



Briefing for Incoming Ministers Primary Industry Skills Programme



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Primary industry skills at a glance

A highly skilled, adaptive and evolving workforce is critical to the future of the primary industries in New Zealand.

In 2012, 350,000 people were employed in the primary industries, accounting for one in six jobs in New Zealand. This is expected to grow by 50,000, to 400,000 people by 2025.

Over the next decade there will be a need to increase the skill level of the primary industries by both up-skilling the existing workforce, and attracting more highly skilled new people, to meet a projected demand of 93,000 more people with tertiary qualifications. Management, business, scientific, technical, marketing, and cultural skills will be particularly critical, as well as lifting people management capability to improve retention of existing workers and better support their development.

MPI works closely with other government departments and with industry organisations to ensure that the highly dynamic labour market and the education system meet the needs of the primary industries.

Within the primary and secondary school system MPI is focused on increasing understanding of the primary industries and the diversity of careers within them and attracting young people into primary industry career pathways. At the tertiary level we are focused on helping to ensure that education and training meets the needs of industry.

MPI also supports specific areas of capability development through our grant programmes and regional initiatives, and contributes to other key government agency initiatives such as the Recognised Seasonal Employer scheme and the Sector Workforce Engagement Programme.

Activities in 2016/17 are focused on:

- maintaining the momentum in increasing student and public understanding of the primary industries and the career opportunities within them;
- growing primary industry leaders and strengthening the role of women in the primary industries;
- working alongside industry to lift people management capability;
- exploring the value industry currently sees in qualifications and how to strengthen this by working with the tertiary education sector; and
- addressing critical skill gaps, such as farm system expertise and precision agriculture, through our funds, grants and other specific initiatives.

Background

Overview of primary industry skills

Increased human capability is a key driver for the primary industries to grow and add value to our primary production, as well as to address environmental challenges and become more sustainable.

In June 2014 MPI published *Future capability needs for the primary industries in New Zealand*, forecasting the employment needs of the sector. This analysis was the first time that a whole of primary industries assessment had been undertaken covering all sectors and including roles in production, processing and the support services.

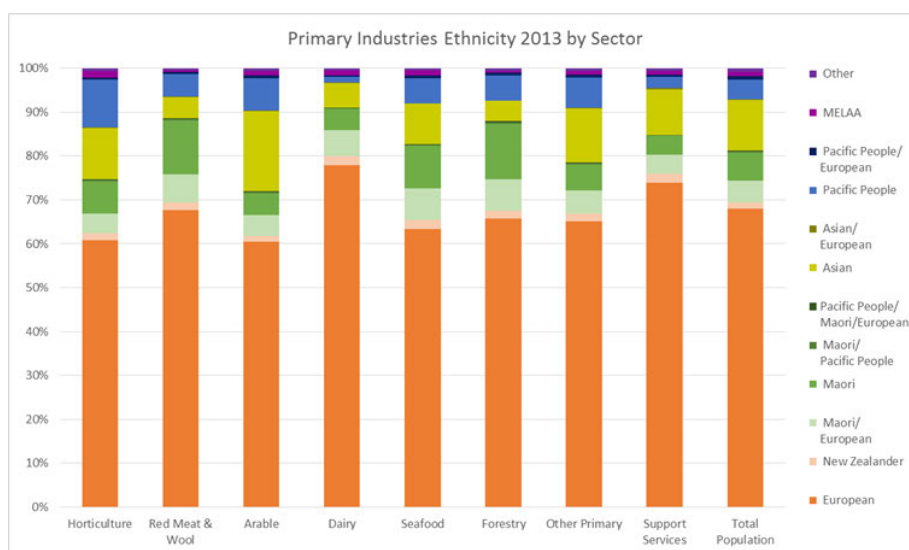
In 2012, 350,000 people were employed in the primary industries, accounting for one in six jobs. Between 2012 and 2014, the overall number of people employed in the primary industries rose by around 5,000 people or 1.5 percent.

In some regions such as Gisborne, Tasman, Marlborough and Southland, the primary industries accounted for nearly one in every three jobs, highlighting the importance of the primary industries in regional economic development.

Thirty-nine percent of people employed in the primary industries were directly involved in primary production; 32 percent in processing activities; and 29 percent in the support services (roles that service multiple sectors such as veterinarians, rural consultants, engineers and scientists).

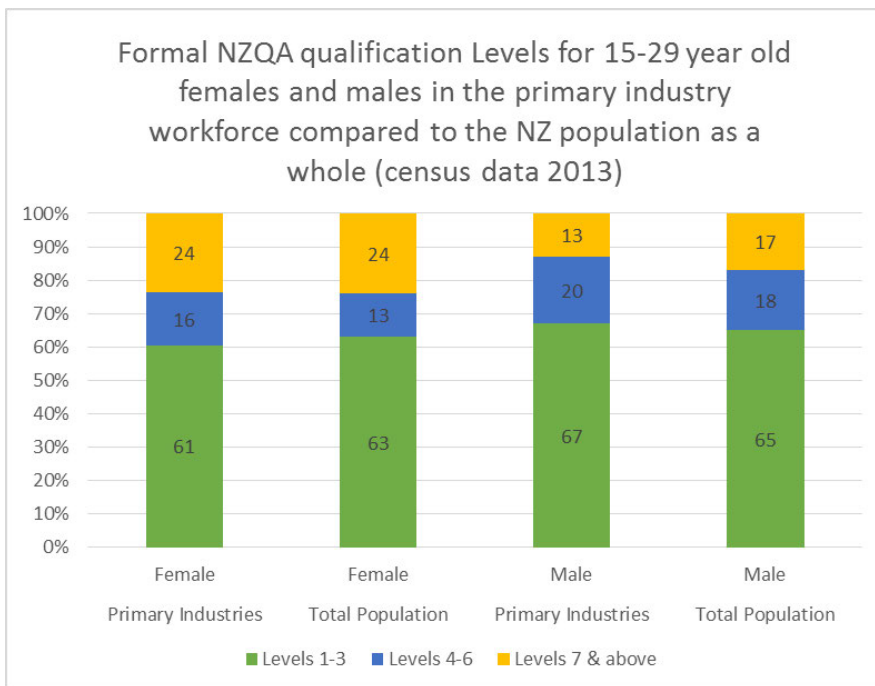
Self-employment is high in the primary industries, particularly in primary production (farms and orchards), and proportionally higher than in the national population (17.3 percent compared to 10.5 percent).

The primary industry workforce is also ethnically diverse, with the greatest diversity seen in the horticulture and arable sectors.

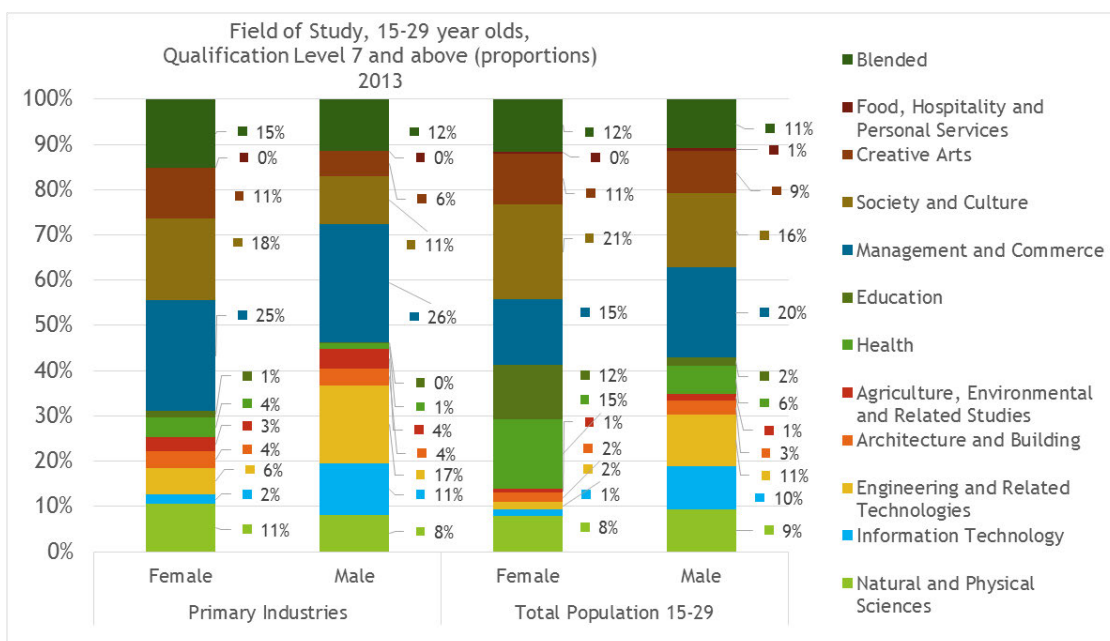


The composition of the primary industry workforce is 34 percent female and 66 percent male. Forestry is the sector with the lowest proportion of women (17 percent), and the arable sector has the highest proportion of women (48 percent).

The qualification levels held by people within the primary industry workforce are similar to the national population. Consistent with the national population, females working in the primary industries are more highly qualified than males, 24 percent of females compared to 13 percent of males hold a degree qualification or higher.



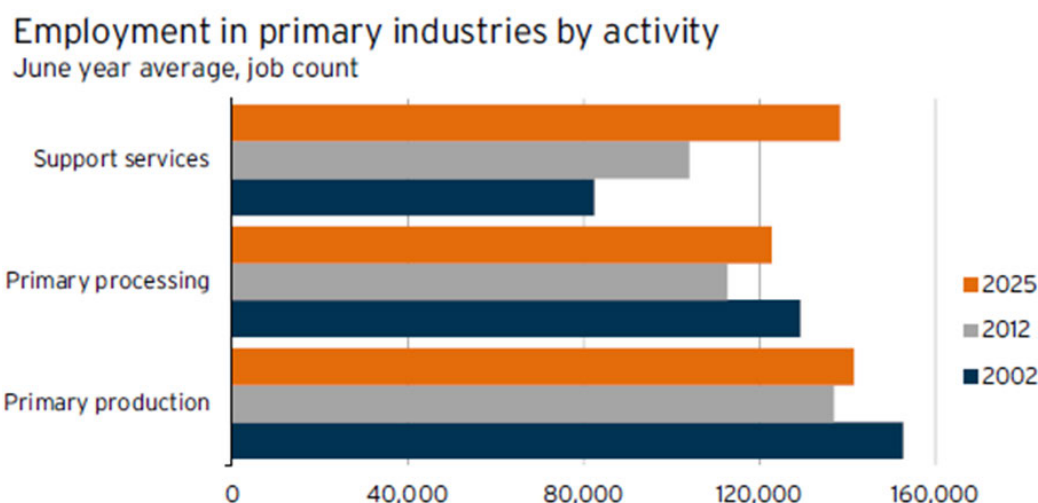
A wide variety of degree qualifications are held by the primary industry workforce highlighting the range of careers available. The most commonly studied fields include natural and physical sciences, engineering and related technologies, management and commerce, and society and culture.



Evolution of the primary industries workforce

The primary industries, with Government support, plan to double the value of exports by 2025. In doing this, there will be an increased focus on meeting consumer demands and our evolving export markets, especially with the growing importance of Asia. There will be an increased investment in innovation, greater automation and precision application of inputs such as water and nutrients, and greater use of sensing technology to enhance decision making. This means that production units will become more specialised, sophisticated and larger.

Over the next decade there will be a need to increase both the number of people employed in the primary industries and their skill level. By 2025 it is expected that employment in the primary industries will grow by 50,000 people to a total of 400,000 people.



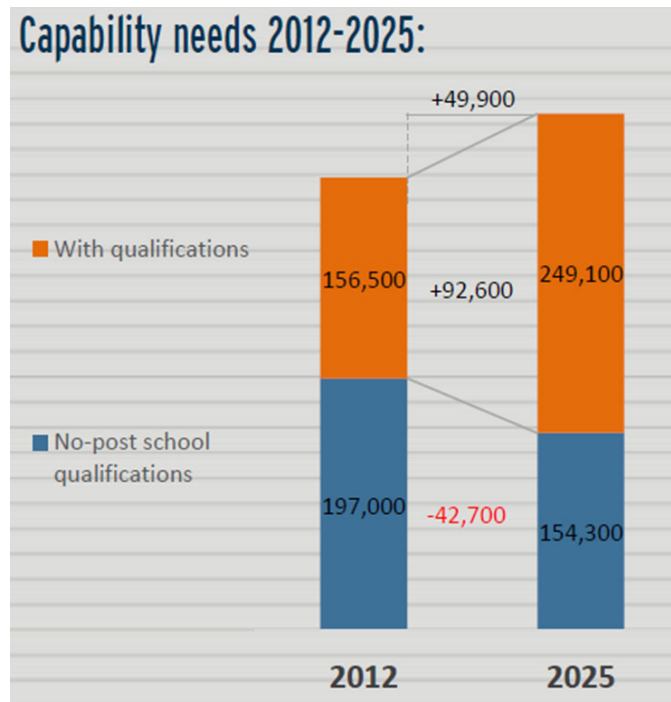
There is a growing demand for support services, including professional skills such as management and business, technical, and scientific skills. This is particularly important if we are to add more value to our primary products and will require more people who have studied science, engineering and technology.

With the need for a more highly skilled workforce, it is likely that formal qualifications will be required for roles that have traditionally not required them. This will increase the demand for on-the-job and professional training.

By 2025 it is expected that we will need 93,000 more workers with qualifications and 43,000 fewer workers without post-school qualifications.

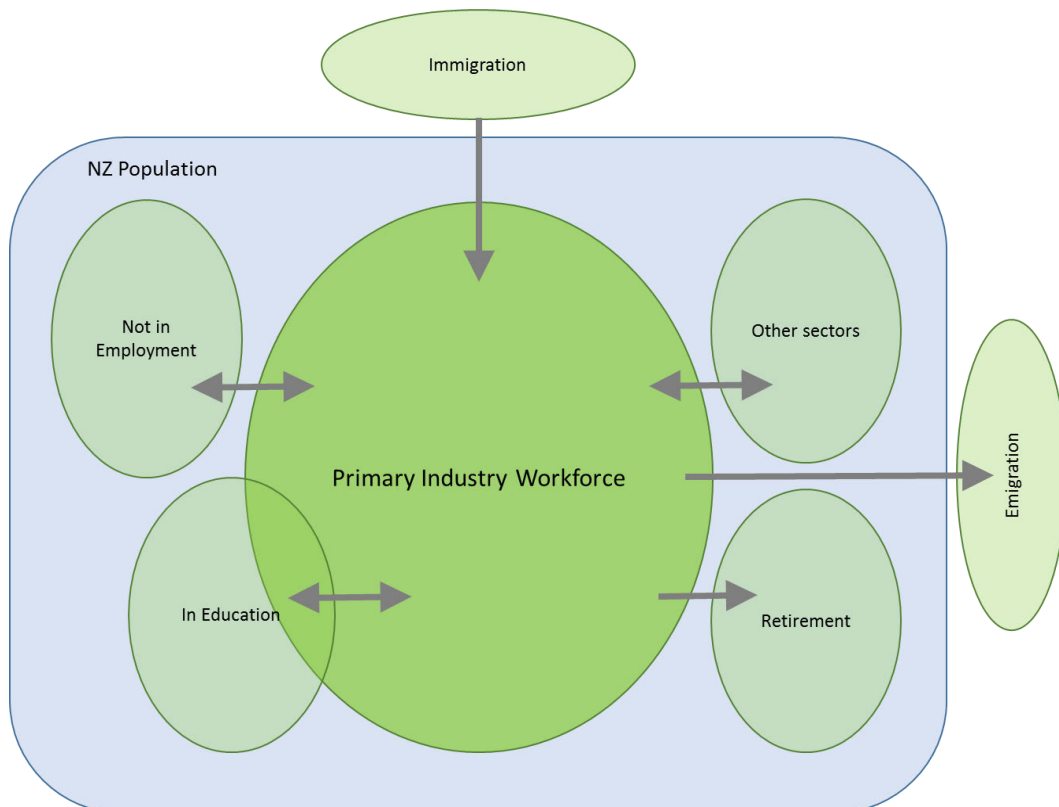
In 2002, only 36 percent of primary industry workers possessed a post-secondary school qualification. In 2012 that had increased to 44 percent and it is expected that by 2025 this will need to increase to 62 percent.

An additional 235,000 people will need to be trained to meet demand and replace the natural attrition of workers within the industry between 2012 and 2025.



Overview of the primary industries labour market

The New Zealand primary industries labour market is dynamic, with people moving in and out of work, between sectors and between jobs within a sector. The education system plays a vital role in this market by helping prepare people for work and up-skilling those within work.



This diagram illustrates the key stocks and flows relevant to the primary industries workforce. The size of the ovals is illustrative and does not reflect the actual number of people involved.

The education system and labour market regulatory systems are led by other ministries. MPI therefore plays an influencing and facilitating role. We work closely with other government departments and with industry organisations to ensure that the labour market and the education systems understand and meet the needs of the primary industries.

Within government, responsibilities particularly important for primary industries skills include the:

- Ministry of Business, Innovation and Employment: work in the areas of skills and employment, science and innovation, and immigration;
- Ministry of Education: work on education curriculum and policy at all education levels and vocational pathways;
- Tertiary Education Commission: work on tertiary education strategy and delivery; and
- Ministry for Women: work on the role of women in the primary industries and in STEM (science, technology, engineering and maths), and women's leadership development.

MPI's focus within the labour market

MPI's focus is helping to ensure that the primary industries have access to the skills they need to continue to succeed. This includes focus on creating regional employment opportunities, working with industry bodies to support better employment practices, and ensuring that our immigration policies are appropriate.

We work closely with industry and other government departments to ensure that there is a robust evidence base (for example, our forecasting work both on overall labour demand and seasonal demand) and that initiatives are well designed and reflect the unique nature of the primary industries.

MPI's role in education

Primary education

In primary education, MPI is focused on working with industry to create student awareness of the sector through the availability of curriculum resources that are based on the primary industries.

Secondary education

In secondary education, in addition to curriculum resources, MPI has a strong focus on ensuring that students are aware of the wide range of career opportunities within the primary industries. This includes engagement in Career Expos, field days and teacher conferences.

There are a number of primary and secondary schools that have a specialist learning focus on the primary industries. Other schools, particularly in the regions, have used their local primary industry sectors as a valuable way of contextualising the curriculum.

The Ministry of Education's Vocational Pathways are a key lever for promoting primary industries careers. They are helping young people to make informed choices by providing clearer lines of sight from school to meaningful study and employment destinations. One example is the work of the Primary ITO trades academy, which has 500 young people studying primary industries related learning as part of their NCEA Level 2 while still at school.

Tertiary education

At the tertiary level MPI is focused on helping to ensure that education and training is meeting the needs of industry. The majority of qualifications within the primary industries are currently at a sub-degree level. Private training establishments, such as Taratahi, and polytechnics such as Toi Ohomai Institute of Technology, are important education providers to the primary industries. At the degree level Massey and Lincoln Universities are recognised as key specialist providers of primary industries skills. The breadth of the skills required for our increasingly diverse sectors means that all New Zealand universities are a critical source of graduates.

The industry training organisations (ITOs such as the Primary ITO and Competenz) play a critical role in working with industry and tertiary education providers to develop and deliver the skills that benefit trainees and employers. The ITOs set national skill standards, lead qualifications development, and play a central role in industry-related vocational education and training.

Role of industry in education

Within the primary industry a number of organisations are active in growing skills and supporting careers. Individual industry bodies have a focus on helping to grow skills and strong career paths in their sectors. This includes helping attract people to their sectors, and also up-skilling the workforce and being better employers. A good example is the DairyNZ and Federated Farmers *Sustainable Dairying: Workplace Action Plan* which has a focus on: balanced and productive work time; fair remuneration; wellness, wellbeing, health and safety; effective team culture; and rewarding careers.

The Primary Industry Capability Alliance (PICA), established in 2014 with assistance from the Transforming the Dairy Value Chain Primary Growth Partnership (PGP) programme, brings together key organisations with an interest in growing primary industry skills. Their role includes working with primary and secondary schools to ensure they understand the primary industries and the exciting careers offered by the primary industries.

MPI's skills work programme

The objectives of MPI's work programme to help meet the future capability needs of the primary industries are to:

- attract more people to the primary industries by improving public understanding of the diverse range of careers within the primary industries;
- target people with specific skills identified as gaps (for example, environmental management) and attract them to the primary industries;
- develop primary industries leaders; and
- up-skill the existing workforce.

MPI's work has four strands:

1. the Future Skills work programme, which concentrates on attracting, training and retaining talented people in the primary industries, focusing on students and public awareness;
2. support for specific areas of capability development through grants programmes and specific projects;
3. growing skills through regional initiatives as part of the regional economic development work; and
4. contributing to other government agency initiatives that are particularly important to the primary industries.

1. Future Skills work programme

Budget 2015/16 allocated \$1.8 million over two years to a Future Skills work programme. The programme has focused on helping New Zealanders (particularly school age) to better understand the primary industries and the broad range of career opportunities available. The work programme has five components: champions, ambassadors, curriculum, careers, and workforce analysis.

Champions initiative

The Champions initiative – Growing Our Future – was launched in June 2016. It consists of a series of short videos that feature a mix of 'everyday' champions, and well-known New Zealanders who may have grown up on farms or have personal connections to the primary industries. The initiative is aimed at increasing the general public's awareness of the primary industries, demonstrating the breadth of career opportunities available in the primary industries, and celebrating people doing great things in the primary sector.

Twenty videos have been published to date and are getting solid hit rates (nearly 27,000 total views) through social media. In 2017 we will be publishing further videos and working with primary industries organisations to make the publication of further videos part of their business as usual.

Ambassadors programme

The Ambassadors programme facilitates primary industries ambassadors visiting schools. Ambassadors are early career professionals in primary industries roles with a focus on science, technology, engineering, and maths (STEM) related careers. The programme is designed to give school students, teachers and caregivers a greater awareness of the opportunities for primary industries careers and an appreciation of how what the students are learning in school relates to the primary industries.

The programme will run from November 2015 to June 2017. An evaluation of the programme is being undertaken to determine its impact. The number of primary industry relevant ambassadors has grown from 50 to over 150 with over 500 visits to some 140 schools in 2016.

Curriculum resources

The primary industries provide a valuable context for cross-curriculum learning. Embedding primary industries learning in schools is a great opportunity for increasing the understanding of the primary industries and their role in New Zealand.

The focus of this part of our work is to increase the availability of high-quality primary industries curriculum resources being used in schools. This is being done through funding the development of some resources as well as helping our primary industries organisations to better understand what is required to develop great resources.

Careers

The careers work focuses on initiatives that target enhancing the information available to students and teachers on primary industries careers. It has included the Enterprising Primary Industries Careers (EPIC) challenge (which focuses on year 10 students exploring primary industries careers), supporting industry initiatives that provide presentations to teacher conferences, and contributing to career days and field days.

In 2017 MPI will provide support for particular careers-related events, for example, the Get Ahead Experience Days run by Young Farmers.

Primary industries workforce analysis

To update our understanding of the primary industries workforce we have analysed the available data in the Statistics New Zealand Integrated Data Infrastructure. We are now able to monitor the changes in the primary industries workforce with regard to numbers employed, qualifications, fields of study, and demographics. This can be done at both a national and regional level and be compared to the wider population.

In 2017 we will publish the results of this analysis and further explore data relating to women in the primary industries and retention levels within different sectors.

2. Contributing to skills through grants and projects

MPI grant programmes and specific policy projects are a critical part of our work on skills. They address specific skill vulnerabilities and needs.

Primary Growth Partnership programmes, such as Transforming the Dairy Value Chain and the Red Meat Profit Partnership have projects focused on building skills and capability. A number of the programmes have activities in schools to develop curriculum and attract talent. The programmes also work with professional bodies, such as the New Zealand Institute of Primary Industry Management (NZIPIM), and fund PhDs and post-doctoral positions for young scientists in key research areas.


We also invest around \$25.8m in skills and capability work in our other investment funds. This includes \$16.9m of grass-roots extension and research projects through the Sustainable Farming Fund, \$1.7m of farmer environmental education through the Hill Country Erosion Fund, and \$7.2m towards rural veterinarians through the Voluntary Bonding Scheme for Veterinarians.

Policy projects such as our Farm Systems Change initiative also support capability development. A future focus of the Farm Systems Change initiative will be supporting skill development among rural professionals and farmer-to-farmer learning to support sustainable growth.

3. Growing skills through regional initiatives

Skills development and extension is a high priority for regions within the Regional Growth Programme (RGP). MPI supports skills development and extension activity across the priority regions, most notably in Northland.

Examples of specific regional initiatives for the primary industries include:

- **Northland: Kaikohe GROW** – this project began in February 2016 with 34 unemployed young people from Kaikohe participating in a pre-employment programme, with twelve months of wrap-around support for the participants and the employers that place them in work. This project is expected to finish on 23 February 2017. The evaluation, including lessons learnt, will provide valuable input into the design of the broader work focused on people not in employment education or training occurring across the regions;
- s 9(2)(f)(iv) 
- **Hawkes Bay: Training Hub** – MPI is leading the development of a feasibility study for a joint venture primary industries training hub in the Hawke's Bay to address skill shortages in key industries in the region. This is still in the very early stages with scope still being clarified; and
- **Manawatu-Whanganui: Accelerate25 Action Plan** – MPI is working with the sheep and beef sector to support a farm mentoring programme (farmers

learning from farmers) and a network of extension programmes for hill country sheep and beef farmers. The aim is to increase the capability of farmers so that they have the confidence to reinvest in their business.

s 9(2)(f)(iv)

4. Supporting other government initiatives

Sector Workforce Engagement Programme (SWEPP)

In 2015, the Ministry of Business, Innovation and Employment established the Sector Workforce Engagement Programme (SWEPP) to manage the relationship between the Government and a range of industries that have specific workforce needs. Dairy, horticulture, and viticulture are within scope of the programme.

In dairy, SWEPP is working closely with industry and agencies to develop a workforce strategy to improve the domestic pipeline and employment opportunities for New Zealanders. s 9(2)(f)(iv)

Recognised Seasonal Employer (RSE) scheme

Horticulture and viticulture crops generally have short periods of high labour demand (such as during harvest). Managing this labour demand and ensuring that there are sufficient workers available at the right time is crucial to these sectors maximising export revenue. Horticulture and viticulture exports are worth \$5 billion for the year ending 30 June 2016.

The RSE scheme is a visa scheme administered by MBIE. The Minister for Immigration has the portfolio responsibility for the scheme. The scheme allows employers in the horticulture and viticulture industries to employ migrant workers on a temporary visa during periods of peak workload.

A recent analysis of horticulture labour supply and demand commissioned by MBIE identified a national shortfall of 2,500 full time workers in the 2016/17 season and forecast a shortfall of 5,500 by 2020/21. In response to these findings, the Minister of Immigration increased the national cap on RSE visas from 9,500 to 10,500 from the 2016/17 season.

The 'New Zealander first' principle is core to the RSE scheme. One initiative is the 'New Zealand Seasonal Worker Scheme', which involves Work and Income working closely with horticulture employers in particular regions in order to identify and support New Zealand workers into seasonal roles. s 9(2)(f)(iv)

Key challenges and next steps

MPI work to date on skills has:

- provided an evidence base and targets to aspire to for the primary industry sectors;
- created a platform to drive skills needs across the primary industries;
- created and/or strengthened partnerships across government, between government and primary industry, and between industry sectors; and
- shifted the conversation about skills in the primary industries from being about low skills on farm to diverse skills across the value chain.

Key challenges

We need to increase both the number of people employed in the primary industries and their skill levels. This includes attracting more people with science, engineering and technology skills at a time when there is increased competition for people with these skills both domestically and internationally. As we diversify the products we produce, the range of countries we export to, and add greater value to what we produce, we also need more people with strong leadership, people capability, marketing, commercialisation, language and cultural awareness skills.

We also need to ensure that we up-skill the existing workforce in these areas. To achieve this we need training and development that is fit for purpose and a culture of continuous professional development within the primary industries. We need employers and managers that encourage, support, and reward their staff to up-skill and employees who clearly understand and receive the benefit from up-skilling.

In addressing these key challenges it is important that we:

- **maintain the momentum** in attracting people to the primary industries by increasing student and public understanding of the primary industries and the career opportunities within them. The range of activities to date by government and industry has resulted in significant improvements in this area. The key challenge is to ensure this is strengthened and mainstreamed for long term impact;
- **support a lift in people management capability.** We need to identify how we can best support employers and managers to improve employment opportunities and conditions. While there are many excellent employers in the primary industries there is an opportunity to lift employers' people management capability to improve retention of existing workers and better support development of their skills;
- **increase diversity in the workforce.** There is the potential to increase the diversity of talent within the primary industries by understanding and addressing the barriers to women in the primary industries and looking at how we grow future leaders within the primary industries. Ethnic diversity is also critical to the future of the primary industries; and
- **ensure that training and development is fit for purpose.** There are still significant challenges in ensuring that training and development for staff across primary industry sectors is well targeted and well delivered. Ensuring

that graduates are 'work ready' and that in-work training and qualifications are high impact will be critical. A key challenge for MPI will be determining how best we influence this area.

s 9(2)(f)(iv)

s 9(2)(f)(iv)

