



Netherlands Enterprise Agency

NZ Seed Sector Profile

Commissioned by the ministry of Foreign Affairs

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International.*

NZ Seed Sector Profile

April 2016

Introduction

NZ is recognized worldwide as a leading producer, processor and exporter of high-quality seed for a wide range of crops. It is a cornerstone industry that underpins NZ's pastoral, arable and horticultural sectors. It contributes millions to the NZ economy and provides jobs for thousands. It is an innovation-focused industry that utilises complex technologies with millions invested annually in seed research and development.

This report is an overview of the seed industry in NZ, providing a clear picture of how it is structured and its impact on the NZ economy.

NZ's seed sector:

- Plays a critical role in the agri-food value chain;
- Drives agricultural innovation;
- Contributes millions to the NZ economy;
- Encompasses diverse crops and businesses; and
- Fuels a strong export market.

Critical role in agri-food value chain

- Seed is the critical first link in the agri-food value chain. It's the starting point for growing crops that produce food, feed and other products for both domestic and export markets.

Driver of agricultural innovation

- The industry utilises complex technologies to produce seed that farmers plant to achieve increased productivity and market opportunities.
- NZ is known for its adoption of leading-edge technologies, including biotechnology, genomics and other plant breeding advances.

- Private sector invested over \$20 million in plant breeding, research and varietal development in 2015.
- In addition to the private sector, there is also a significant seed research at the Crown Research Institute and University level.

Significant contributor to the NZ economy

- Total economic direct impact of the seed industry in NZ is estimated at \$700m.
- The seed industry generated the equivalent of 1500 jobs.

Diverse sector with numerous crops and various businesses

- NZ's fertile soil and temperate climate enable seed producers to grow more than 50 different crops.
- The sector encompasses many types of businesses, including: plant breeding and research, seed growers, seed processors and seed testing labs as well as seed distributors, brokers and exporters.
- The sector involves business of all sizes – from small independent seed companies to large multinationals.

Strong export market and trade relationships

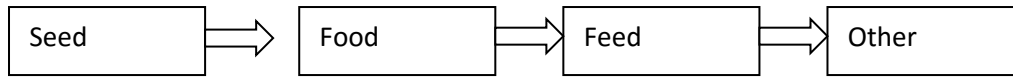
- In 2015, NZ seed exports were valued at approximately \$170 million.
- NZ seed companies and plant breeders are involved in many aspects of the international seed trade such as germplasm exchange, global research and development programs, contract production for export, and marketing new varieties imported into NZ.

Critical role in agri-food value chain

Seed: the starting point of all agri-food output

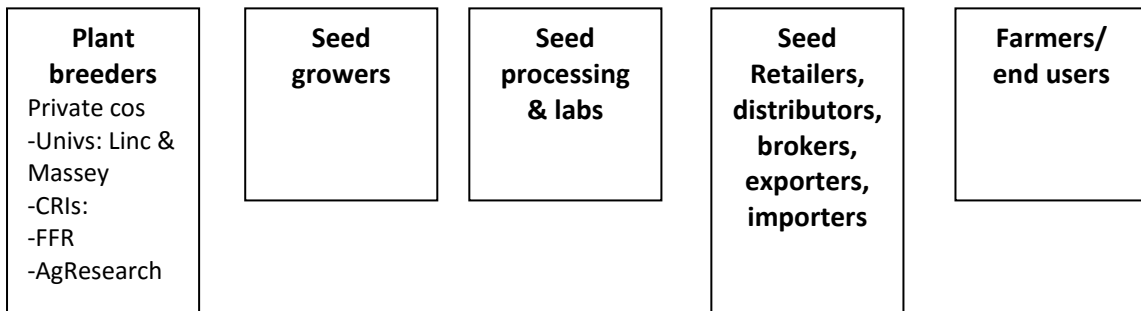
The NZ seed industry is the critical first link in the agri-food value chain. Seed is the starting point for growing crops that produce food, feed and other products such as oil. Much of the

innovation for increased productivity and market opportunities for farmers is delivered by seed.



Structure of NZ's Seed Sector

The seed value chain can be described by five basic links: plant breeders; seed growers; seed processors; seed distributors and retailers; and farmers (seed end users). In the case of seed exports, seed processors and distributors ship seed to end users around the world.



Driver of agricultural innovation

Sophisticated seed technology advances industry

The seed sector is continuously evolving. Due to its unique position as a starting point for the agri-food value chain, it is an industry that embraces innovation and technological advancement to produce new plant varieties with desirable attributes, such as higher yield potential and greater disease resistance. Innovation carried in seed can also help the agriculture sector meet consumer demands for improved nutrition, appearance and processing characteristics as well as help reduce agriculture's environmental foot print.

NZ is known for its adoption of leading-edge technologies. This includes biotechnology, genomics, molecular breeding and other plant breeding advances. The NZ seed industry has invested a large amount of resources in developing new seed products, ideas, patents and techniques that create value up the chain by increasing yield, quality and consistency, which allows NZ to enjoy a unique brand position in domestic and international markets.

Investment in research and development

There is a significant local research and development initiative.

- Private sector invested about \$20 million in plant breeding, research and varietal development in 2015.
- Research and development has been largely focused on pasture grasses and cereal grains.
- There is also investment in research at the CRI e.g. PFR & AgResearch and University level (e.g. Lincoln and Massey).

Significant contributor to the NZ economy

Economic impact

A study conducted by BERL in 2013 estimated the total economic impact (direct and indirect) of the seed industry to be \$700m.

In 2015, NZ seed exports were valued at approximately \$170 million, up from \$130 million in 2007.

Employment

The NZ seed industry employs NZers working in various segments of the industry, including plant breeding and research, seed production, seed processing and production support, and seed sales and marketing.

There are more than 1500 people across the sector.

Diverse sector with numerous crops and various businesses

Diverse and numerous NZ crops

NZ's unique geography, temperate climate and fertile soil, enables producers to grow diverse and numerous crops.

- Key category of crops grown for seed in NZ, include: forage and turf, grains and oilseeds, special crops and vegetables

Class	Category	Crop type
Grains	Cereals	<ul style="list-style-type: none">• Barley• Rye• Wheat• Oats• Triticale
Oilseeds		<ul style="list-style-type: none">• Canola• Linseed• Hemp
Pulses		<ul style="list-style-type: none">• Chickpeas• Kidney beans• Peas• Fababeans• Lentils• White beans
Vegetable		<ul style="list-style-type: none">• Carrot• Radish• Beet• Other Vegetable seed

Forages	Legumes	<ul style="list-style-type: none"> • Alfalfa • White clover • Red clover
Forages	Grasses	<ul style="list-style-type: none"> • Bluegrass • Fescue • Ryegrass • Brome grass • Timothy
Turf		<ul style="list-style-type: none"> • Red fescue • Perennial ryegrass • Kentucky bluegrass • Turf-type tall fescue

NZGSTA

The NZ Grain and Seed Trade Association (NZGSTA) is the peak industry body.

The NZGSTA represents approximately 80 seed companies and a broad cross-section of NZ businesses that develop, produce, sell, and export seed. Membership ranges from small independent businesses to multinational seed companies.

Acts and regulations

NZ does not have legislation controlling production or market access.

Industry operates under voluntary codes of practice and seed quality and purity standards and intellectual property protection help to enhance the industry's competitiveness.

Strong export market and trade relationships

International seed trade

In addition to its strong contribution to the domestic economy, NZ seed attracts significant demand internationally. NZ seed companies and plant breeders are involved in many aspects of the international seed trade, including:

- Variety and germplasm exchange agreements;
- Multi-national R&D efforts;
- Contractual agreements for production of seed for export and import;
- Marketing new varieties imported into NZ; and
- Marketing new varieties abroad.

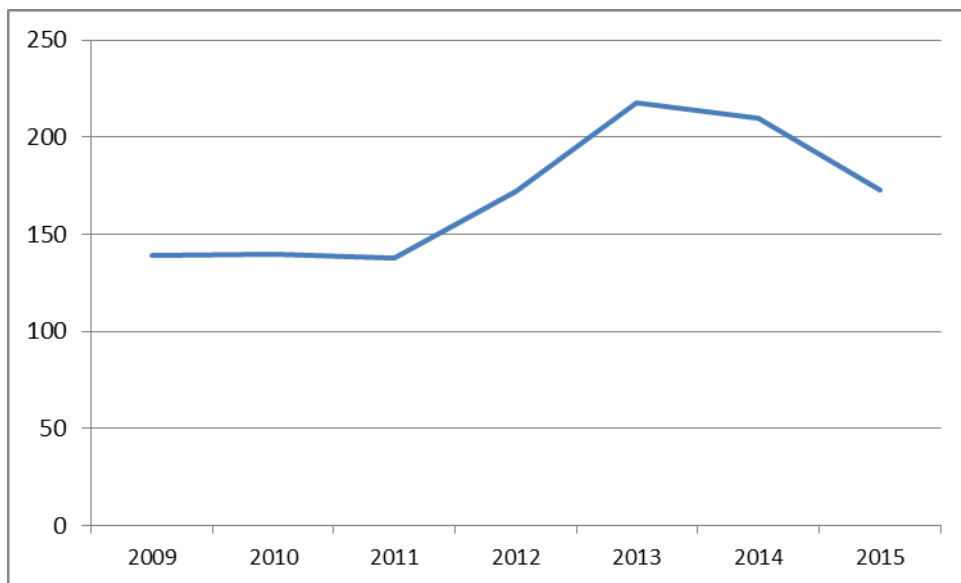
Trade balance

NZ is active in the world seed market. In 2015, seed accounted for approximately \$170 million in exports.

Exports

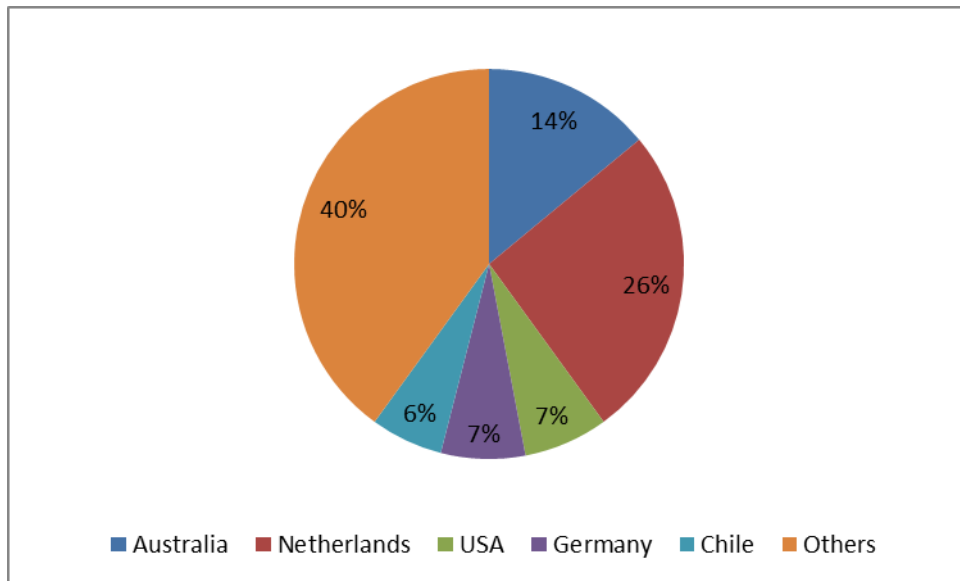
Seed exports are shipped to over 60 international markets. Ryegrass, clover, and vegetable seeds account for the majority of export sales.

Figure A. NZ's seed exports \$ million



The largest importers of NZ seed by value are Australia (14%) , United States (7%) and the Netherlands (26%).

Figure B. NZ's export markets 2015 (% value)



Conclusion

In summary, NZ's seed sector is a diverse and dynamic industry that:

- Plays a critical role in the agri-food value chain;
- Drives agricultural innovation;
- Contributes directly millions to the NZ economy;
- Encompasses diverse crops and businesses; and
- Fuels a strong export market.



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