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## A view of the markets for beef and lamb and potential opportunities

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### ABSTRACT

This paper identifies some of the changes that have occurred in New Zealand's beef and sheepmeat exporting over the past 50 years and then offers some comments on the future. The NZ meat industry met the challenges of the post-war period by changing its processes, systems and markets to meet changing world demand and changing tariff and quantitative barriers to trade. The global meat market continues to change and expand and presents major new challenges to producers and marketers. The Uruguay Round of GATT will increase access for New Zealand meat but also for that of our competitors. The production of high quality product designed to meet the requirements of identified end users is likely to be of increasing importance to the NZ meat industry.

### INTRODUCTION

We intend to provide a brief outline of the history of beef and sheepmeat exports from NZ to identify some of the issues over the last 50 years. We will then offer some comments on the future.

#### Beef - 1950 to 1980

Initial beef exports from NZ were in quarter beef form to the United Kingdom. In 1956 the North American market was opened for beef imports. This created new opportunities - the hamburger trade in the US was increasing and there was a demand for quality lean beef. This necessitated change in the NZ processing industry with plants being upgraded to produce boneless boxed beef and also to meet the stringent conditions imposed by the US Department of Agriculture. By the early 1960s the majority of New Zealand's beef production was being exported to the USA. Changes were also made in the production area with the introduction of exotic beef breeds and in the 70s with the rearing of young bulls from the dairy industry.

In the 1970s the collapse of the US beef market combined with increased production, prompted Australia to begin developing Asian markets, in particular Japan. New Zealand's access to the US was sufficient to absorb production so little diversification occurred.

#### Beef - 1985 to 1994

In 1988 the Korean market reopened to beef imports though it is severely restrictive particularly for grass-fed beef suppliers. The market will not be fully liberalized until 2001.

In 1989 the Japanese market was finally opened with agreement for annual tariff reductions, although under the final GATT agreement there is allowance for some protection if imports grow too quickly. The market is very focused on grain-fed product although opportunities do exist to develop niches for high quality manufacturing beef. Relationships are very important and business takes time to develop.

Demand is growing and in 1995 Japan imported more than 50% of its total beef requirements. Japan is an important market as it will become the major influence in global beef markets. It is anticipated that Japan will be the largest importer of beef within the next couple of years.

In the USA the Meat Import Law (MIL) started to have major impact on New Zealand beef producers because of the substantially reduced access which dropped from 206,700 tonnes in 1992 to 184,400 tonnes in 1994. New Zealand had to find an alternative market for its beef and reduce its dependence on North America.

Mexico imposed a tariff on beef imports : 20% on chilled beef and 25% on frozen.

The North American Free Trade Area (NAFTA) agreement was signed giving the US and Canada tariff-free access to Mexico for beef from January 1995.

#### Beef - 1995 ...

The signing of GATT brought the end of the MIL and New Zealand, Australia and others obtained tariff-free quotas to the US along with the opportunity to supply additional product by paying an out-of-quota tariff.

The GATT Agreement also provided 20,000 tonne quotas to each of Uruguay and Argentina for frozen beef to the US once their Foot and Mouth Disease-free (FMD-free) status was verified. Uruguay cleared all the barriers for access and at the end of 1995 gained access to the US market.

The EU intervention beef stockpile has been cleared. Additional intervention purchases are not expected in the next couple of years. The decline in intervention stocks has resulted in a decline in EU beef exports particularly to Eastern Europe and the Russian Federation.

Beef supplies for export from South American countries were limited due to increased 'domestic' demand particularly from Brazil so buyer interest was diverted to other suppliers such as Australia and NZ.

#### Sheepmeat - 1950 to 1980

When the Second World War began NZ's meat exports to the UK were subject to quotas and there was a

threat of levy. NZ exported around 350,000 tonnes of meat to the UK in 1938-39.

NZ signed a bulk purchase agreement with the UK to supply meat (and other products) throughout the war. It was extended through until 1952 when a 15 year agreement giving unlimited free access was signed.

In 1994-95 NZ all meat exports to UK totalled 123,500 tonnes. In between there have been significant changes.

NZ has successfully diversified into markets which were originally perceived as impossible e.g. France, Germany, Benelux, Italy, Muslim markets in Middle East, north America. This required adapting to different cultural, language and religious requirements.

### Sheepmeat - 1980s

At the start of the 1980s the European Economic Community (EEC) introduced its sheepmeat regime and NZ agreed to limit exports under a Voluntary Restraint Agreement.

The EEC was enlarged twice - key sheepmeat markets of Greece, Spain and Portugal were introduced.

So-called sensitive markets were introduced - France and Ireland towards the end of the decade (these were subsequently removed).

NZ continued to develop a wide range of markets - both geographical and product form moving from carcass to cuts including chilled sheepmeat.

In 1980 20% of exports to EEC were in cut form. In 1990 60% and in 1995 75% of exports to the European Union (EU) were in cuts form.

NZ had excess production in some years which required disposal into low-priced markets.

### Sheepmeat - 1990s

In the 1990s agricultural support in the EU changed. The variable premium paid to sheep producers in the UK was terminated. This effectively opened up continental EU markets to the British and since 1992 they have been the major suppliers of sheepmeat to France, New Zealand's third largest sheepmeat market.

Further enlargement of the EU occurred with Austria, Finland and Sweden joining at the start of 1995.

Germany and France developed further as the continental markets imported more than the UK for the first time.

New Zealand earns 70% of its global sheepmeat earnings from the EU but exports to the EU account for only 55% of volume exported.

EU beef stocks peaked in the early 1990s and then declined to be eliminated by the end of 1995. Subsidised EU beef has been a major competitor in Middle East markets at prices as low as 25% of those for NZ lamb.

The GATT Uruguay Round (UR) was completed. It provides security of access but increased challenges on sanitary and other non-tariff grounds can be expected. It also place disciplines on export subsidies.

### Changes in Meat Consumption

There were significant changes in meat consumption in the main markets over the period from 1981 to 1993. There were significant increases in white meat consump-

tion and declines in beef and veal consumption in most markets. Japan is an exception in that the liberalisation of the beef market during the period resulted in growth in consumption. Sheepmeat consumption also increased in the major consuming regions.

### 1995 and beyond

There will be increasing demands relating to food safety with legislation in many markets focusing on food safety responsibility. This will include providing assurances about a range of issues. Recently representatives from a number of British retailers visited NZ specifically looking at issues of animal welfare and food safety.

In the UK 60% of households have one or two people. This has implications for meat joints, the type of cuts supplied and the use of heavier leaner carcasses.

Even in these enlightened days where women make up more than 50% of the workforce in the UK, 80% of them still do the main household shopping. They make the purchasing decisions.

Growth in fast food is expected. 'Faster' food will take a range of forms. The 'traditional' form will remain but changes are expected. Fresh, frozen and dried ready meals will increase as manufacturers attempt to meet the demand for convenience. Already some retailers in the UK are providing a full package of raw ingredients combined with a recipe which can be used to prepare a meal within 30 minutes.

More travelling will occur as the infrastructure develops. In Europe they have yet to deregulate the airlines but have plans for a comprehensive fast train network.

As communications improve there will be greater internationalisation/concentration by NZ companies, competitors and retailers. Increased buyer strength can be expected - many companies are already spreading their wings across regions within countries and between hemispheres or continents.

Closer relationships with customers will be needed to meet their needs better than the alternatives. This is particularly true in developing the beef business in Asia. Traditional 'US-style' structures will be inappropriate.

### Sheepmeat

#### 1950 to 1980

- Changes to traditional market
- UK joined the EEC
- Diversification of markets
  - continental EEC
  - Middle East
  - North American markets
  - PNG/Pacific

#### 1980

- EEC
- Shift form UK to continent
- Increase in further processed products sold
  - 1981 20% cuts
  - 1990 60% cuts
  - 1995 75% cuts
- Excess production and volume/disposal sales

**1990s**

- Changes to agriculture support
- Steady growth of chilled lamb
- Further EU enlargement
- EU beef stocks and export subsidies
- GATT UR provides stability in access

**1995 and beyond**

- Food safety, HGP, residues, BSE, animal welfare, environmental issues, HACCP, ISO
- Smaller families/households
- 'Faster' food
- Shelf life, presentation
- Increased travel
- Internationalisation/concentration
- Closer customer relationships

**Beef**

**1950 to 1980**

- 1950s sales to Britain
- 1960s boneless beef to North America
- 1970s US market collapse
  - Australia moves to develop Japan
  - NZ access to USA matched by production increases

**1985 to 1994**

- 1988 Korean beef market reopened
- 1989 Japan beef market liberalized
  - Changing impact of MIL
- NAFTA Agreement – Mexico

**1995 ...**

- GATT Agreement
- South American access to USA
- EU stockpile eliminated
- Mexican market collapse
- EU and Eastern Europe opportunities

**Chicken Competition in the US**

“As we move into the next century, I predict chicken will make significant in-roads into the ground red meat and breakfast meat markets – the last bastion of dominance by the beef and pork industries. Further, I see beef hamburger products becoming a combination product market. That is, I envision that instead of 100 percent beef hamburgers, the most common meat patty after the year 2000 will be a 50/50 beef-poultry blend burger.”

*Joe Frank Sanderson, Jr Chairman, National Broiler Council, July 1994*

**Changes in meat consumption**

Countries/ Regions	Beef & Veal	Pigment	Poultry	Sheepmeat
Canada	-17.9	-8.6	39.6	15.7
United States	-10.4	-5.0	55.5	-4.3
EU	-10.8	13.2	32.1	17.6
Australia	-24.5	18.8	42.9	3.2
Japan	78.6	17.7	31.7	-46.7
Argentina	-21.3	28.2	28.2	-31.3

*Source: WTO - International Markets for Meat 1994-5*

**Proteases and meat quality**

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Consumers judge the quality of meat at the point of sale on colour, visible fat content and odour. However, on eating meat, characteristics such as juiciness, flavour and texture also assume importance. Supermarket surveys of customer preferences have indicated that tenderness is the single most important meat quality characteristic that influences whether consumers are repeat buyers. In New Zealand, the industry standard for tenderness is that shear force must be less than 11 kg F for exported meat. The meat industry recognises, however, that 11 kg F is the upper limit for shear force and that for discerning markets, tenderness values of <5 kg F are required if the markets are to be retained or improved. This presentation will emphasise the biochemical factors contributing to meat tenderisation and future research that will contribute to the production of meat with tenderness values < 5kg F.

**1 Post-mortem enzyme changes and meat tenderisation**

Biochemical components of meat tenderisation include the activity of enzymes involved in: 1) regulating the conversion of glycogen to lactic acid which lowers meat pH; 2) generating ATP which affects muscle contraction and the final sarcomere length of muscle fibres - a contributor to meat tenderness and 3) the breakdown of muscle myofibrillar proteins - another contributor to meat tenderness (Greaser, 1986; Etherington, 1991). This breakdown of myofibrillar proteins is carried out by proteolytic enzymes which are broadly divided into the lysosomal cathepsins and the cytoplasmic ubiquitin and calcium dependent proteases. All three biochemical processes are inter-connected.

A research challenge is to unravel the sequence of post-mortem metabolic events that dictate the final quality of meat