

# SUPPORTING AND PROTECTING in the primary industries

Ministry for Primary Industries  
Manatū Ahu Matua



The primary industries bring billions of dollars to our economy each year and employ one-sixth of New Zealand's workforce.

Many people support and protect the primary industries through:

- improving quality, productivity and profitability of products and practices;
- surveillance, protection and management of pest plants and animals;
- developing and implementing environmentally friendly practices.



## What kind of work is it?

People in this field respond to issues affecting the sectors involved in growing and harvesting, or processing and commercialising – including the sustainable production of raw materials, food safety, animal welfare, biosecurity and the effects of climate change.

Scientists research how to improve soil or water quality, grow bigger plants or animals, or create more environmentally-friendly fertilisers. They help protect the environment by reducing the impact of farms, forestry and aquaculture.

Agricultural, horticultural, forestry or fisheries consultants help businesses to become more successful and meet future market needs. Engineers work in various roles, developing fertiliser or farm machinery, for example, or specialised software for management or processing systems.

People working in biosecurity study pest



plants and animals to develop effective ways of controlling them. Some are directly involved in preventing potentially damaging plants, insects, fish and animals from entering or becoming established in New Zealand.

**“For New Zealand to maintain its position at the leading edge of the world's primary industry, we need new sustainable operating models. We will achieve new ways of thinking through innovation, research and technology.”**

Traci Houppa, Chairman, Landcorp New Zealand

## Is there a future in it?

Yes! As food and fibre products and processing systems become more sophisticated and sustainable, the primary industries will require greater levels of expertise. The demand for technologists and engineers will also increase as new technologies arise.



### SOFTWARE DEVELOPER

Sammy Wong  
AbacusBio

**WORK** Sammy creates web applications such as online surveys for farmers, and analyses data  
**PATH** South Otago High School, final year: Calculus, Design & Visual Communication, English, PE, Statistics  
Otago Polytechnic: Degree in Information Technology



### CONSULTING OFFICER

Graeme Peter  
Dairy NZ

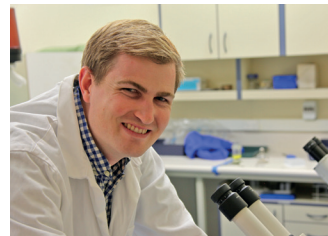
**WORK** Graeme supports dairy farmers with scientific information so that their farms run more efficiently  
**PATH** Scots College, final year: Agricultural Science, Geography, PE, Statistics, English  
Lincoln University: Degree in Agriculture



### FARM VET

Petra Stegehuis  
Auckland Veterinary Centre

**WORK** Petra is involved in veterinary services to farmers, and specialises in caring for horses  
**PATH** Palmerston North Girls' College, final year: Biology, Chemistry, English, Maths, Physics  
Massey University: Degree in Veterinary Science; University of Otago: degree in Pharmacology



### SENIOR ENTOMOLOGY TECHNICIAN

Andrew Pugh  
Scion

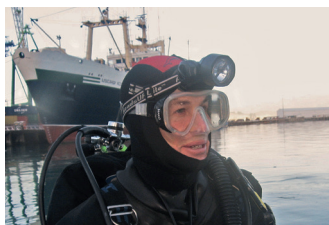
**WORK** Andrew helps protect New Zealand trees by studying forestry-related insects  
**PATH** Riccarton High School, final year: Chemistry, English, History, PE, Physics  
Lincoln University: Degree in Conservation & Ecology; University of Auckland: Master's degree in Biosecurity & Conservation



### PLANNING & VALUATION ANALYST

**Jessica Brown** Hancock Forest Management NZ

**WORK** Jessica works out the value of the forest estates her company manages and develops long-term plans for maintaining them  
**PATH** Rotorua Lakes High School, final year: Art History, Art Painting, English, Photography, Statistics  
 University of Canterbury: Degrees in Art Theory and Forestry Science



### MARINE ECOLOGIST

**Chris Woods** NIWA

**WORK** Chris works in aquaculture (underwater farming) and biosecurity (preventing the introduction and spread of foreign organisms)  
**PATH** Christchurch Boys' High School, final year: Biology, Chemistry, English, Geography, Statistics  
 University of Canterbury: Degree and Master's degree in Zoology  
 Victoria University of Wellington: Postgraduate degree in Marine Biology



### FARM SENIOR

**Rachel Worth** AgResearch

**WORK** Rachel works on grazing and stock management, assists with projects such as the artificial insemination programme and drench trials, and helps out with other science-related tasks  
**PATH** St Hilda's Collegiate, final year: Biology, Chemistry, Digital Technologies, Statistics, STAR vet nursing course; University of Otago: Degree in Zoology



### AGRICULTURAL/ ENVIRONMENTAL CONSULTANT

**Erica van Reenen** AgFirst

**WORK** Erica is a farm and environmental consultant, working with farmers, industry and government  
**PATH** Mt Aspiring College, final year: Biology, Business Administration, Chemistry, Digital Technologies, English, Physics, Statistics; Massey University: Degree/Master's degree in Agricultural Science; Advanced certificate in Sustainable Nutrient Management

As new technologies arise, there will also be an increased demand for the technologists and engineers required to implement them.

## What qualifications will I need?



It is increasingly important that people working in this sector have an understanding of the technology, engineering and science that underpins the primary industries. A tertiary qualification – certificate, diploma or degree – in science, engineering, information technology or agribusiness is valuable for job seekers.

Starting salaries for people with a science, engineering or technology-related diploma or degree range from

\$40–\$60,000, depending on qualification level and experience. Find out what you can study, and where, using the online Course Finder at **www.futureintech.org.nz/search.cfm**



“The industry is very sophisticated and innovative in its use of technology and science. Our research teams develop tools and technologies to strengthen the economic and environmental sustainability of this sector. Our science, business and technical staff work with growers, suppliers and markets to ensure top-quality, sustainably grown produce reaches international markets in premium condition.”

Peter Landon-Lane, CEO, Plant & Food Research

## Find out more....

Read stories about people working in the supporting and protecting sector of the primary industries and learn how they got there – at **www.futureintech.org.nz**

You can also check out primary industry champions at **www.mpi.govt.nz/funding-and-programmes/other-programmes/future-skills/growing-our-future/**



**Primary Industries**



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APRIL 2018

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