

Sector Report

Agriculture New Zealand

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OVERVIEW

The agriculture and forestry sector is one of the largest sectors in the New Zealand economy. New Zealand's temperate climate and fertile soil make the country ideal for almost every kind of land-based production - from sheep and cattle, to cropping, horticulture and forestry. Together with its support and processing components it regularly contributes more than NZ\$21 billion per year, or about 20 percent of Gross Domestic Product and accounts for over 65 percent of New Zealand's export earnings.

Agriculture in New Zealand is geared towards export markets, with about 80% of the total farming output produced going overseas. The sector's major exports include meat, wool, dairy products, wood products, horticultural products, and many specialised products supplying niche markets around the world. The two biggest export earners from agriculture are dairy products, which contribute around 18% to New Zealand's total export earnings and account for around 31% of world trade in dairy products; and meat products, which contribute around 13% and account for around 55% of world trade in sheep meat. Since the 1970s horticultural produce has also become an important export earner, most notably kiwifruit, apples, avocados and wine.

Government assistance to agriculture in New Zealand is very low by international standards. New Zealand farmers have the OECD's lowest producer support rates, only 2 percent of the value of output compared to the OECD average of 40 percent. Such assistance as remains in New Zealand is directed at government-funded research, pest and disease control, agri-environmental measures and climatic disaster relief.

New Zealand farmers have always been at the forefront of technological improvement in pastoral farming and are amongst the first to adopt new technologies into their farming systems. New Zealand's soil, climatic and topographical features have often demanded innovative solutions. Many of these solutions, in farming practices and processing technologies, or as outputs from plant and animal breeding programmes, have subsequently been adopted around the world.

CHARACTERISTICS OF MARKET

Industry Structure

New Zealand has around 80,000 farm holdings, which cover a total landmass of around 13 million hectares. The land used for meat and wool farming is mainly hill country and rolling downs, while the lowlands and coastal plains support dairy, arable and horticultural production.

The industry is good at reacting to world market demand by changing land use to suit demand, moving into more profitable areas, and specialising and developing products for niche markets. For example, beekeepers have responded to interest in the antibiotic properties of manuka honey by increasing production, and wool production has become more specialised to cater for new markets such as the demand for fine merino wool.



The agricultural industry in New Zealand is a major employer, covering an estimated 11.4% of the workforce. This includes around 66,000 people employed on sheep, beef and dairy farms, but does not include the thousands of family members who work on farms unpaid.

Since 1984 successive governments have embarked on a series of economic reforms across all sectors of the economy. For agriculture this meant the removal of almost all producer and exporter subsidies and incentive payments. Previously industry bodies (usually called producer boards), such as the New Zealand Wool Board and the New Zealand Meat Producers Board, were granted powers of acquisition and sole trading by the New Zealand government. However following deregulation producer boards now only cover activities such as research & development and information transfer. The biggest and most important deregulation occurred in 2001 when the single-desk export marketing powers of the New Zealand Dairy Board were revoked and it was merged with the two biggest dairy processing co-operatives to form Fonterra Co-operative Group, the third largest dairy company in the world.

Now all primary produce marketing activities are carried out by grower-owned or publicly-owned companies or co-operatives, with no government support and limited in-market assistance. Smaller producer boards for apples and kiwifruit, berries, eggs, hops and pork have been disbanded and their assets and functions corporatised, usually with the majority shares held by farmers and orchardists.

Agricultural Research

New Zealand has always encouraged research and development in the primary industries. Initially, the main goal was to increase farm output but in recent years the focus has shifted from production towards adding value and developing new products. The Ministry of Research, Science and Technology and the Foundation for Research, Science and Technology manage the government's investment in research and development. Crown Research Institutes (CRIs), research associations and universities carry out the majority of the government-funded research and development.

Crown Research Institutes (CRIs)

The structure of New Zealand CRIs is unique in that they have been set up as limited liability companies with their shares held by the government. The CRIs that have input into agricultural research are:

- AgResearch Ltd
- Horticulture and Food Research Institute of New Zealand Ltd (HortResearch)
- New Zealand Institute for Crop and Food Research Ltd (Crop and Food Research)
- Forest Research
- Landcare Research New Zealand Ltd (Manaaki Whenua)
- Institute of Geological and Nuclear Sciences Ltd (GNS)
- Industrial Research Ltd (IRL)
- National Institute of Water and Atmospheric Research Ltd (NIWA)
- Institute of Environmental Science and Research Ltd (ESR)

Research Associations

There are a number of industry-owned research associations and a key goal for those involved in the primary export industries is to improve the marketability and



added value of products from New Zealand's farms and forests. The agricultural research associations are:

- New Zealand Fertiliser Manufacturers Research Association
- Wool Research Organisation of New Zealand
- New Zealand Dairy Research Institute
- New Zealand Leather and Shoe Research Association
- New Zealand Logging Industry Research Association
- Meat Industry Research Institute of New Zealand (now owned by AgResearch).

Universities

New Zealand universities provide agricultural and horticultural courses, most with onsite farms and orchards. Research is integrated with education, and staff and post-graduate students carry out basic and strategic investigations and make substantial contributions in their applied fields. The various universities all have their specialities in different areas of science and technology. Some of these areas include agriculture and horticulture; biological, physical, earth, marine and environmental sciences; forestry; engineering; medicine and pharmacy; mathematics, statistics and computer science. Massey and Lincoln Universities are internationally known for their agriculture and horticulture qualifications.

Areas of Research

Agricultural Biotechnology

Extensive knowledge and innovation in research and development in New Zealand is supporting low-cost, sustainable and environmentally friendly farming and forestry systems. Key examples of R&D in this sector include:

- The development of solid-state reproductive and milk-residue sensors at HortResearch and Sensortec.
- Work by the Dexcel-led team to combine sensors and fractionation technologies in milking machines to detect and separate the biologically valuable proteins and peptides from whole milk
- ViaLactia, which identifies, discovers and commercialises genes that are important to the dairy industry, including those affecting pasture grasses, milk production and animal health.
- Clonal afforestation through the development of micropropagation techniques to select superior tree variants for large scale forestry
- Genetic manipulation of flower colour
- The world's first enteric bacteria-based bioinsecticide, for the control of grass grubs
- The development and commercial production of vaccines to prevent sheep abortion, deer tuberculosis, and to promote fertility in sheep
- The extraction of complex lipids from milk and brain tissue



Genomics

Gene mapping in animal and plants that can be leveraged into improved farming, forestry, food and health. For example, *Genesis*, New Zealand's largest biotechnology company, has built a technology platform to identify new molecules that regulate the distribution of information during cell to cell communication common to all life systems, from microbes to plants and animals.

Bio-Prospecting

New Zealand's unique biodiversity offers opportunities from bioactives. Key examples of such research include Biodiscovery Ltd's high throughput screening of microbes for their ability to destroy plant pests and crop diseases. The company is looking for novel bioactives, in particular peptides and proteins for use in organic pesticides.

Crop and Food Research is using it's combined seafood biochemistry and bioprocessing skills (including the ability to scale up from lab bench to pilot plant) to develop marine extracts obtained from seafood processing discards. Fish enzymes, protein and mineral extracts, and biomolecules extracted from fish collagen or lipid sources, promise a wide range of unique biological, chemical or physical functionalities.

Biosecurity/Traceability

Funding for the establishment of a National Centre for Emerging Diseases and Biosecurity at Wallaceville, Upper Hutt, was provided in New Zealand Government's 2005 Budget. The new centre will add significantly to the country's capability to safeguard human and animal health and to protect the economy. It will comprise of new state of the art Environmental Science and Research laboratories and new staff with existing Ministry of Agriculture and Forestry National Centre for Disease Investigation and AgriQuality facilities.

Bio Pharming

Some of the newest and most effective drugs that combat illnesses like cancer and heart disease are made from proteins complex compounds that can only be synthesised by the cells of living organisms. These proteins, called "biologics", are currently manufactured in expensive, sterile fermentation facilities where cultures of mammalian cells or micro-organisms are brewed in stainless steel tanks. Now, by applying the tools of biotechnology to commercial crops such as tobacco or corn, plants are being developed that could produce these medicinal compounds.

For certain protein drugs that require complex modifications or are needed in large supply, production in transgenic animals seems most efficient. The farm animal becomes a production facility with many advantages - it is reproducible, has a flexible production capacity through the number of animals bred, and maintains its own fuel supply. Best of all, in most animal drug production, the drug is delivered from the animal in a very convenient form - in the milk!

With its heritage as an agricultural producer, New Zealand is uniquely placed to capitalise on the rapid developments in bio-pharming. Examples already under development include vaccines for rabies, cholera and hepatitis b, from plants such as tobacco and potatoes. As an agricultural nation with a knowledge-based economy New Zealand is well placed to take advantage of the new technologies. However, it will face the challenges of issues relating to product safety, containment and designing a regulatory environment that will allow the emerging industry to operate.



Agri-Environmental Policy in New Zealand

Legislation

The subject area of agriculture and its effect on the environment is of considerable importance to New Zealand, given the major role of agriculture in the economy. The relatively rapid development of New Zealand over the past century has raised the usual range of environmental issues, although agriculture in New Zealand is generally much less intensive than in other countries. These issues are addressed under the Resource Management Act 1991, with its single purpose of promoting sustainable management of natural and physical resources. Under the RMA, most environmental responsibilities are assigned to local government. As a result, the majority of resource management programmes relevant to agriculture are now carried out at the regional level. These include soil conservation activities, water quality monitoring & control and pest management.

Preservation and sustainable management of indigenous flora and fauna also remains a high priority. This is reflected in the Forests Act 1949, which was amended in 1989 to ensure the sustainable management of indigenous forests. The management of introduced pests has been addressed by the Biosecurity Act 1993. Both these acts are administered by the Ministry of Agriculture and Forestry (www.maf.govt.nz).

The registration of agricultural chemicals and other hazardous substances is covered under the Hazardous Substances & New Organisms Act 1996, which is managed by New Zealand's Environmental Risk Management Authority (www.ermanz.govt.nz).

In addition to domestic legislation, New Zealand is a signatory to key international documents on the environment including the:

- Framework Convention on Climate Change and the Kyoto Protocol
- Convention on Biological Diversity
- Montreal Protocol
- Basel Convention on the Control of Transborder Movements of Hazardous Wastes and their Disposal.

Climate Change

New Zealand is among the 182 countries that have ratified the Framework Convention on Climate Change (1992) and has also signed the Kyoto Protocol, responding to concerns over potential global warming. Current commitments under the Kyoto Protocol are aimed to reduce greenhouse gas (GHG) emissions to 1990 levels over the commitment period 2008 to 2012 or to take responsibility for excess emissions.

While New Zealand's policy on emission of greenhouse gases has focused on carbon dioxide sources and forest sinks, the contribution of methane and nitrous oxide from agriculture is also under consideration. New Zealand is unique amongst developed countries in that almost 50 percent of the country's greenhouse gas emissions are non-carbon dioxide emissions from agriculture. Methane comes mainly from livestock digestion processes, while the main sources of nitrous oxide, another greenhouse gas, are nitrogen fertiliser, animal urine and natural soil processes.

The Government and agricultural sector groups have signed a partnership agreement on research into agricultural greenhouse gas emissions. This



Memorandum of Understanding is underpinned by an industry-led research strategy, which aims to develop safe, cost-effective greenhouse gas abatement technologies that will reduce methane and nitrous oxide emissions from livestock by at least 20 percent by 2012.

Voluntary Codes of Practice

Because New Zealand farmers and foresters are almost totally exposed to the world markets, the success of their industries depends on responding to market requirements. The demand of consumers for minimum pesticide use, for example, has prompted the move by New Zealand kiwifruit growers to the "Kiwigreen" production system, a low chemical production method, and increasingly to organic production. New Zealand fruit growers have also introduced low-chemical Integrated Pest Management strategies in pipfruit, summerfruit and grape production. Farmers using agricultural chemicals undergo a "Growsafe" training programme to learn about the safe handling, application and disposal of agricultural chemicals.

Other voluntary initiatives include quality assurance systems (QA) developed by the meat and dairy sectors, an integrated wine grape production scheme, and numerous community land management groups. A fertiliser code of practice has also been developed for the industry and many organisations have taken on the code as part of their own QA or Environmental Management System (EMS). Many local government authorities have made fertiliser application a permitted activity under the Resource Management Act provided the code of practice is followed.

The forest industry has developed a Code of Practice for Forest Harvesting. Most of the large companies have developed their own Environmental Management Systems in recent years, and have ISO 14000 accreditation. The industry has also developed a Verifiable Environmental Performance certification system.

Industry Associations

The agriculture industry has a number of professional trade organisations. Listed below are the main industry associations and relevant government bodies:

AgResearch

AgResearch is an independent, Crown-owned research and development company with acknowledged expertise in biological science. They have a key role to play in boosting the productivity of New Zealand's bio-dependent economy. www.agresearch.co.nz

Crop & Food Research

Crop & Food Research is one of New Zealand's nine Crown Research Institutes researching sustainable land and water use, high performance plants, personalised foods, high value marine products and biomolecules & biomaterials. www.crop.cri.nz

Dairy InSight

<u>Dairy InSight</u> is responsible for co-ordinating and investing in industry good activities on behalf of dairy farmers, including research and science; information transfer; disease control; promotion of the industry; and quality control, employment, training and environmental activities that support sustainable dairying. www.dairyinsight.co.nz



Deer Industry New Zealand

Deer Industry NZ takes a strategic role in co-ordinating industry marketing and market access, quality and research programmes. www.nzqib.orq.nz

Dexcel

Dexcel is a provider of industry good activities such as research, extension and education services to dairy farmers and rural professionals. It was established in 2001 and is 100 percent owned by New Zealand dairy farmers. www.dexcel.co.nz

ENZA

ENZA, formally the New Zealand Apple & Pear Marketing Board, is the New Zealand pipfruit industry's exporting brand. www.enza.co.nz

Federated Farmers

<u>Federated Farmers</u> is the rural sector's advocacy body, representing the broader interests of the rural sector. A voluntary, member-funded organisation, it represents 17,000 member farmers and rural families throughout New Zealand. The federation has seven industry groups representing the specific interests of meat and wool, dairy, mohair, rural butchers, high country and grain farmers and beekeepers. www.fedfarm.org.nz

Fonterra Co-operative Group

Fonterra is New Zealand's largest dairy company and the world's single largest exporter of dairy products, exporting 95 percent of production. Fonterra has some of the world's best-known dairy brands including Anchor, Anlene, Anmum, Tip Top, Fernleaf, Fresh 'n Fruity and Mainland. www.fonterra.com

Horticulture New Zealand

Horticulture NZ represents the country's 7000 fruit and vegetable growers and provides strategic direction and focus for the sector. It was established in 2005 after the former NZ Vegetable & Potato Growers, NZ Fruitgrowers and NZ Berryfruit Growers federations merged to make a single representative body. The new organisation is a nationwide voice on issues such as border security, trade policy, resource management plans, compliance costs and food regulations. www.hortnz.co.nz

HortResearch

HortResearch is a world-class fruit science company. They use resources in fruit, plants and environmentally sustainable production systems to produce innovative fruit and food products. www.hortresearch.co.nz

Landcare Research (Manaaki Whenua)

Landcare Research is one of nine independent Crown Research Institutes founded in 1992. It is New Zealand's foremost environmental research organisation specialising in sustainable management of land resources optimising primary production, enhancing biodiversity, increasing the resource efficiency of businesses, and conserving and restoring the New Zealand's natural assets.

www.landcareresearch.co.nz

Livestock Improvement Corporation

Livestock Improvement is a Crown Research Institute focused on dairy herd improvement through a unique national database which offers unparalleled traceability, world class genetic improvement systems and laboratory automation solutions. www.lic.co.nz



Meat and Wool New Zealand

Meat & Wool New Zealand is funded by livestock producers through levies on all beef, sheep and goats slaughtered and on all wool sold. This income is used primarily to increase preference for New Zealand wool and red meat internationally and domestically; to maintain and extend trade access for New Zealand wool and red meat; in funding research and development to provide solutions that will help improve New Zealand farm returns, and to provide wool technical advice. www.meatnz.co.nz

Ministry of Agriculture and Forestry (MAF)

The New Zealand Ministry of Agriculture and Forestry (MAF) is the main regulatory body for the agriculture and forestry sectors. MAF's mission is to advance agriculture, horticulture, forestry and food sectors for the benefit of all New Zealanders. MAF is responsible for developing, administering and certifying standards and systems, facilitating market access, and managing agricultural, forestry and horticultural biosecurity. It also manages the government's forestry interests and commitments. MAF aims to protect New Zealand's competitive advantage as an exporting nation by protecting its animals, plants, forests and fisheries against the introduction of exotic pests and diseases. MAF also has the important role of providing policy advice to the government on the trading environment, sustainable resource use, the regulation of product safety, and biosecurity and related matters. www.maf.govt.nz

Ministry for the Environment

The Ministry for the Environment develops policy on environmental management, and reports on the state of the New Zealand environment. Most of the responsibility for day-to-day environmental management rests with local government, particularly the regional councils. It is part of the Ministry's duties to monitor how well the environmental laws and policies work and advise the government on changes necessary to improve environmental management. www.mfe.govt.nz

Ministry of Research, Science & Technology

The Ministry of Research, Science and Technology and the Foundation for Research, Science and Technology manage the government's investment in research and development. The Ministry's role is policy development and the Foundation is responsible for purchasing specific science services on behalf of the government. www.morst.govt.nz

New Zealand Agritech Inc

Agritech is a group of diverse agricultural technology companies including suppliers of diary and milking equipment, livestock feed for raising cattle and sheep, animal health remedies and farm machinery who export around the world. www.agritech.org.nz

New Zealand Pork Industry

NZ Pork Industry helps New Zealand pig farmers attain the best possible return for pig and pork products. www.pork.co.nz

New Zealand Wine Growers

New Zealand Winegrowers aims to represent, promote and research the national and international interests of the New Zealand wine industry. www.nzwine.com



SCION

Formerly known as Forest Research, Scion is a Crown Research Institute focused on applying a deep knowledge of plantation forestry, wood and fibre to the development of new biomaterials from renewable plant resources. Scion's three main areas of research are commercial forestry research & development, biomaterials research and sustainable consumer products. www.scionresearch.com

ZESPRI

Zespri are global marketers of New Zealand's ZESPRI brand kiwifruit. It is owned by more than 2500 owner-producers, and has its own Research and Development unit. www.zespri.com

OPPORTUNITIES

New Zealand's agricultural sector covers a wide range of sub-sectors. Opportunities for UK companies exist across all of these sectors particularly in areas such as agritechnology, equipment supplies and new technology for alternative uses of traditional crops.

Provided below is an overview of popular sub-sectors in New Zealand. For further information please contact New Zealand's UK Trade & Investment team located at the British Consulate General in Auckland (see contact list below).

Dairy

New Zealand is the world's largest producer of internationally traded dairy products. In New Zealand 95 percent of milk is made into products such as milk powders, butter cheese, and casein and exported to 140 countries. For the year ended March 2005 these exports totalled NZ\$5.69billion, almost one fifth of the country's total exports for that year.

Dairy farming is concentrated in the North Island, where 83 percent of all dairy farms are located. There are 5840 herds in the Auckland, Waikato & Bay of Plenty region, 2270 in Taranaki and 1365 in Northland. These are warm areas, with reliable rainfall and fertile soil.

There are about 17,000 dairy farmers including farm owners and sharemilkers. The majority of New Zealand dairy farms are owner operated. In addition, there is an established sharemilking system, under which a sharemilker is contracted to milk the herd and carry out a range of farm duties for a share of the milk income. Sharemilkers operate around 38 percent of all dairy farms in New Zealand.

The vast majority of New Zealand dairy herds supply milk seasonally for manufacturing. Cows are milked in spring, summer and autumn, but dried off in winter when pasture production is lower. The remaining three percent of the herds supply milk year-round for the domestic liquid milk industry. The seasonal milk production system relies predominantly on highly productive, rotationally grazed pasture and herds of high genetic merit. It is this system that enables farmers to produce milk substantially below average world costs, giving New Zealand its advantage over competitors worldwide. The warm climate and productive pastures enable herds to graze in pasture year-round, thus avoiding the need for indoor housing and expensive feed supplements.



New Zealand dairy companies produce an extensive range of products, from ingredients such as milk powders, to retail products such as speciality cheeses. The four main groups of ingredient products are:

- Milk powders New Zealand is renowned for its high quality milk powders and nutritional powder products.
- Cream products such as butter and whipping cream, and others used in baking products.
- Cheese and cheese ingredients for food manufacturers and retail markets.
- Milk and whey proteins high quality protein products with a wide range of nutritional and food manufacturing applications.

All of New Zealand's main dairy companies are farmer-owned co-operatives. There are currently three core companies operating in New Zealand - Fonterra Co-operative Group Ltd, Westland Co-operative Dairy Company and Tatua Co-operative Dairy Company. Fonterra is the giant of the New Zealand dairy industry. Co-operatively owned by almost 12,000 dairy farmers, it is New Zealand's largest company accounting for around 95% of dairy production in New Zealand. Westland has around 370 suppliers and produces around two percent of New Zealand's milk supply, while Tatua's 130 suppliers provide most of the remaining one percent. As well as these bigger export-orientated companies, there are also around 70 smaller companies operating in product or regional market niches in New Zealand.

Meat

A cornerstone of the New Zealand economy, meat, is the country's second largest food export, worth \$NZ4.8 billion in 2005. New Zealand's main meat exports are lamb, mutton and beef, accounting for 90% of export income. Other meat exports include venison, veal, goat, offal and co-products such as variety meats and sausage casings. Meanwhile the domestic market absorbs over 99 percent of the pigmeat and poultry produced in New Zealand.

Meat processing is a strongly competitive industry. It includes 18 processor/exporters, six processors who process only for exporters, and 110 companies with export licences. There are a number of other companies that process for the local market only. Four companies dominate the processing sector, controlling about 80 percent of output - the AFFCO Group, Alliance Group Ltd, Primary Producers Co-op Society Ltd (PPCS) and Richmond Ltd. Each of these companies has multiple plants and annual turnovers in the range of \$1.2 billion to \$1.4 billion. Many of the remaining processors are private companies.

The New Zealand meat industry boasts one of the greatest quality assurance systems in the world. A key strength is the disease-free status of the national flock and herd. The country's geographical isolation backed by stringent quarantine regulations means that overseas consumers can be assured New Zealand is free of BSE or other animal disease scares such as foot and mouth. A strong regulation process of livestock inspection complements this and is underpinned by the adoption of HAACP quality assurance systems in all processing plants. The industry also runs unique trace-back systems allowing products to be traced back to the farm gate.

Sheep & Beef

There are over 13 000 commercial sheep and beef cattle farms in New Zealand, most of which are owned and operated by farming families. Sheep and beef farms are predominantly on hill country in New Zealand. There are a wide range of farm types and systems that vary according to land type, topography, climate, scale and



farmer preference. The majority of farms have both sheep and beef cattle, which complement each other in pasture-based grazing systems. Some farms also run deer or have arable crops. This diversification reduces the business risk.

A representative Central North Island farm is 550 effective hectares, runs 3565 sheep and 402 beef cattle, and is owner-operated with the employment of casual labour and contractors. In the year ended June 2003, it produced for sale 13 900 kg of wool, 2400 lambs, 600 adult sheep and 120 cattle.

All sheep and beef farms are run on low input pasture grazing systems, sometimes supplemented with hay, silage and fodder cropping. This low cost system enables New Zealand farmers to supply high quality pasture-fed meat and wool to world markets at competitive prices.

Deer

There are approximately 1.7 million deer farmed in New Zealand, half the world's farmed deer population. More than 90 percent of the New Zealand deer industry's products are exported and New Zealand is the major world supplier of venison. Top quality velvet has also become a valuable export to traditional Asian medicinal markets. The deer industry continues to expand; deer numbers have grown 50 percent over the last ten years.

There are an estimated 5,000 farms in New Zealand with deer, split roughly 40 percent in the North Island and 60 percent in the South Island. These farms range in size from smaller lifestyle properties to extensive stations. Deer are frequently run as a secondary enterprise in conjunction with other pastoral livestock, but there are 2300 farms where they provide over 50 percent of revenue. These specialist farms carry 63 percent of all deer.

"Cervena" is a name registered exclusively for speciality cuts of New Zealand venison. It was introduced in 1983 as part of a strategy to develop a reputation for consistent quality and value. In order to qualify as Cervena, the animals must be three years or under and raised in the most natural way, free range on farms ranging from 200 to over 2,000 acres, fed grass with natural supplements such as hay, and given no hormones or steroids.

Poultry

The New Zealand poultry industry comprises of a poultry meat production sector and an egg production sector. The industry, which is almost entirely focused on the domestic market, has changed significantly over the last 30 years. Thirty years ago, 4.6 million laying hens supplied eggs for 3 million people; now only 3.2 million hens meet the needs of 4.0 million people.

Poultry meat production is highly integrated, with three companies supplying 90 percent of chicken meat. These processors own and control most stages of production and distribution including the importing of genetic material, hatcheries, breeding farms, processing plants and feed mills.

The Poultry Industry Association of New Zealand (Inc) represents the interests of all the poultry processing and breeding companies and the Egg Producers Federation of New Zealand (Inc) carries out a similar function for members of the egg industry.



Pig

New Zealand has a relatively small pig industry, which focuses on the domestic market. About 45 000 breeding sows are farmed in New Zealand, producing about 700 000 pigs for slaughter each year. Pork production has remained reasonably static in the last ten years, averaging 49 000 tonnes per year. Over much of this period, a strong New Zealand dollar pushed down the price of imported pork, markedly increasing the volume of imports.

The pork industry has already undergone significant restructuring in recent years and more rationalisation is likely. The number of specialist pig farms more than halved between 1990 and 2002 and now totals 360 farms. Canterbury and Waikato are the main regions of production.

The New Zealand pig industry is co-ordinated through the New Zealand Pork Industry Board. The Board is active in the promotion and marketing of New Zealand pork and the "Trim Pork" brand, providing information to producers, funding research and development, developing and promoting quality assurance programmes, and advising government on issues of importance for pork producers.

Environmental and animal welfare practices continue to be a concern for the public. The New Zealand pork industry has responded by forming an Environmental Task Force, developing a Code of Practice for pig farming, and funding research into specific environmental and animal welfare issues.

Wool

New Zealand is the world's largest producer and exporter of crossbred wool, and is second only to Australia in the export of all wool. There are over 220 companies registered as exporters of wool although fewer than half that number are actively engaged in wool exporting. In 2002-2003 the top 20 exporters accounted for about 75 percent of all wool exported. Fine wool made up 5 percent of export volume, 15 percent was medium, 30 percent was fine crossbred and 50 percent was strong crossbred. There is also a strong domestic market for New Zealand wool. Net domestic consumption of wool products in New Zealand is among the highest in the world per capita.

New Zealand sheep are largely dual purpose wool/meat animals. Traditionally wool was sold by auction, but there has been a steady decline in the proportion of wool sold this way. Many farmers now choose to sell wool directly to private buyers and end-users. Less than half of New Zealand's shorn wool is now sold at auction. All this wool is tested prior to sale at an accredited testing facility, which provides objective measurements of commercially important characteristics. This gives New Zealand wool exporters a key competitive advantage, as they can supply wool that meets buyers' specifications. The characteristics tested include yield, condition (moisture content), fibre diameter, colour, length, strength, and bulk.

There are now nine wool scouring plants in New Zealand. These plants have invested in new, locally developed technology, creating one of the most cost-effective scouring industries in the world. New Zealand exports that technology to other wool-producing and processing countries.

Horticulture

New Zealand's horticulture industry is characterised by it's diversity; a temperate climate, fertile soils, and isolation make it possible for a wide range of fruits, vegetables and flowers to be grown. The largest export crops are kiwifruit, apples,



wine, onions and squash. Avocados and cherries are also fast growing horticultural export crops.

This industry has grown significantly over the last 20 years. In 2005 domestic sales of horticultural products were estimated at \$2.5 billion and export sales reached \$2.3 billion, up from \$115 million in 1980. The key export markets for New Zealand fruit and vegetables are the European Union, Japan, America and Australia.

The main areas of horticulture production in New Zealand are Northland, Greater Auckland, Bay of Plenty, Gisborne, Hawke's Bay, Nelson, Marlborough, Canterbury and Otago. In these regions horticulture is a key economic contributor, providing direct returns to producers, marketers and processors, as well contributing to the local infrastructure. The area of land used for horticulture was around 121,000 hectares at June 2002.

Horticultural enterprises operate at many scales. Off-orchard packhouses and processing plants allow many small holdings to be economic for growers. This structure encourages new grower entrants. It is estimated that over 44,000 people are employed in this industry throughout New Zealand. There are also thousands of additional workers employed seasonally by orchardists, flower and vegetable farmers to assist with harvesting and packaging produce.

An important aspect of the horticulture industry is New Zealand's clean and green image, and the value this adds to New Zealand produce. Increasingly, consumers worldwide are demanding to know how their food was grown and that it is safe. Many areas of the horticulture industry have embraced sustainable land management practises and integrated pest management programmes that minimise the use of chemicals on crops. For example, pipfruit growers (such as apple and pear growers) use integrated or organic fruit production programmes, aimed at low environmental impacts.

Viticulture

The wine industry has grown significantly over the last 20 years. Total wine sales for 2005 reached a record 96 million litres, with wine export sales exceeding local sales for the first time (53% of wine produced was exported). Wine valued at \$433 million was exported to 74 countries, compared with \$18.4 million in 1990. The United Kingdom, the United States and Australia are New Zealand's major export markets, taking 84 percent of exports. Further growth is expected with exports anticipated to double over the next five years.

The area used for grape growing and wine production has more than doubled since 1990 to reach around 19,000 hectares. Just over half of this area is in the South Island. The Nelson Marlborough region is the largest wine growing region, with around 7,500 hectares, followed by the Hawkes Bay and Gisborne. Sauvignon Blanc (71%), Chardonnay (9%) and Pinot Noir (5%) are the dominant export wines.

Arable

The New Zealand arable industry produces milling, malting and feed grains, including wheat, barley, maize, oats and peas. It also produces pasture and vegetable seeds for the pastoral industry and for export. During the year ended June 2002, 42,000 hectares of wheat, 78,000 of barley, 14,200 of maize, 7400 of oats, and 10,900 of peas were grown. A further 30,000 hectares of other crops are produced.



New Zealand is not self-sufficient in cereals and imports about 30 percent of its total cereal requirements. Overall the production of grains and seed contributes 3 percent of the total value of New Zealand's agricultural output, or approximately \$400 million in gross agricultural output. While predominantly a domestic industry, the sector exports herbage and vegetable seeds (\$70m fob) and baking products (\$72m fob) produced from local and imported wheat.

The industry is localised primarily in Canterbury, which produces 85 percent of all the crops, but production is also significant in Southland, Otago, Manawatu, Hawke's Bay and the Waikato Region. Arable farms usually run significant but varying numbers of livestock, including sheep, beef cattle, dairy cattle and deer and also grow a significant proportion of fresh vegetables.

The arable processing industry is divided into three main sectors: flour production from imported and local wheat, malt production from local barley, and animal feed manufactured from local and imported feed grains. Other companies specialise in the cleaning, packing and marketing of pasture and vegetable seeds.

Apian

Honey bees have been kept in New Zealand for over 150 years. In that time, beekeeping has moved from being a home craft to a progressive industry. New Zealand is now recognised as one of the world's most advanced beekeeping countries, and is a leader in several important fields. As well as honey, beekeepers produce products such as, propolis, beeswax, pollen and royal jelly. These are often used in health products. As New Zealanders are becoming more aware of their benefits these bee products are increasingly in demand.

There are 292,928 hives in New Zealand, owned by 2947 beekeepers. New Zealand produced over 9,500 tonnes of honey in 2005, half of which was consumed domestically. Exports for honey exceed \$33 million, with the UK the largest market followed by Australia, Japan and Singapore.

Aquaculture

Aquaculture, or marine farming, is a \$315 million industry in New Zealand and makes up around 20% of the total fisheries production value. The main marine aquaculture activities in New Zealand are the farming of GreenshellTM mussels, Pacific oysters, and king salmon.

There are about 898 mussel farms in New Zealand, the majority of which are located in the top of the South Island and the Coromandel. In 2004 they generated total market revenue of over NZ\$181 million. There are 29 salmon farms in New Zealand which account for roughly half of the worldwide farmed king salmon production. Pacific oyster farms in New Zealand cover around 928 hectares and generated export market revenue of NZ\$14 million in 2004.

Forestry

New Zealand is home to some of the world's largest and most intensively managed production plantations. The majority of plantations are New Zealand Pine or *Pinus radiata*, a strong, durable, versatile and sustainable wood which accounts for 89% of total plantation. Douglas Fir is the next largest, accounting for 6% of total plantation.

Total wood exports are worth NZ\$3.3 billion, which accounts for 3.3% of New Zealand's GDP. There are 1.8 million hectares of forest plantations, of which 1.6



million hectares are planted in New Zealand Pine. New Zealand's industry supplies approximately 2% of global forest trade and 8.8% of forest products trade in the Asia Pacific Region Forestry accounts for 7% of total land use in New Zealand.

New Zealand Pine forests are genetically selected to ensure excellent quality in terms of growth, form and wood properties. Due to New Zealand's climate and topography harvesting can occur all year round. About one-third of New Zealand's national harvest is exported, with the remainder processed further in New Zealand to increase the product value for local and international customers.

By using sustainable forests, New Zealand's companies offer environmentally friendly products. Many New Zealand wood companies grow and use certified timber. Forty percent use the international Forest Stewardship Council certification.

In it's efforts to meet current commitments under the Kyoto Protocol and reduce greenhouse gas emissions, the New Zealand government is currently developing a Permanent Forest Sink Initiative (PFSI), which aims to promote the establishment of new permanent forests on previously unforested land. The PFSI offers landowners the opportunity to claim Kyoto Protocol compliant carbon credits from newly established permanent forests. These emission units can then be sold on the international market, subject to conditions. To qualify for carbon credits under the PFSI, forests must be established and managed according to certain definitions and standards. Work to develop the precise meanings of these definitions and standards is currently underway. For more information visit www.maf.govt.nz and www.maf.govt.nz and www.maf.govt.nz and www.climatechange.govt.nz.

Acknowledgements

The information in this report has come from the following sources: "Agriculture & Forestry in New Zealand" by the Ministry of Agriculture & Forestry, "New Zealand's Agricultural Excellence" by New Zealand Agritech, "Freshfacts: New Zealand Horticulture" by HortResearch, "Agriculture Overview" and "Agricultural Production Statistics" by Statistics New Zealand, "Agriculture Industry Overview" and "Horticulture Industry Overview" by Career Services New Zealand, "Agriculture" on the New Zealand Climate Change Website and "New Zealand Meat Industry" by Market New Zealand.



KEY METHODS OF DOING BUSINESS

Population

New Zealand enjoys a long history of association with the UK and is a major trading partner. A majority of the population is of British descent and the ties remain strong, providing a small but loyal market of approximately 4 million.

Infrastructure

There is a well-established transport and communication infrastructure in NZ and most of the main importers have national distribution. There are air links between all major towns and cities and over 20 international airlines offer services to NZ. Four container and twelve conventional ports provide access to a comprehensive network of shipping services. Interisland shipping is still comparatively expensive and many importers operate distribution centres in both islands, sending shipments to Auckland and Christchurch (Lyttleton Port).

NZ Business Environment

As a result of a number of years of free market economic policies New Zealand has one of the most open competitive economies in the world. New Zealand importers, exposed to international competition and the proximity of the Asian market, have become experienced world traders, keenly aware of prices and margins. Many companies import direct, cutting out traditional middlemen.

Most New Zealand importers travel regularly to the major international trade fairs and are therefore well aware of new trends and opportunities.

Internet, email and increasingly e-commerce are the norm in NZ business.

Regulatory Requirements

There are no import licence requirements (removed in July 1992) or quotas in New Zealand. Advice should be sought from the British Consulate General in Auckland.

The import tariff on products and services from the UK varies depending on the product. Indicative rates and advice can be found on the NZ Customs website www.customs.govt.nz under the library category.

GST of 12.5% is levied on all domestically produced goods and is payable on all imported products on arrival in NZ (except bullion). It is assessed on the total of the customs value (normally invoice value), any duties, plus insurance and freight. It must be paid before goods can be cleared. A broker or importer can arrange to make these payments.

The Commerce Act 1986 and the Fair Trading Act 1986 are New Zealand's competition laws, aimed at protecting the competitive practice. Acts can be viewed at www.legislation.govt.nz.



PUBLICATIONS

Country-Wide Northern

An issue driven rural magazine offering farmers in the North Island essential information on how to farm profitably.

PO Box 529 Fielding New Zealand

Tel: + 64 6 323 7104 Fax: + 64 6 323 7101

Website: www.country-wide.co.nz

Country-Wide Southern

An issue driven rural magazine offering farmers in the South Island essential information on how to farm profitably.

PO Box 1317 Dunedin New Zealand

Tel: + 64 3 453 5583 Fax: + 64 3 453 5983

Website: www.country-wide.co.nz

Dairying Today

Monthly dairying magazine which features dairy news and views, as well as topical feature issues.

PO Box 3855 Auckland New Zealand

Tel: + 64 9 307 0399 Fax: + 64 9 307 0122

Website: www.ruralnews.co.nz

Farm Trader

Provides information on farm equipment.

PO Box 7129 Wellesley Street Auckland New Zealand

Tel: + 64 9 308 2833 Fax: + 64 9 358 4111

Website: www.farmtrader.co.nz

Food Technology in New Zealand

Reports on activities and developments in food science and food and beverage manufacturing and processing.

PO Box 896 Auckland New Zealand

Tel: + 64 9 306 2379 Fax: + 64 9 306 2478

Email: info@hayleymedia.com

Website: www.foodtechnology.co.nz



Grower

As an official publication of the New Zealand Vegetable and Potato Growers Federation (VEGFED) this magazine reaches virtually all professional growers in this market.

PO Box 10232 Wellington New Zealand

Email: comgrow@xtra.co.nz
Website: www.thegrower.co.nz

Horticulture News

Monthly magazine providing the fresh produce industry with an up-to-date mix of news, features, market reports, products and services.

PO Box 4233 Shortland Street Auckland New Zealand

Tel: + 64 9 524 1186 Fax: + 64 9 524 1170

Email: hortnews@ruralpress.com

Lifestyle Farmer Magazine

Contains practical farming information and advice specifically for small block holders.

PO Box 4233 Shortland Street Auckland New Zealand

Tel: + 64 9 523 5056 Fax: + 64 9 524 1170

Email: <u>lifestylefarmer.nz@ruralpress.com</u> Website: <u>www.lifestyle-farmer.co.nz</u>

New Zealand Agribusiness

New Zealand Agribusiness provides a forum to present up-to-date information on new products and promotions, finance and insurance options, staff movement and industry comment.

PO Box 37151 Christchurch New Zealand

Tel: +64 3 577 5640 Fax: +64 3 578 5647

New Zealand Dairy Exporter

New Zealand's leading dairy industry journal informing NZ dairy farmers, sharemilkers and farm managers of topical items of interest in the dairy industry each month.

PO Box 5544 Auckland New Zealand

Tel: +64 9 630 1624 Fax: +64 9 630 2307

Email: enquiries@dairymag.co.nz
Website: www.dairymag.co.nz



New Zealand Lifestyle Block

NZ Lifestyle Block is a monthly magazine which serves to both inform and entertain with a mix of practical, easy to follow tips and in depth feature articles covering every aspect of lifestyle farming.

PO Box 7129 Wellesley Street Auckland New Zealand

Tel: +64 9 308 2815 Fax: +64 9 308 4111

Email: <u>nzlsb@tradergroup.co.nz</u>

Website: www.lifestyleblockmag.co.nz

New Zealand Grape Grower

Provides articles on grape growing techniques, technology and equipment, and stories that profile the different approaches to growing grapes.

PO Box 4233 Shortland Street Auckland New Zealand

Tel: +64 9 523 5056 Fax: +64 9 524 1170

Rural News

Rural News gives in-depth, informative and independent coverage of New Zealand's agribusiness affairs. Published bimonthly, it caters for all types of agricultural and horticultural farming, as well as covering the latest products and services available to the industry.

PO Box 3855 Auckland New Zealand

Tel: + 64 9 307 0399 Fax: + 64 9 307 0122

Email: ruralnews.co.nz
Website: www.ruralnews.co.nz

Southern Rural Life

Distributed free in the Otago/Southland districts every fortnight, Southern Rural Life focuses on the various facets of farming and associated activities.

PO Box 517 Dunedin New Zealand

Tel: + 64 3 479 3505 Fax: + 64 3 473 3581

Website: www.alliedpress.co.nz

Straight Furrow

Rural New Zealand's community newspaper free to more than 85,000 rural homes weeklv.

PO Box 4233
Shortland Street
Auckland
New Zealand



Tel: + 64 9 523 5056 Fax: + 64 9 524 1170

Website: www.straightfurrow.co.nz

The Dairyman

The independent voice of New Zealand's ever-changing dairy industry, The Dairyman provides industry news alongside practical, financial and property advice to over 25,000 New Zealand dairy farmers each month.

PO Box 4233 Shortland Street Auckland New Zealand

Tel: + 64 9 523 5056 Fax: + 64 9 524 1172

Email: chiefsub.nz@ruralpress.com

The Deer Farmer

New Zealand's leading deer farming publication covering industry issues from both a New Zealand and international perspective. Published Bimonthly.

PO Box 11092 Wellington New Zealand

Tel: + 64 4 380 9991 Fax: + 64 4 388 3358

Email: <u>deereditor@wham.co.nz</u> Website: www.deerfarmer.co.nz

The New Zealand Farmers Weekly

A weekly business newspaper for farmers providing the latest agricultural news and market information across all sectors of agriculture.

PO Box 529 Feilding New Zealand

Tel: + 64 6 323 7104 Fax: + 64 6 323 7101

Website: www.farmersweekly.co.nz

The Orchardist

Published by Horticulture New Zealand, The Orchardist is a monthly magazine aimed at New Zealand's commercial fruit growers.

PO Box 10232 Wellington New Zealand

Tel: + 64 4 472 3795 Fax: + 64 4 471 2861 Email: hans.k@hortnz.co.nz Website: www.hortnz.co.nz

Wine Technology in New Zealand

A nationally distributed bimonthly publication for wineries, winemakers and viticulturalists presenting information on all aspects involved in the manufacturing of wine.

PO Box 9596 Greenlane Auckland



New Zealand

Tel: + 64 9 529 3000 Fax: + 64 9 529 3001

Email: info@tplmedia.co.nz
Website: www.tplonline.co.nz

EVENTS

New Zealand National Fieldays

New Zealand National Fieldays is the biggest agricultural trade show in the Southern Hemisphere. Showcasing the latest in agricultural products and services, Fieldays attracts annually 1,000 exhibitors and over 115,000 visitors through its gates. It is New Zealand's premier agribusiness event bringing buyer and seller together to create an agricultural hypermarket. www.fieldays.co.nz

Agricultural & Pastoral Events (A&P Shows)

All of New Zealand's farming regions have a local Agricultural and Pastoral Association who hold annual A&P Shows, the largest is the Canterbury A&P Show which has been held every year since 1862. Livestock and machinery exhibits featured from the outset.

New Zealand Royal Show

The Canterbury A&P Association has been granted the right to host the Royal New Zealand Show for the next fours years until 2009 inclusive. www.theshow.co.nz

CONTACT LISTS

British Consulate General, Auckland UK Trade & Investment

Paul Tuckley – Trade Development Manager Private Bag 92014 Auckland

Tel: + 64 9 303 5017 Fax: + 64 9 303 1836

Email: <u>paul.tuckley@fco.gov.uk</u> Website: <u>www.uktradeinvest.co.nz</u>

Dairy Insight

PO Box 10002 Wellington

Tel: + 64 4 471 6900 Fax: + 64 4 471 6909

Email: info@dairyinsight.co.nz
Website: www.dairyinsight.co.nz

Deer Industry New Zealand

PO Box 10702 Wellington

Tel: +64 (4) 473 4500 Fax: +64 (4) 472 5549 Email: <u>info@deernz.org</u> Website: <u>www.nzqib.org.nz</u>



Dexcel

Private Bag 322 Hamilton New Zealand

Tel: + 64 7 858 3750 Fax: + 64 7 858 3751 Email: <u>info@dexcel.co.nz</u> Website: <u>www.dexcel.co.nz</u>

Federated Farmers

PO Box 715 Wellington

Tel: + 64 4 473 7269 Fax + 64 4 473 1081

Email: receptionwgton@fedfarm.org.nz

Website: www.fedfarm.org.nz

Horticulture New Zealand

120 Mt Albert Road Sandringham Auckland 1025 New Zealand

Tel: + 64 9 815 4200 Fax: + 64 9 815 4201

Email: enquiries@hortresearch.co.nz
Website: www.hortresearch.co.nz

Landcare Research

Head Office PO Box 40 7640 Lincoln New Zealand

Tel: + 64 3 321 9999 Fax: + 64 3 321 9998

Website: www.landcareresearch.co.nz

Ministry of Agriculture and Forestry

PO Box 2526 Wellington

Tel: + 64 4 894 0100 Fax: +64 4 894 0720

Email:

Website: www.maf.govt.nz

Ministry for the Environment

PO Box 10362 Wellington 6143 New Zealand

Tel: + 64 4 439 7400 Fax: + 64 4 439 7700

Email: information@mfe.govt.nz
Website: www.mfe.govt.nz



Meat & Wool New Zealand

P O Box 121 Wellington 6015 New Zealand

Tel: + 64 4 4739150 Facsimile + 64 4 4740800

Email help@meatandwoolnz.com Website: www.meatnz.co.nz

New Zealand Wine Growers

PO Box 90276

Auckland Mail Centre Tel: + 64 9 303 3527 Fax: +64 9 302 2969 Email: info@winz.org.n

Email: info@winz.org.nz Website: www.nzwine.com