**Food Technologist**

**Kaihangarau Kai**

Food technologists research and develop new food and beverage products and/or improve the quality of existing products. They may also develop or improve the processing, packaging, storage, and safety of food in line with government and industry standards.

## About the Job

## How many people are doing this job?

**2014:** 829; **2013:** 825; **2012:** 830

**Source:** Ministry of Business, Innovation and Employment, '2006-2014 Occupation Data' (prepared for Careers New Zealand), 2015.

## Pay

Pay for food technologists varies depending on location and experience.

* Graduates usually earn $50,000 a year.
* Food technologists with two to three years' experience, usually earn $60,000 to $70,000.
* Senior food technologists with five to 10 years' experience usually earn $75,000 to $95,000.

**Source:** Lawson Williams Consulting Group Ltd, 2016.

## What you will do

Food technologists may do some or all of the following:

* improve or develop new food and drinks
* make test samples of food products and conduct trials
* source and select ingredients for food products
* manage or supervise development and production of food and drinks
* improve efficiency of manufacturing processes
* develop new food packaging or improve current packaging
* ensure food products meet specifications and standards (quality assurance)
* investigate the sensory and nutritional properties of foods.

## Skills and knowledge

Food technologists need to have:

* knowledge of food and drink products
* knowledge of food processing and production methods
* knowledge of hygiene and quality standards
* skill in analysing and interpreting research results
* practical skills for performing experiments and operating scientific equipment
* writing skills, for writing reports and for publications
* maths and computer skills.

## Working conditions

Food technologists:

* usually work regular business hours. However, for some projects they may need to run factory trials at off-peak times, such as at night or on weekends
* usually work in laboratories, offices and factories
* may need to travel overseas to clients' companies or factories, and attend local or international conferences and trade shows.

## What's the job really like?



### Andrew Legg

### Research Technologist

##### **Cheeseaholic by passion, food technologist by profession**

Self-confessed cheeseaholic Andrew Legg uses his passion to develop specialty cheeses at Fonterra's innovation centre in Palmerston North.

"The ideas are driven by what the marketing team wants to do in New Zealand and Australia. They'll want a certain type of product in a couple of years’ time – a new camembert or different textures and shapes – things that you couldn't imagine how they would be done."

##### **Making the unimaginable possible**

Andrew says his job is to make these things possible. "I talk to all the scientists who are specialists in a particular area, such as controlling cheese texture. Then I’ll do some research, making up samples. When it’s ready to go to trial, I’ll hand it over to the guys in the factory who can commercialize it.”

Of the four or five projects that Andrew is usually working on at one time, only a few will move beyond the experimental phase, so it's rewarding when they do.

##### **Innovative skills bring recognition**

One of Andrew’s projects involved adding a protein powder to milk to get a higher yield of cheese. Within a year, they had customers for the powder, and Andrew's team were finalists in the Fonterra Innovation Awards for new products and concepts. "It was great getting that recognition!”

## Entry requirements

To become a food technologist, most employers require you to have a Bachelor's degree in food technology, food science or food engineering. You should do a course of 3-5 years of training.

Food technologists are often required to complete on-the-job training programmes specific to the products and processes they are working with.

## Secondary education

For food technology and engineering courses, you usually need NCEA Level 3 maths (normally including algebra, differentiation and integration), physics and chemistry. Biology can also be helpful.

For food science the requirements are similar, but for most courses there is less emphasis on physics.

## Personal requirements

Food technologists need to be:

* accurate
* patient and persistent
* able to work well under pressure
* good at problem-solving
* good at planning and organising.

“I've always been a hands-on person. I didn't want a job where you sit at your desk most of the time. I wanted the opportunity to get in and make stuff. I like seeing the end product and achieving something.”

***Claire Redman:*** *Development Technologist*

## Useful experience

Useful experience for food technologists includes:

* food processing or production work
* laboratory work
* quality assurance work
* business management or marketing.

## Physical requirements

Food technologists must have good hand-eye co-ordination because experiments often involve weighing and measuring precise amounts.

## Find out more about training

**Futureintech**

(04) 473 2023 - enquiries@futureintech.org.nz - [www.futureintech.org.nz/](http://www.futureintech.org.nz/)

**Institution of Professional Engineers NZ (IPENZ)**

(04) 473 9444 - ipenz@ipenz.org.nz - [www.ipenz.org.nz/ipenz](http://www.ipenz.org.nz/ipenz)

**NZ Institute of Food Science and Technology (NZIFST)**

(06) 356 1686 - rosemary@nzifst.org.nz - [www.nzifst.org.nz/careers/students.asp](http://www.nzifst.org.nz/careers/students.asp)

## What are the chances of getting a job? Job opportunities.



Chances of getting a job as a food technologist are good due to growing demand and a shortage of workers.

### Shortage of skilled food technologists

According to Ministry of Business, Innovation and Employment estimates, the number of food technologist positions is predicted to grow by 4% a year through to 2018, due to growing industry demand.

However, the number of skilled, qualified food technologists is insufficient to meet demand. As a result, food technologist appears on Immigration New Zealand’s long-term skill shortage list.This means the Government is actively encouraging skilled food technologists from overseas to work in New Zealand.

Demand is strongest for food technologists with three to seven years of experience.

### Strong prospects for graduates with food technology qualification and industry experience

Some of the larger companies that employ food technologists have graduate recruitment programmes. However, most food technology graduates find work, particularly if they have completed courses with an element of process engineering, including projects for industry, and have worked in related areas during summer breaks.

If you've done a food science qualification, you may find it more difficult to get work as employers prefer a broader qualification containing some engineering. However, you can improve your chances by completing a postgraduate diploma, which includes an applied project for a food manufacturing company and getting hands-on industry experience.

## Types of employers varied

Most food technologists work for:

* food manufacturing companies such as dairy processing companies, breweries, food and vegetable processing companies, cereal manufacturers and commercial bakeries
* private food research institutes such as Fonterra Research Centre
* Crown research institutes such as AgResearch and Plant and Food Research
* universities.

## Sources

* Immigration New Zealand, 'Long-term Skill Shortage List', accessed April 2016, (www.immigration.govt.nz).
* Ministry of Business, Innovation and Employment, 'Food Technologist Occupation Outlook', 2016, (www.mbie.govt.nz).
* Ministry of Business, Innovation and Employment, '2006-2014 Occupation Data' (prepared for Careers New Zealand), 2015.
* New Zealand Institute of Food Science and Technology website, accessed May 2016, (www.nzifst.org.nz).
* Scott, A, president, NZ Institute of Food Science and Technology, Careers New Zealand interview, May 2016.

## Progression and specializations

Food technologists can progress to more senior roles such as technical manager.

They may also move into marketing or sales roles with food companies or ingredient suppliers. They can also choose to work for food safety authorities, or as teachers at universities offering food science/technology courses.

Food technologists often specialize in one area of food technology such as:

* packaging
* product development
* production
* quality assurance
* policy and standards
* technical sales
* research and development.

Last updated 26 January 2017

<https://www.careers.govt.nz/jobs-database/science/science/food-technologist/>

**ACTIVITY**

1. What do a food technologist do? ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

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1. This article shows data of the amount of Food Technology who worked from 2012 to 2014 of which country?

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1. How much does a Food Technologist earn by month in R$ having three years of experience? (calculate it considering 1 dollar as R$ 3,14)?

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1. Use A for activity a FT can do and S for skill a FT may have:

( ) knowledge of food and drink products

( ) knowledge of food processing and production methods

( ) improve or develop new food and drinks

( ) knowledge of hygiene and quality standards

( ) make test samples of food products and conduct trials

( ) source and select ingredients for food products

( ) skill in analysing and interpreting research results

( ) manage or supervise development and production of food and drinks

( ) practical skills for performing experiments and operating scientific equipment

( ) writing skills, for writing reports and for publications

( ) improve efficiency of manufacturing processes

( ) develop new food packaging or improve current packaging

( ) ensure food products meet specifications and standards (quality assurance)

( ) maths and computer skills

( ) investigate the sensory and nutritional properties of foods

1. What place can a Food Technologist work?

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1. Does this professional need to travel?

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1. Fill in with the information of this professional below:

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| **Name** | **Kind of food he works** | **Countries he work** |
|  |  |  |
| **Profession/Job** | **Place of work** | **Innovations his job requires** |
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1. What are the entry requirements for being a Food Technologist?

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1. Check down the personal characteristics a Food Technologist must have:

( ) accurate

( ) impatient

( ) persistent

( ) lazy

( ) unable to work well under pressure

( ) polite

( ) problem-solver

( ) disorganized

( ) good planner

( ) pretty

1. Is there any physical requirement for being a Food Technologist?

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1. Do you think a Brazilian can get a job in New Zealand as a Food Technologist? Why?

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1. If you have only the graduate degree, can you get a job easily in New Zealand?

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1. Which areas can you specialize after graduating?

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1. Where can you find more information about training?

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