand average cost of production. The project has since

the fat at the P2 site(6.5cm of the mid line at the last rib). Buyers schedule prices fluctuate depending on the demand at the time

been put on hold until enough support is gained for re-instating it. MRC has provided the industry with a technology transfer seminar and workbooks in order for individual producers to work out their own cost of production.

2.2 Rising Imports

Twenty years ago domestic pig production could meet all consumer demand for fresh pork and supply the processed pork market the cuts they required to make ham, bacon and small goods. The only pressure to the industry was prior to Christmas with an increased demand for ham and roasts. This led in recent years to processors looking to imports of frozen bone-in pork legs to produce hams for the Christmas market.

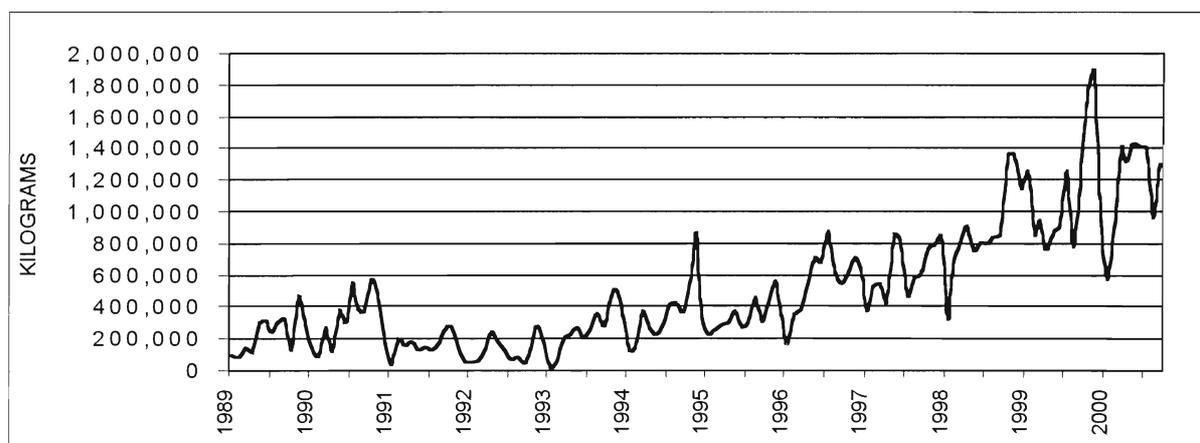
Importation of pork has since expanded for two reasons. A proportion of processors use imported pork because they believe the imported product is more consistent in quality, it is delivered in the form they request and can be in New Zealand between a few days or three weeks after ordering. Other processors now are totally reliant on imported pork and no longer source pigs from the domestic market, while others source imports only for the Christmas ham market.

The other reason for expansion of imports in the last three years has been the price and availability of imported pork. As discussed above many countries are able to grow pigs to slaughter weight at a lower cost than New Zealand, which makes the importation of their product attractive. In the 1998/99 year in Canada and the United States, there was an over production of pork, combined with an undersupply of killing space. This affected the markets dramatically resulting in the lowest ever “hog” prices. This in turn dropped the cost of importing pork and led to large volumes of imported pork reaching New Zealand (see Graph 1). The quoted price per kilo of frozen bone-in leg from Canada in August

1998 was \$NZ 2.80 per kilo compared to August 1999 when the quoted price for the same product was \$NZ 3.50 per kilo.

Denmark has become a major supplier of pork in the last 12 months as a result of the trade sanctions. The European Union placed a ban on the United States because of the importation of US beef treated with hormones. The United States then halted the importation of a number of items from the European Union, including pork and processed bacon from Denmark. Denmark has since turned its eyes to New Zealand and Australia to place its exported product.

Graph 1 Imports of meat of swine from October 1988 to September 2000



Source: Statistics New Zealand

The percentage of imported pork compared to domestically produced pork has grown from 6 percent in 1993 to 30 percent (NZPIB data). The reason this challenges the domestic pork industry is that the price the wholesalers⁴ and processors are prepared to pay influences the price a producer will be paid for his pig. Therefore cheaper imports may force down the schedule price to a point where the producer is not getting a return, as his

⁴ Wholesalers are buyers of pork meat and are either the abattoirs themselves, a group of producers (producer groups) or a mixture of the two.

cost of production is higher than the price he is being paid. The lowest average schedule price received by producers since 1987 was \$2.35 per kilo for a bacon weight pig in April and May of 1999. In the six months prior to this, imports rose 66 percent compared to the same time in 1998 (NZPIB data).

In June 1999 the New Zealand Pork decided to apply to the National Government of the time for a Temporary Safeguards Action (TSA) using the New Zealand Temporary Safeguards Authority Act 1987. This TSA required that evidence prove that “serious injury” has occurred to the domestic industry by importation of “like” or directly competitive goods. At the same time the US Lamb 202 case (202 is the US equivalent of Temporary Safeguards) was in the process of illustrating the connection between imports of New Zealand lamb and injury to American lamb producers. If a safeguard action application is successful the New Zealand Government can recommend that safeguards such as tariffs or quotas be put in place for a temporary timeframe in order for the domestic industry to progress to become more competitive. This TSA by the pork industry was the first application that had been put forward for an agricultural product using the New Zealand legislation.

The Trade Remedies Group of the Ministry of Commerce looks at any application under the Temporary Safeguards Authority Act, and if they believe there has been injury, they will ask that an Authority be put in place to investigate. Prior to this occurring the Trade Remedies Group indicated there were a number of technical issues that needed clarification, including:

- whether the New Zealand Pork Industry Board could be considered to represent the industry
- whether safeguard action may be taken against goods of Australian origin

- whether the pork industry in New Zealand produces goods that are directly competitive with the imported goods.

Although the first two issues were resolved satisfactorily, the legal advisors to the Ministry of Commerce and New Zealand Pork's consultants and legal advisors disagreed on the interpretation of part of the New Zealand Temporary Safeguards Authority Act 1987. The Ministry of Commerce wished to undertake a competition analysis in order to define "the market(s) with which the New Zealand and imported goods compete" before they could determine whether the "goods compete directly" (correspondence from the Ministry of Commerce received under the Official Information Act 1982). However it was argued that the Temporary Safeguards Authority Act 1987 was not closely related to the Commerce Act 1986 and therefore the reference to "market" and "competition approach" was erroneous and not required in order to show that the goods competed directly.

Part of the problem was that this was a precedent setting case and no other industry had been required to show direct competition in this way. It was decided that the investment needed to fight this case would be substantial and the application was put on hold until such time that the resolve of the producers or political climate was more amenable.

In 1998 the Australian pig producers had undertaken a similar initiative to restrict the level of imports by implementing an Australian Productivity Commission report. Although the report found that imports had caused harm to the Australian pork industry, the Government did not impose any form of temporary safeguard. The Federal Government instead made A\$24 million available for pork industry business grants to assist people leave the industry, develop industry alliances and to develop an export industry. In the year to June 2000,

Australia exported A\$149 million worth of pork to Singapore, Japan and other countries including New Zealand.

2.3 Consumer requirements - consistency and quality

Like most commodity meats in New Zealand the traditional push has been from the production end rather than pull from the consumer end. The consumer is becoming increasingly knowledgeable and has expectations to be able to buy quality and consistent pork products. In other words, consumers expect to have an enjoyable eating experience every time.

There are a number of reasons why pork can be variable in quality and consistency.

2.3.1 Change in breeding of pigs

In the 1980's consumers were educated as to the health benefits of a healthy diet, low in fat. As pork traditionally did not meet this in the eyes of consumers, "Trim Pork" was introduced in 1981, re-launched in 1993 and received the New Zealand Heart Foundation 'tick' for promotion in 2000. This has been a very successful advertising campaign for a number of pork cuts that are low in fat, or have the fat trimmed. This has put pressure on the producers to produce a pig with lower "back fat". The measurement of back fat after slaughter is one of the determinants as stated earlier as to how much a producer will get paid for an individual pig. Producers started breeding pigs with a lower back fat, and reduced feeding, in order to get more return for their pigs. This has meant that much of the flavour and texture has been reduced in pork meat, which results in a variable product.

2.3.2 On farm issues

Research into the transport and slaughter of pigs has shown that stress in pigs can lead to pale, soft, exudative meat (PSE) or dark, firm, dry meat (DFD) which results in varying tasting and quality of pork. Other factors effecting quality of pork relate to on-farm issues such as genetics, feeding regime and handling. Therefore to ensure the consumer is getting not only a consistently good quality pork product but also a safe product, the New Zealand Pork Industry Board has developed a Total Quality Management programme called the Pork Quality Improvement Process (PQIP). This is based on Hazard Analysis and Critical Control Point (HACCP) principles. PQIP Standards are now available for all industry sectors including: On-farm, live animal transport, killing plants, fresh pork processing and pork processor (food safety). Currently not all sectors are using the standards but they have been developed in conjunction with industry and are available if and when required.

Table 1: Number of companies / individuals with accredited PQIP Standards

Standard	September 1998	September 2000
On-farm	13	18
Live Animal Transport	1	5
Killing Plants	9	9
Fresh Pork Processing		1
Pork Processors (Food Safety)	4	5

2.3.3 Cooking of pork by consumers

The third reason why pork may be variable relates to how consumers themselves affect the product. Historically consumers knew that they had to cook pork well because of “some kind of worm”. *Trichinellosis* is a parasitic nematode that lives in the muscles of pigs and will migrate into the muscles of humans if the meat is not cooked well and the worm killed. *Trichinella* does not occur modern New Zealand domestic herds, although it may still exist in the feral animal population. The concern remains, and without any education

of this fact, many consumers continue to either cook pork well, or even over cook it. The resulting tough piece of pork on the plate at the end of the day does not encourage a consumer to buy pork on a regular basis.

New Zealand Pork has been promoting consumers to cook pork ‘until the juices run clear’ since the early 1990s, and continues to advise this when releasing any cooking information such as in the “ Unbelievably Easy New Zealand Pork” book in 2000.

2.4 Consumer requirements – production issues.

The consumer is demanding more information as to the food they are consuming. This puts pressure on producers and retailers to give more information and to provide the products that even niche consumer’s desire. Consumers are concerned about a number of issues including: animal remedy residues, hormones, growth promotants, antibiotics, same species meat and bone meal feeding, feeding of genetically modified feed and animal welfare. They are expecting either reassurance that the food contains none of these “additives” and that pigs are grown in way that does adversely affect their welfare.

2.4.1 Additives used in production

Some consumers are very concerned about the additives that are used to produce the food they eat. Chemical residues are seen as “unnatural” and are thought to have unwanted side effects in humans. New Zealand has strict regulatory control over residues through the Minimum Residue Limits (MRLs) set on all products used in the production of animals. Many of these MRLs are set in order to meet minimum standards in countries that New Zealand exports to, but also to meet the food safety requirements set for domestic consumption. Therefore, both the Animal Compounds and Veterinary Medicines Group (ACVM), and the Ministry of Health set the MRLs. They use a random sampling regime

to test for any infringements of the regulations. No hormones are registered for use on pigs within New Zealand.

Intensive livestock production allows infectious viral diseases such as enzootic *pasterulla* pneumonia, and proliferative enteropathy to travel swiftly through a herd, reducing production and possibly resulting in the death of some stock. By using antibiotics in the pigs feed prophylactically, infection can be avoided, or the antibiotics can be used in-feed therapeutically once the animals have contracted a viral disease.

In 1998 The European Commission voted to ban the use of four antibiotics as in-feed growth promoters: Zinc bacitracin, spiramycin, virginiamycin and tylosan phosphate. This was because these and similar antibiotics are used in human medicine and if antibiotic resistant bacteria were to develop then the resistance theoretically could be passed between species⁵. There was also the perception that the antibiotics were being used as growth promotants. In New Zealand pressure was put on the Ministry of Agriculture and Fisheries to ban these same antibiotics, and the headlines attacked the New Zealand pork and poultry industries for being responsible for the “Super-bugs” appearing in local hospitals. A MAF Antibiotic Resistance Steering group was set up in New Zealand comprising of MAF RA, Animal Remedies Board, Ministry of Health, ERMA, MoRST, Consumers Institute, Federated Farmers, AGCARM, ARPPA, Poultry Industry Association and New Zealand Pork. This group in turn commissioned an expert panel to review the use of these antibiotics within New Zealand agriculture and to make recommendations for their future use.

⁵ Note also resistance is also thought to occur to over-prescription of antibiotics by doctors to patients who do not require them.

The recommendations from the group and subsequently to the Animal Remedies Board were that the majority of these products should remain available for therapeutic and prophylactic use, but not at the rates that would result in growth promotion only, and each product would be reviewed in a defined time period.

The feeding of meat and bone meal has raised concerns with consumers as a result of the bovine spongiform encephalitis (BSE) problems in Europe. Research on BSE has implied that prions from the brains of BSE infected animals can be spread to those animals eating the meat and bone meal, and further onto the humans eating the meat of the infected animal in the disease known as Creutzfeldt-Jakob disease (CJD). Although New Zealand is free of BSE and therefore its meat and bone meal is free of the infective agent, regulations have been put in place to stop same species feeding in cattle. The poultry and pig industries restrict the use of same species meat and bone meal feeding even though law does not require them to.

2.4.2 *Genetic Modification*

All New Zealand primary production and food producers have struggled with emerging technologies in the form of genetic engineering, or genetic modification. Due to the disparity between European and the United States on the implications of the technology, confusion reigned in the late 1990's in New Zealand while the Government Ministers and officials decided how to handle the issue. At one stage it was not clear whether they would define whether an animal that was fed a genetically modified feed source (whether grass or grain) would result in a genetically modified animal. It has now been determined that this is not so. However genetic modification remains high in the public's perception especially with the Royal Commission on Genetic Engineering being run over the 2000/2001 year.

The New Zealand Pork Industry Board and the poultry and egg industries have become interested parties in the Royal Commission which allows for time to give a verbal submission using expert witnesses and to support the written submission. The written submission has shown that genetic technology is already being used in the intensive livestock industries through the use of altered vaccines, such as that used to help eradicate Aujeszky's disease in pigs in New Zealand. The imported soyameal that may be from genetically engineered soyabeans. The intensive livestock industry believes that with the appropriate legislation and controls, that genetic engineering will provide immense benefits in the future.

2.4.3 Animal Welfare

The New Zealand pig industry has always maintained that the welfare of the pigs is paramount, from both efficient production and industry reputation standpoints. A Code of Recommendations and Minimum Standards for the Welfare of Pigs was published in 1994 after consultation with the industry. The RSPCA and Regional SPCA Branches together with MAF Biosecurity have been asked to contact the CEO of the New Zealand Pork immediately any of their staff are made aware of a potential animal welfare problem on any pig farm throughout New Zealand. Since 1997, the New Zealand Pork Industry Board has had in place a problem piggery scheme that ensures that a Board member will contact a farmer with an animal welfare issue. As of 2000 the New Zealand Pork Industry Board has a Memorandum of Understanding with the MAF Enforcement Unit to ensure that the industry can work with both the enforcement officers and industry to resolve any animal welfare problems.

The industry has responded by developing a range of resources and contacts to learn as much as possible about this and other animal welfare issues. In 1998 New Zealand Pork

commissioned a report on sow accommodation systems by Professor Nelville Gregory in which a survey of approximately 90 percent of the sows in New Zealand was undertaken (Gregory 1999). The results of this survey indicated that ranges of systems were used in practice. The main systems for sow housing included farrowing in arks followed by holding in dry sow paddocks (23% of sows), farrowing indoors in crates then housing in dry sow pens (35%), and farrowing indoors in crates then housing in dry sow stalls (29%).

Recently a number of animal welfare groups, including the Green Party have targeted the New Zealand pig industry. Although some of these groups are coming from a position that there should be no intensive livestock industry at all, they have focussed mostly the confinement of dry sows⁶. They have put public pressure on the industry to change its way of housing dry sows in stalls that do not allow the sow to turn around and therefore restrict one of the five freedoms (that of natural behaviour). The pork industry has responded by putting forward a resolution at the 2000 Industry Conference that the producers adopt the recommendations in the present Code of Recommendations and Minimum Standards for the Welfare of Pigs on dry sow stalls by 2015.

New Zealand Pork contributes funding to an Environment and Animal Welfare Officer within Massey University. The Animal Welfare Strategy has been completed in which the main production practices in pig production are covered and the positives and negatives of each practice from a welfare perspective are reviewed. This information will contribute to the MAF Operational research that is being undertaken by other Massey Staff members including Professor David Mellor. It is anticipated that by the end of 2000, industry and other industry parties will have reviewed the current Code of Recommendations and Minimum Standards for the Welfare of Pigs, to ensure that it is consistent the Animal

Welfare Act which came into effect in early 2000. The current code is “deemed” and needs to be reviewed before the requirements within it become legal.

2.5 Environmental Limitations

The implementation of the Resource Management Act 1991(RMA), and resulting Local and Regional Council air, water and land plans, has increased the amount of regulation of producers. In 1997/98 the industry through New Zealand Pork invested over \$60,000 in lobbying the Government to change the wording of the RMA to delete the reference to “factory farming” as this was seen as a pejorative term which was biased against pig producers. New Zealand Pork has spent the past ten years ensuring that as Regional and District plans are developed, the producers are fairly treated by the imposed regulations.

A number of initiatives have been put in place to assist producers including an Environmental Task Force established in 1990. This task force has developed Liaison Groups consisting of producers and local authority officials who meet two or three times a year to consider environmental issues as they relate to pig farming. With funding from the Ministry for the Environment, the workbook, “Land Based and Pond Based Environmental Management Systems” was produced for producer use.

Producers are finding it increasingly difficult to maintain their “right-to-farm”, especially in areas where increasing population pressure is bringing more people into closer range of their properties. Many Regional and District plans now specify that pig farm is a discretionary activity and producers have to apply for a resource consent in order to expand, to apply manure to ground, to use water or to meet odour specifications. In some

⁶ pregnant or gestating sows

cases the regulations have been enforced to the level of Environment Court, which costs the producer many thousands of dollars and in some cases the loss of the business.

2.6 Producer Board Reform

When the National Government started pushing towards producer board reform in 1998, the New Zealand Pork Industry Board consulted its registered producers and was working towards becoming an incorporated society funded by a compulsory levy. Although there were benefits for this move, the change in Governments resulted in a decision to maintain the status quo and continue under the New Zealand Pork Industry Board Act 1997.

2.7 Marketing of pigs

Currently pigs are paid on the schedule matrix that penalises producers when the back fat measurement exceeds 12mm. Starting in 1997 New Zealand Pork explored the use of lean meat yield measurement as a more accurate way of predicting yield and quality. The Hennessy GP4 probe, developed in New Zealand uses reflection to measure fat thickness, calculate lean meat yield percentage, reflected colour (PSE) and degree of fat marbling. The probe was trailed in a number of abattoirs and is sold overseas. AgriQuality New Zealand was commissioned to write a discussion paper on a change to the payment based on predicted lean meat yield compared to the current schedule system. Currently there is little enthusiasm to change the payment system although New Zealand Pork ran pig grader training in mid May 1999 so that the measurement of the P2 site on pigs was more accurate.

At the same time it was decided that more information was needed on the factors influencing the demand for pigs (Hughes Consulting, 1997). The methods used to identify these factors included a value chain analysis considering all key participants in the industry

and analysis of the buyer/seller relationships. By using a statistical model based on elasticities, Hughes found, against expectations, that the retail price of pork did not have an influence on the demand for pigs. However the price of the pig was a significant determinant of demand. It was suggested that for every 1 percent fall in price, an increased demand of 0.3 percent could be expected.

After a review of the implications of the demand for pigs report by key members of the pork industry, Hughes went on to complete a further report on the Strategic Marketing of pigs (Hughes Consulting 1998). After reviewing the current New Zealand pig marketing system, Hughes reported on international trends in the pork industry and the further implications for the production and marketing of pigs in New Zealand. The major finding was the need for the industry to become more vertically integrated, which would allow producers to be part of the overall industry rather than price takers at one end of the supply chain.

2.8 Export Network Development

In a further report by Hughes Consulting in 1999, it was concluded that one of the ways for the industry to become internationally competitive was to develop the export market. In a series of seven reports Hughes identified the main opportunities for export into Asian countries, potential niche markets and the main competitors in these markets.

Early in 2000 New Zealand Pork initiated contact between the four main fresh pork wholesale groups and the major pork processor in order to get the industry to work together to develop an Export Network. Trade New Zealand offers a service that if the network meets certain requirements then they will pay for half of airfares and accommodation for trade missions undertaken by the Network. Although one member of

the Network had already started to export chilled pork to Singapore in mid 2000, a Trade Mission had been organised to Singapore, Hong Kong and Japan in early November 2000. The Export Network members have agreed that it is in their best interests to co-operate in export markets so that the export push is focussed and companies don't undercut each other.

2.9 Market Access

The discovery of Aujeszky's disease in pigs in the southern half of the North Island in 1976, prevented exports to Australia and Fiji from the North Island. The pork industry then decided to take the initiative and undertook an industry-funded eradication program. A low cost strategy using vaccination and "test and cull" was developed, and implemented jointly from 1986 by New Zealand Pork and MAF. Aujeszky's disease was officially eradicated in 1997.

In a similar vein New Zealand Pork is assisting with the market access protocols into Singapore. Currently Singaporean officials are requiring that every pig carcass imported from New Zealand must be tested for trichinella. New Zealand could go down the route of testing large numbers of pigs to meet the international requirements for trichinellosis freedom. No country has yet to achieve this, so New Zealand is following international trends and developing a farm accreditation programme which will ensure trichinella freedom. This may assist in negotiations to reduce the current testing regime with the Singaporean officials.

2.10 R & D funding

Traditionally the pork industry has not received funding from Government in the form of money from the Public Good Science Fund (PGSF) administered by The Foundation for

Research, Science and Technology (FRST). The industry made an attempt to rectify this by becoming involved in 1998 when the Foundation was undertaking to change the way it allocated money. The Foresight Programme was an attempt by the Foundation to involve the end users of science as well as the science providers to determine the future needs of PGSF allocations. New Zealand Pork, along with the Poultry Industry (broilers and eggs) and the Companion Animal industries submitted a report on the strengths of the industry and likely research in the future. Although this highlighted the importance of the intensive livestock industries within New Zealand which contribute \$1 billion to GNP, changes within the Foundation have meant that the likelihood of getting funding has been reduced.

However to build on the combined research efforts of the intensive livestock industries, the Intensive Livestock Research Advisory Committee was implemented. This committee is made up of key research scientists from Crop & Food, Massey University, as well as representatives from the Poultry Industry Association, the Foundation for Arable Research and New Zealand Pork. An independent Chairman runs the committee, and its focus is to increase alternative funding streams into research and development in the intensive livestock arena.

The information above has provided a brief overview of the issues that the New Zealand pork industry and New Zealand Pork Industry Board have faced and resolved over the past ten years. This can be seen as a benchmark on how the New Zealand Pork Industry Board has performed, but it remains to be seen whether it will be a suitable organisation for the future. The next section is an attempt to show one of the possible futures for the New Zealand pork industry.

3 THE CHANGING STRUCTURE OF AGRICULTURE

Patterns and trends are emerging in world agriculture as a result of changes in world food demand, developments in marketing, economic pressures on farms, changes in management and more intensive production systems (Studley 1998).

More specifically these trends include:

- rapidly rising populations and incomes in developing nations which has lifted the demand for agricultural products
- increasing agriculture production and productivity, with more intensive production systems
- growth in exporting of agricultural products
- rising consumer expectations of quality and food safety
- increasing number of niches for diversified and branded agricultural products
- polarisation in farm size with fewer and larger commercial farms as well as a growing number of lifestyle farms
- information technology resulting in increased communication and management tools
- business relationships getting closer with more alliances and joint ventures.

In some cases these changes have occurred forcibly as agriculture changes from a way of life and independence, to that of a business with dependence on others (Boehlje 1995).

Although the term “the Industrialisation of Agriculture” did not occur until the early 1990’s (Urban in Boehlje 1995) the broiler industry (chickens raised for meat) underwent

major structural change in the 1950s in the USA and is seen as one of the first examples of industrialisation. A simple definition of industrialisation is:

The application of modern industrial manufacturing, production, procurement, distribution and coordination concepts to the food and industrial product chain.
(Boehlje 1995)

Boehlje believes this the industrialisation of agriculture results in a paradigm shift in thinking and concepts about agriculture, a few of which are summarised below:

Table 2 Paradigm shifts in Agriculture

Old Concept	New Concept
Commodities	Specific attribute/differentiated raw materials
Assets drive the business	Customer drives the business
Impersonal / open markets	Personal / negotiated / closed markets

3. A review of Industrialisation and the USA Hog industry

The United State pork industry is currently undergoing industrialisation, identified by increasing number of hogs sold through contracts, use of new technology and new geographical areas of production and growth in firm size. The trends are as follows:

3.1 Changing pattern in types of farms operated

Hog⁷ farms and farmers are becoming increasingly specialised. In order to reduce the risk of disease outbreaks and improve the use of facilities many hogs are now no longer produced on farrow-to-finish operations. Instead hogs are typically produced on three separate sites; a unit for breeding, gestation and farrowing, a nursery facility once the hogs

⁷ Note the term hogs is used in this section in order to stay true to the literature. Hog is an American term and pigs or swine can be used interchangeably.

have been weaned, and once the hogs are approximately 10 weeks old a third site for finishing where they are grown to market weight (Martinez 1999).

3.2 Change in size of farming operations

The number of hog farms in the USA has dropped as declining hog prices has put small and/or inefficient farmers out of business. Records show that there was a drop of 77 percent of farming operations with hogs from 1980 to 1986, or three farms in four (Boehlje et al 1997). The average size of farms has increased. In 1997, 16 percent of the US swine population was raised in operations with between 1,000 and 2,000 head, with “mega-producers” (inventories of over 2,000 head) providing 55 percent of the total supply to market. The total of 71% of pigs being produced by farmers with over 1,000 head compares to 37 percent in 1987 (Martinez 1999).

3.3 Change in amount of pork produced

Advances in technology have resulted in larger litters per year per sow, with the numbers of pigs weaned from each litter reaching 8.64 in 1997 (Martinez 1999). Individual hog size has increased, resulting in a given quantity of pork produced from fewer hogs, with less feed and less labour. The amount of pork produced per head of breeding stock is now over 2,500 pounds compared to 1,400 in 1978 (Martinez 1999). Since 1990 the total US pork production has increased by an annual average of 1.8 percent per year.

The growth in production has not been reflected a growth in consumption with a trend of between 48 and 53 pounds per capita per year since 1982 (Boehlje et al 1997). Although production has needed to increase to keep up with growing American population, export of pork now is a growing aspect of the market.

3.4 Change in ownership patterns

Traditionally hogs have been sold on the open market, with producers growing pigs then selling them to the best buyer at the end of finishing. With production broken down into three sites, large hog producers are establishing production contracts with other growers for specific operations such as finishing. The “Integrator” may provide management services, the hogs, feed and veterinary medicine while growers provide the labour and facilities.

Other types of integration patterns include a number of producers getting together to coordinate and/or own the production, marketing, genetics or processing companies; and joint ventures with feed suppliers, transporters, packers or processors.

3.5 Changes in farms – geography

Until recently the USA the hog farm belt was matched the grain belt, so where the climate allowed for grain growing, the hogs farms proliferated. Most of these farms were orientated around using homegrown grains and on-farm milling. Hog farming is now occurring in non-traditional farm areas, due to contracting and the utilisation of specialised feed. North Carolina is such an example where the reduction in tobacco cropping and the familiarity of farmers with broiler contracting, has lead to an increase in commercially integrated hog farming (Martinez 1999).

3.6 Growth in Packers

In the USA the companies which buy the hogs, slaughter and process the pork into either cuts or into further processed products are called packers. The size of these operations has increased with the number of packers with a capacity to kill 1.5 million head growing from

6 plants accounting for 17 percent of total processing in 1982, to 28 plants of this size processing 80 percent of total kill in 1996 (Boehlje et al 1997).

The growth in the industry may have outpaced the packer's ability as inadequate capacity in hog slaughter facilities is blamed for the dramatic drop in hog prices in December 1998 to below the prices received in the Great Depression (Jones et al 1999). Access to confirmed "shackle space" within abattoirs has encouraged the formation of contracts between growers and packers. Production contracts vary but most require a minimum volume and either a minimum quality level or specific genetics (Schrader 1998).

3.7 Lowering cost of production

Integrators or owners of large farms have reduced their costs in a number of ways, generally associated with increasing scale. A fully integrated operation will contain a feed mill as part of the supply chain and highly specialised feed is created for the specific needs of the hogs and brought on to the farm instead of using smaller less efficient on-farm feed mills (Schrader and Boehlje 1996). With more precise rations and less wastage the result is cost savings, especially when it is commonly accepted that feed makes up 60 to 70 percent of the production of pork meat.

Research has shown that large specialised farms have total costs of production that are around 10 percent lower than traditional farrow-to-finish operations if advantages in inputs such as cheap feed are excluded (Good in Martinez 1999).

3.8 Changes to Spot Market

As hog operations in the USA trend towards integration and contracts, the spot market still remains an option for those independent producers who still feel they would like to control their own operation and take the risks associated with selling pigs once they are produced.

3.9 Industry is closer to consumer and providing cheaper retail pork prices

Consumers are demanding a greater diversity of products, some with very specific characteristics to be available when they want them. Increasingly as packers and other integrators are closer to the consumer than the producer on-farm, they have more knowledge as to the pork products that best suit the market. Therefore through contracts and integration, they are providing the market signals and information to producers. Some integrated companies such as Seaboard farms have decided they cannot compete on the basis of high volume and low cost, and have instead opted for a value-added differentiated product strategy (Boehlje et al 1997).

The growth in the US Hog industry has enabled cheaper pork on the retail market. Fresh pork sales to retailers are usually negotiated day to day, showing only limited branding programmes as progress towards full integration (Schrader 1998).

3.10 Consumer Environmental concerns

Consumer and regulator concerns with the potential damage to the environment that large hog farms may represent have led to obstacles for further expansion in some states. For example North Carolina has put in a moratorium on new large hog production units. Consumers believe that these operations lower the quality of life and land values by contaminating water and air (Martinez 1999). Expansion of hog operations is occurring in

states that currently do not have as much regulation such as Texas, Wyoming, Colorado and Utah.

3.11 Control over quality

Packers have to bear high fixed costs, but additional costs are associated with variable supply flows and poor-quality hogs. A survey of US pork packing companies found that quality problems such as excess fat, PSE and carcass defects cost about US\$10 per hog (National Pork Producers Council in Martinez 1999). It was estimated 80 percent of the total problem cost could be controlled at farm level, which has meant packers are increasingly becoming integrators. They buy hogs based on a market-specific contract that allows for a large stable flow of high quality uniform hogs and therefore lowers their costs and allows for increased growth.

Increasing integration in the hog industry allows for the implementation of food safety regulations as part of a contract. As new methods of reducing the pathogens are discovered they can readily be implemented on-farm and as a requirement to fulfil a contract.

3.12 Increase use of technology

Advances have occurred in almost all aspects of hog farming such as genetics, nutrition, housing and veterinary medicine which allows an improvement in the health of hogs, and therefore the ability to house larger numbers of hogs together. Technologies that result in saving costs are split sex feeding, all-in, all-out stocking and medicated early weaning (Schrader and Boehlje 1996).

3.13 Use of specified genetics

Highly sophisticated and large breeder companies such as PIC and DeKalb are now replacing small family-orientated purebred breeders. Larger farms typically replace large volumes of gilts and boars from these companies, whereas small farmers still rely on the open market for their genetic stock (Martinez 1999).

Artificial insemination is a growth area in the USA, which is reducing the need for boars and allows for selection of genetics to change rapidly to create pork to meet a range of consumer needs (Schrader 1998).

Specific genetic lines are being developed that are matched to the consumer's demand for lean pork. Smithfield foods, one of the USA's largest packers along with its breeder operation Carrolls, has bought the rights to market the British National Pig Developments breed of hog. The resulting pork has an American Heart Associations seal of approval and is branded as "Lean Generation" (Martinez 1999).

4 NEW ZEALAND PORK INDUSTRY INDUSTRIALISATION

There have been some signs of industrialisation in the New Zealand pork industry in the past five years, although not at the same rate or level of the United States.

4.1 Restructure of the industry

Restructure and consolidation has occurred in three key components of the industry: the number of pig farms, the number of abattoirs and the number of bacon, ham and smallgood processors.

Although the number of farms with pigs has stayed relatively stable (Table 3), these numbers reflect all farms with pigs including those such as beef, sheep or dairy farms with a small number of pigs on the farm for home kill. The number of farmers registered with the New Zealand Pork Industry Board more closely represents the number of farmers who are primarily pig producers. Registered producers are estimated to account for approximately 95% of total pig meat production in New Zealand (New Zealand Pork Profile 1996). The number of registered farmers eligible to vote for producer directors has dropped from 1600 in 1984 to 480 in 2000.

Table 3 Number of Farms with pigs and number of pig producers registered with the New Zealand Pork Industry Board

Year	Total (farms)	NZPIB registered
1984		1602**
1985	5021	1571**
1986		1404**
1987		1199**
1988		
1989		
1990		
1991		
1992	4909	906
1993	5538	826
1994	5216	802
1995	5728	725
1996	4663	660
1997		
1998	4700	576
1999	2570*	520
2000		480

Data: on the farm as at 30 June

Data: Statistics New Zealand, New Zealand Pork

Source:

1985: Agricultural Statistics 1984. 85. June Year. A volume of Statistics consolidating earlier releases, with some additions. Department of Statistics. Wellington. 1987.

1986- 1991: Agricultural Statistics June Year series, Department of Statistics.

1996. Breeding sows: Profile of the New Zealand Pork Industry. New Zealand Pork Industry Board. Wellington.

1999 New Zealand Pork Sow Survey in conjunction with AgriQuality. Incomplete survey of all farms with pigs from AgriQuality Agribase directory.

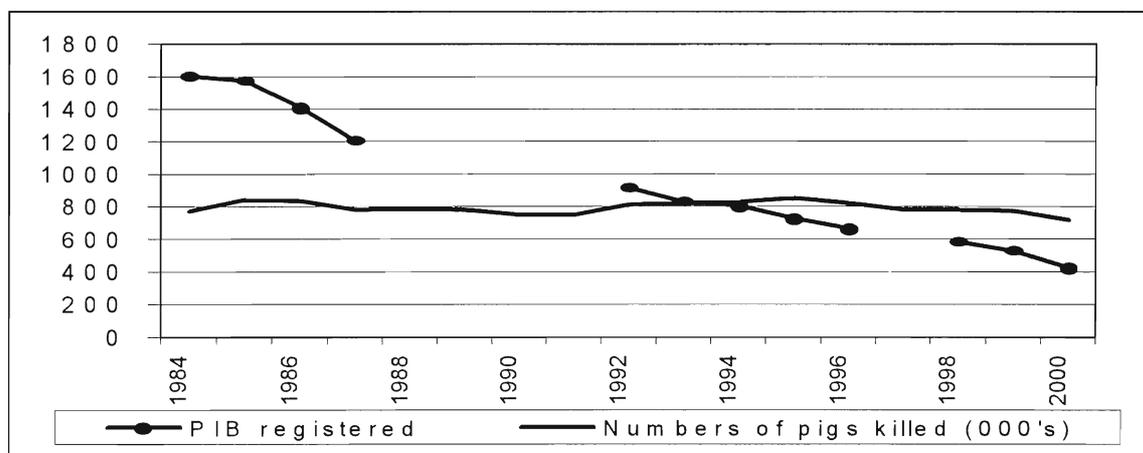
There are not complete series for all the categories as the Statistics census has changed from year to year.

* Note not all farms on Agribase were surveyed - there may be many more farms with 1-2 pigs

** Numbers from Pig population survey cards sent out

Although the number of pig producers has decreased, the remaining farms themselves produce more pigs per year. Graph 2 shows that although the number of producers has dropped to below a third of those 16 years ago, production has remained relatively stable with between 700,000 and 850,000 pigs killed each year. Increasingly, as smaller and less competitive producers leave the industry, larger farms are becoming more a feature of the New Zealand industry. Information from the New Zealand Pork Sow Survey in 1999 revealed that over half the sows (56%) are now concentrated in about 100 large farms with over 150 sows each.

Graph 2 Number of pig producers registered with New Zealand Pork and the number of pigs killed (00's) from 1984 to 2000



Source: New Zealand Pork Industry Board, MAF

The number of abattoirs has shown some consolidation in recent years. Historically New Zealand has relied on its meat processing export industry, which resulted in a large number of abattoirs, with a wide geographical spread. Many of these abattoirs have adapted to run pigs through their sheep kill lines, with often half a day a week set aside to just process the pigs from the local area. Since 1990 the number of abattoirs killing pigs has dropped from 32 to 15 in 2000.

Table 4 Number of abattoirs licensed to kill pigs in New Zealand.

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
32	28	27	23	22	21	21	19	17	16	15

Source: New Zealand Pork. March year.

The Commerce Commission analysed the slaughtering industry in 1995 and stated there was excess capacity in the slaughtering industry and suggested that reducing the number of abattoirs would promote the efficiency and profitability of the industry (Hughes Consulting November 1998). Currently seven out of fifteen abattoirs are killing an average of 44 to 270 pigs a week and represent only 9 percent of the total kill, whereas the top seven abattoirs are killing 88 percent of the total kill. Specialisation is occurring as the four abattoirs with pig-only kill chains killed 53 percent of all the pigs in New Zealand in the year 2000.

Table 5: The number of Bacon, Ham and Smallgoods Processors In New Zealand

1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
93	95	91	87	84	77	84	77	75	NA*

Source: Bacon, Ham and Smallgoods Processors, Statistics New Zealand. February year.

* Note: The survey by Statistics New Zealand is no longer being undertaken.

Although Statistics New Zealand is no longer keeping information on the number of bacon, ham and smallgoods processors In New Zealand, it is thought that the number is now less than 50, showing a 50 percent drop in 10 years (Table 5). Many small firms, especially those in rural areas have ceased operations, especially with the increase in imported pork. Currently there are approximately 20 major processors, six of which use 50 – 100 percent imported pork to manufacture bacon, ham and smallgoods (New Zealand Pork Temporary Safeguards Application background information 1999).

The above information has demonstrated the consolidation of the three major aspects of the New Zealand Pork Industry. However there are other indications of industrialisation in the New Zealand pork industry including the development of producer groups, product differentiation and farm specialisation.

4.2 Development of Producer Groups

New Zealand pig farmers are still by and large price takers. 80 to 90 percent of pigs sold by farmers are to a regular wholesaler and will usually involve some form of agreement on the expected numbers each week and possibly the grade and/or quality (Hughes Consulting November 1998). In return they are paid the schedule price determined by the wholesaler, with possibly a negotiated “premium” on top of this. It is unlikely that this will be a formal contract with any kinds or penalties, rather more a “gentleman’s agreement”. Some wholesalers are abattoirs that set a schedule and buy a number of species to slaughter and supply carcasses and/or cuts to the retail or butchery trade. An example of this would be Lakeview Farm Fresh in Levin.

Dissatisfaction with this arrangement has led to an increasing number of farmers working together in the form of producer groups who have become the main wholesalers of pork carcasses. Examples include Pork Corp and Fresh Pork based in Canterbury and Five Star Pork in the Manawatu. In the 2000 year 60 percent of pigs were thought to be bought or sold through one of these producer groups. Currently the focus of these groups seems to be on assisting farmers to sell pigs rather than marketing pork or meeting specific customer requirements.

These producer groups are starting to investigate the possibilities afforded by alliances between farmers including increased buying power for inputs, opportunity to brand their

own pork products and benchmarking their production and progress. Although the Boards benchmarking project did not succeed, all the producer groups are using some form of benchmarking scheme to track their progress through time. Data is collected on-farm by staff and consultant veterinarians, and at the point of kill.

4.3 Development of Product Differentiation

Although many of the larger wholesale groups still focus on supplying the supermarkets and retail trade with half or full carcasses, product differentiation is occurring of various types. The most basic is the introduction of cutting floors into abattoirs such as Bay City Meats in Timaru. The pig carcass is reduced into primal cuts and sub primals in order to meet a retail market that increasingly is showing reluctance to have in-supermarket butchers.

Other firms have carved out a market niche by supplying a differentiated product into a specific market.

Examples include:

Murrellen Pork – branded quality assured pork using the PQIP system from farm to retail.

The Pork Market – supplying restaurant and the highly selective ethnic Chinese market.

Waratah farms – high end restaurant market

Harmony meats – organic pork

Pacific Choice - the cultural Pacific Island market in Auckland

4.4 Specialisation of farming

Some parts of the industry are moving towards specialisation of farming and will buy weaners on the spot market, or receive porkers to finish from another farm. For example

Paparoa Prison's piggery currently produces approximately 20,000, 18kg weaner pigs per annum. All this production is sold to Willaden Farms which grows these animals to slaughter-weight under contract to Fresh-Pork.

Information from the New Zealand Pork Sow Survey in 1999 indicated that 291 out of the 911 (or 32 percent) of farms with more than 10 pigs considered themselves to be primarily involved in weaner production. 12 percent of the farms surveyed considered themselves to be involved in finishing the pigs to slaughter weight with the remaining in farrow to finish operations.

5 **THE FUTURE FOR THE NEW ZEALAND PORK INDUSTRY**

As discussed, the New Zealand pork industry has shown some signs of consolidation, some development of industry wholesaler groups and limited differentiation of product and farming operations. However the industry as a whole is yet to undertake the paradigm shift in thinking and actions that Boehlje (1995) would characterise as industrialisation. Pigs are still seen as a commodity, based on selling a carcass for the best price and not seen as part of the food business. Production still drives the business, with farmers tending to produce pigs and then selling to a wholesaler, rather than having a customer focus.

This lack of industrialisation would not be a problem in a traditional commodity market where specific attributes are not demanded, supplies are fully adequate and can be obtained from various sources, and information flow between stages in the chain are minimal (Schrader and Boehlje 1996). Although this probably defines the New Zealand Pork industry 10 years ago, it is not enough to fulfil the needs of the pork industry in the future.

The current mode of growing and marketing pigs cannot survive in a market that is increasingly demanding greater diversity of pork products, more consistent quality of pigs and more control over a consistent supply of pigs to market. With the growth of imports in recent years, the New Zealand Pork industry is truly part of the global economy. New Zealand pig producers need to become internationally competitive in order to remain a viable part of the New Zealand economy. The following are comments and observations on what the industry could look like in five years time⁸.

5.1 Size and geography of farms

The next five years will show even greater division between the small to average size producers and those with large commercial operations. In general the small producers enter and exit the industry based on profits, or costs of inputs. They do minimal record keeping, no or little benchmarking, the quality of the pork is variable and they cannot or will not improve their efficiencies. Many of these operations have ceased production in the past few years and this is reflected in the fewer numbers of pigs being sold through stockyards. In a consumer driven market a wholesaler cannot afford the risk that these pigs bring to his business in regards to consistent quality, potential diseases and residues. Therefore the smaller producer is likely to find it harder to produce pigs at a profit and harder to sell them.

In five year's time the vast majority of pork supplied to the retail markets will come from approximately 100 large farms, a quarter of which will have over 1,000 sows. These farms will be highly specialised operations, as some will concentrate on breeder operations, while others on weaners or finishers. Nutritionists and veterinarians will be an

⁸ Note these are personal comments based on my observations of the New Zealand pork industry and study of the USA hog industry and are not necessarily the views of the New Zealand Pork Industry Board.

integral part of the business, controlling inputs and monitoring costs. Specialised compound feed will be the feed of choice with specific rations for each age group of pig. These producers will all know the exact cost of production for their pigs at any given time and will have full and complete records.

Although farms have traditionally been close to the main centres of population, pressure from regional councils regarding emissions to land, air and water will continue to limit the growth of existing farms. For this reason these large farms will either be in a region with a supportive council, or new developments in remote, yet climatically suitable areas. Breeding outdoors will continue to be a viable option in Canterbury, but larger straw based housing will be developed for growing and fattening.

5.2 Ownership of the industry

In 2005 there will be only three producer wholesaling groups: one in the North Island and two in the South island. 90 percent of the large farms will be involved with some form of contractual arrangement, either supplying their own wholesaler or contracting to a producer group. These will be formal agreements based on numbers, weight, lean meat measurements, appearance (including colour), and eating quality (including texture, taste, tenderness). The producer groups will ensure they get a return on investment and are likely to have invested in more than just pig farms. Other parts of the industry will become integrated with pig farms such as grain production, abattoir operations, processors and retail.

The spot market will be very small and cater to any small butchers or processors that remain. The determinant of price for pigs on the spot market will be difficult to ascertain and will have to be done on a case by case basis. This is because in five year's time there

will no longer be a “schedule price” matrix available through wholesalers, as the vast majority of pigs will be sold or owned based on a contract.

5.3 Consumer Focus

The variable supply to market with undersupply and then stockpiling, which has been a feature of the pig industry for many years will no longer be an issue in five year’s time. A closer relationship and communication between the wholesalers and buyers will have smoothed the supply curves with the use of forward contracts for supply and forewarning of fluctuations in demand and supply.

The three pig abattoirs (Bay City Meats, Alliance Freezing Company and Coromandel Meat Processors) for the industry will all have cutting floors and innovations in the cutting of pigs into primal’s and an extended shelf life will be providing specific cuts into the retail market. The abattoirs will have contracts with the wholesaler groups, so that they have priority for shackle space. Pork will be seen as a convenient and possibly more healthy and flavoursome alternative to chicken. Consumers will be able to purchase more ready-made and fast pork/ham/bacon meal alternatives.

The wholesaler producer groups will have greater knowledge about what the consumer wants in regards to eating quality and consistency and will be able to provide this at a competitive cost compared to other meats. They will undertake market research to determine these factors, and use genetics and breeding as one means to achieve them. All three producer groups and other producer owned companies will have branded fresh pork available, as well as a commodity range. Pork will be branded on a perceived attribute the customer is prepared to pay a premium for, for example free range, additive free or quality approved. They will finance marketing campaigns with the major retailers to position their

brand. Some farms have already and will continue to specialise into certain markets such as the high quality restaurant grade pork, totally free range or modified pork with health benefits. One or two might even be in completely niche non-food areas such as pig organs for xenotransplantation or production of semen.

Consumers will have full confidence that the pork they consume meets their requirements and humane treatment and production practices will be a given. It is likely that there will be a legal requirement for each farm to have a HACCP based system with critical control points to ensure food safety, residue control and potential disease incursions.

5.4 Use of technology

In the future, through contracts many farms will share the same genetic stock, the same feed supplier and the same veterinarian and nutritionist. This will make technology transfer much quicker and the uptake of new technologies easier. Producer groups will utilise the internet and other communication strategies in order to run their business and access international technology and knowledge. They will also invest money into solving production issues on-farm, developing added value products and maintaining their human technical resources.

The next ten years will bring the knowledge of the complete pig genome and the possibilities for use of genetic manipulation that it brings. Although the research might not be done in New Zealand, it is likely that New Zealand producers will source genetic stock and semen from overseas in the future in order to remain competitive. They are more likely to use artificial insemination more frequently.

5.5 Growth in industry

The New Zealand pork industry will have doubled its output in pig numbers and tonnage by the year 2005 to one million pigs killed per annum. Part of this will be due to increased technologies in the larger farms as well as the consumption of fresh pork and processed pork products having risen to 20kg per capita per year. The main reason for the growth will be to meet the demand from the export market. The three producer groups will be providing niche consumer products with the New Zealand Pork brand into a number of Asian markets, with a reputation for quality, consistency and innovation to meet the customer's requirements.

6 THE ROLE OF THE NEW ZEALAND PORK INDUSTRY BOARD IN THE FUTURE

The role and structure of the New Zealand Pork Industry Board has to change in the very near future in order for the vision portrayed above to become a reality and for the New Zealand pork industry to be internationally competitive.

One of the major constraints of the New Zealand Pork Industry Board is the New Zealand Pork Industry Board Act 1997. The major thrust of the legislation is *“to help in the attainment, in the interests of pig producers, of the best possible net ongoing returns for New Zealand pigs, pork products and co-products”*. This is a limitation as it specifies that the role of the Board is to help pig producers. When the industry becomes more integrated, pig producers will be part of a supply chain and not necessarily isolated from other parts of the industry. It may become impossible to service this one part of the industry unless all the other parts of the supply chain are included, such as pork processors and producer wholesaler groups. Secondly as the industry consolidates into a smaller number of larger

farms, the current legislation would require the Board to service the interests of the smaller independent farms, even if this did not assist the industry as a whole.

The New Zealand Pork Industry Board should no longer be a Producer Board under a Government statute and should instead become an Incorporated Society. This would allow more flexibility for the future in a number of ways.

The Incorporated Society would be funded by a compulsory levy on the pigs killed, although the levy is likely to only be a fraction of the \$4.00 per pig currently collected. As the industry is expected to grow to kill at least one million pigs a year, a levy of 50 cents per pig would maintain a core competency in the industry. This small industry body would lobby Government to ensure the farmers “right-to-farm” and undertake a limited amount of industry good research.

Secondly, if so structured, the voting rights of the individual farmers would be more representative of their status and size within the industry. This would result in the owners of the large farms being able to completely control the actions of their own industry organisation. The industry organisation would not be required for generic marketing of pork or for product development, so the future industry body would be used for only those issues that the larger farms and producer wholesalers find important.

Lastly the move to an Incorporated Society allows for a reduction the number of Directors on the Board from the current five producer directors and two appointed Directors with resulting cost savings.

While undertaking the restructure, the New Zealand Pork Industry Board should focus on assisting the producer groups, as they become more commercially orientated. This will require a change in thinking for many of the producers as the review of the USA hog industry has shown.

With a move towards separate farms for breeding, weaners and fattening, contracting of producers for these specific functions will be required. Contracts will need to be put in place between the producers and the producer groups to ensure quality, consistency and supply. The producer groups will need to form closer relationships with abattoirs in order to guarantee quality and provide the cuts and new fresh pork products that their customers will be demanding. Producer groups will have to have better communication with their customers in order to provide different products for different requirements. Therefore the fundamental shift will require more internal industry communication, more trust and more formalising of requirements by using contracts.

The New Zealand Pork Industry Board can facilitate these changes by providing the forums for discussion of these issues with the proactive producer group members, processors and abattoirs. The Board can communicate international trends and give producers access to people and knowledge that will assist them as they move the New Zealand pork industry into a completely commercial future.

7 SUMMARY

With the completion of this report it is hoped that New Zealand pork industry leaders and participants will carefully consider the future options for the industry and to challenge the scenario put forward.

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ACKNOWLEDGEMENTS

Firstly I would like to thank Brian Milne, CEO of New Zealand Pork, for allowing me the time as part of my job to complete this project for the Kellogg Rural Leadership Programme. I enjoyed documenting many of the success stories of the last few years, many of which are directly attributable to his foresight, leadership and ability to employ the right staff.

I would also like to thank the other New Zealand Pork staff and consultants who are committed to the industry and are fountains of knowledge.

Lastly I would like to thank my husband, family and friends who came to dread the word Kellogg as I was working through the project, but supported me with chocolate and kind words.
