2025 Investment Advice to TEC

Submitted in November 2023

MUKA TANGATA
People, Food and Fibre
Workforce Development Council

Contents

Muka Tangata

is the Workforce Development Council for the food and fibre sector.

We represent 14 industry groups that make up the food and fibre sector.

- Apiculture - **Te tiaki whare pī, mahi mīere hoki**

- Arable - **Whenua whakatipu kai**

- Dairy farming - **Pāmu miraka kau**

- Equine, Greyhounds and Racing - **Hōiho, kuri me te Rērehi**

- Forestry - **Mahi ngahere**

- Fruit - **Huarākau**

- Grapes and Wine - **Ngā Karepe me te Waina**

- Nursery, Turf, and Gardening - **Whakatipu rākau, karaike, me te mahi māra**

- Poultry, Pigs, and other livestock farming - **Whakatipu heihei, poaka, kararehe hoki**

- Seafood - **Kaimoana**

- Sheep, Beef, Deer, and Wool farming - **Whakatipu hipi, pīwhi, tia hoki**

- Support Services - **Ratonga Tautoko**

- Vegetables - **Huawhenua**

- Veterinary Services and Animal Care - **Rata kararehe**

Overview

Key drivers of the advice

We are seeking ākonga (learner) number increases across most of our industries because:

- Most of our industries have experienced a period of workforce growth during the five years leading up to 2020 (see Te Mata Rarunga – Muka Tangata - Workforce for individual industry workforce counts) but learner numbers have been falling over that period. Combined with low retention rates (Te Mata Rarunga – Muka Tangata - Workforce for new entrant retention rates and industry tenure) this means that the 'supply' pipeline has not kept up with demand for skilled workers.

- MPI workforce forecasts predict increases in many of our industries' workforces over the next 10 years (see MPI – Future Workforce Analysis) but they expect the mix of skills required to change with an increased need for more highly skilled workers, especially managers and semi-autonomous workers (including in industries where workforces may not be increasing). We are therefore seeking increases for qualifications that provide those skills.

- However, our sector has relatively high levels of workers with no qualifications and generally the distribution of qualifications skews towards lower-level qualifications (see Te Mata Rarunga – Muka Tangata - Workforce for highest qualification rates for each of our industries). While we have a focus on raising skills, we also need to feed the skills pipeline and increase the flow of learners at those lower levels. In addition, industries want new entrants – often from outside the sector – to have a better set of core competencies and be more 'work ready'.

Overarching advice

- The food and fibre sector needs more skilled workers – the level of qualifications held by existing workers in our sector is low compared to benchmark levels in other sectors. We need an increase in both a skilled pipeline of new workers to meet workforce increases and a much deeper level of skill to support workforce productivity.

    - The increases we are asking for are modest in the context of the current skills gap the sector needs to close to hit parity with benchmark sectors. Analysis of 2018 census data shows that 20% of the Muka Tangata workforce have no qualifications – we would need over 13,000 new training places just to close that gap in this one area and over 30k more trained at Level 4 to achieve parity with benchmark industries at this level[1].

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[1] Enrolment estimates based on completion rates of ~65%, which is higher than current estimates for Agriculture, Environment and Related studies but in line with averages across all subject areas. Highest qualification rate of the workforces taken from Census 2018. Figures presented here are benchmarked against those working in Construction industries.

- We have not been specific about mode at a qualification level. In general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

- To support greater workplace training provision and choice – we recommend that PTEs are also permitted to deliver funded work-based training.

- The rising cost of training is a critical concern for our sector. Many of our industries are struggling with profitability and responding to immediate costs and rising prices.[2] The regional distribution and practical training needs of our workforce also makes it challenging for providers to offer the choice and flexibility of training that our sector needs. Without an appropriate funding/pricing approach to training, our sector will not be able to invest in developing the skills it needs to support our future economic and productivity needs. Muka Tangata is keen to explore funding options to meet these challenges with TEC.

How we determined our advice

Our advice is based on three key inputs:

- MPI workforce forecasts which set the broad workforce supply needs for each industry by skills level (managers/semi-autonomous/managed) (see MPI – Future Workforce Analysis) – we have matched these skills levels to our qualification levels for each of our industries (see Appendix A for details of this analysis)

- The skills needs/gaps identified by industries through our engagement with them (including when developing our Workforce Development Plans) – we have mapped these skills needs to our qualifications (see Appendix B for details of who we have engaged)

- An analysis of the enrolment trends for our qualifications based on Nga Kete data – which we have calibrated against the MPI workforce forecasts.

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[2] Situation and Outlook for Primary Industries (SOPI) June 2023 (mpi.govt.nz) – see p12 Costs from Cyclone Gabrielle, p. 20 (Cost of living crisis and inflation) and p. 26 Fig.8 Farm Expenses increase 12% in 2022/23

Things to note

- We have not made specific recommendations for ākonga Māori and underserved learners as these are already covered in TEC's previous Priorities for Investment (Achieving system-wide equity; Honouring Te Tiriti o Waitangi through tertiary education; Education that delivers for learners; Responding to changes in education and training) which we understand will be part of Plan Guidance for 2025.

- We have a number of qualifications that serve multiple sub-industries and industry groupings (for example stranded qualifications for horticulture and agriculture).

We do not have the ability within 'stranded' qualifications to see which strand a SDR learner is taking – we therefore have to determine any increase in learner numbers at the level of the total qualification (not the strand).

- We have qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We have identified these in the table. We welcome discussion on any proposed delivery numbers that seem excessive.

- In general, we have expressed our increases as a percentage increase of learners on a base of 2022 learner numbers. This is to avoid giving the impression of misleading precision. As noted above, we are wanting to reverse declining trends and change the profile of our workforces to meet the need for more and higher skills. In a few cases, we have given an indication of the increased learner number size. This is where there are relatively small enrolments in a qualification (so percentage increases can be 100% or more). [note that, in general, enrolment numbers in individual qualifications are not large, so bigger percentage increases do not necessarily equate to big learner numbers]

- We have highlighted some areas of regional demand from RSLG insights and from industry engagement at a qualification level. In general, we would expect regional provision of training to mirror the respective industry workforce. Details on the regional distribution of our workforces can be found at a summary level on [Te Mata Raraunga](#) with more granular industry information contained within Muka Tangata's 'Workforce' analysis sections of each industry workforce development plans (Links to these are provided in the related industry sections below).

- TEC have requested that we assign different levels of priority to specific qualification increases. Our Advice provides evidence of significantly greater need than we are asking for in this round. We are providing TEC with a balanced portfolio of pragmatic and evidenced increases which total to less than 3,000 extra places (or around 1% of the workforce). Our sector as a whole should be prioritised for investment – but if TEC wish to operate a 'zero-increase for the sector cap' policy then this increase in places could largely be offset by indicated potential reductions to New Zealand Certificate in Horticulture (General) (Level 3) which currently has over 3,600 students which analysis and testing with industry bodies indicates are unlikely to be either in the Horticulture workforce or part of the pipeline of new entrants.

Pan Sector advice

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
Pan-Sector qualifications These qualifications provide skills that are relevant to a number of industries across our sector.						
New Zealand Certificate in Primary Industry Skills (Level 2): Optional strand in Self-Management and Employability Skills [2218]		All regions – but note RSLG specifics: Nelson Tasman (aquaculture strand), West Coast (dairy, sheep, beef and deer, and pork, poultry and other livestock), Wellington (arable in the Wairarapa), and Hawke's Bay.	15%	Across our sector, the workforces have significant proportions who hold no qualifications (20%) or at Level 1 (15%) – significantly worse than industry benchmarks. Those lacking qualifications or holding low levels of qualifications typically are strongly correlated with the priority groups that that WDCs are required in our Orders in Council to provide opportunities for.[3] With COVID-19 disruption exacerbating downward trends in student retention and attainment[4], provision of entry-	The New Zealand Certificate in Primary Industry Skills is designed to meet the needs of industries by enabling workers to carry out practical tasks associated with an entry level role in a primary industry context; including using safe work practices and self-management skills. It is targeted at new or potential entrants into the	High Priority

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[3] Education Counts data shows the proportions of school leavers with no or low level of attainment is strongly associated with school decile and ethnicity https://www.educationcounts.govt.nz/statistics/school-leavers
[4] Ibid

				level vocational education opportunities is even more critical for building basic skills that these learners will lack and	primary sector including seasonal workers, career changers and those	
				for providing pathways for these learners back into further education and training and the associated employment and progression pathways.	not yet engaged in education, employment or training.	
				A repeated concern from across nearly all of our industries has been the need for a strong set of basic skills for workers in the food and fibre sector, especially for those who are not familiar with those work settings. Over the period 2015-2022 the sector has average ~67,500 new entrants per year. Over half of new entrants are industry changers and retention rates for the food and fibre sector are low.[5] With labour shortages across all sectors, all industries, not just in the food and fibre sector, are accessing workers they have not traditionally used. These workers need new skills to be able to perform productively – and safely – in their industries.		
				From our engagement with the food and fibre sector, industries have particularly identified health and safety, self-		

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[5] See https://mukatangata.workforceskills.nz/highlights/retention/

				management and 'employability' skills as key gaps in their workforces (in fact these form the most often cited skills gaps by industries), especially for new entrants.		
New Zealand Certificate in Primary Industry Operational Skills (Level 3): Optional strands in Specialist Equipment, and Infrastructure [2215]		All regions – but note RSLG specifics: West Coast, Hawke's Bay and Wellington, who are specifically seeking an increase for the arable industry in the Wairarapa.	20-25%	Industries from across our sector have identified the need to strengthen a core set of capabilities for workers, both those entering the industry and the existing workforce. In particular, industries want people who can (safely) operate vehicles, machinery, and other specialist equipment; and maintain infrastructure.	The New Zealand Certificate in Primary Industry Operational Skills is one of the sector's central cross-sector qualifications designed to provide primary industry workplaces with individuals who can safely and effectively carry out operational activities which involve vehicles, machinery and specialist equipment, and infrastructure. Learners will benefit by having a qualification within a training pathway that recognises progression through the industry and enables improved job performance.	Priority
New Zealand Diploma in Primary Industry		All regions – but note RSLG specifics: Canterbury, Nelson Tasman, Marlborough	10-15%	MPI workforce forecasting indicates the need for more skilled workers, with both technical and	The New Zealand Diploma in Primary Industry Management is a pan-sector	High Priority

| Business Management (Level 5) [2221] | | and the West Coast. The West Coast has particularly highlighted an increase for dairy, sheep, beef and deer, and pork, poultry and other livestock industries. | | business/managerial skills needs rising. Most of our industries have also highlighted leadership as a pressing skills gap, alongside a need for business planning and financial management. Environmental sustainability - and the skills required to respond to a changing environment - is an emerging issue for the sector. | qualification that builds financial management, business planning and general business decision-making skills. It also contains skills around leadership, including for staff employment and work allocation, and applying interpersonal and leadership skills to monitor staff performance, health, safety, and well-being requirements in a primary industry business. It enables a graduate to plan, implement and review the environmental sustainability requirements of a primary industry business. | |

Are there qualifications or credentials that you are developing or plan to develop that will be available in 2025?

Area of provision and/or qualification/ credential name (if known)	Level	Mode (if specific)	Qualification or micro-credential	Estimated date it will be available	Description of content (10–20 words)	Name of qualification or micro-credential this will replace (if relevant)
Entry Level Qualification Development Project: including stackable MCs				Our expectation is that these would be available for 2025 (Forestry and Seafood entry level MCs should be available in 2024)	We are planning to build flexible, sustainable, and enduring learning pathways for learners as they enter the primary industry sector. AS part of this project, we will also reach out to other Workforce Development Councils to ascertain areas of shared interest to support learner mobility.	

Horticulture qualifications advice

These qualifications serve our Fruit; Vegetable; Grapes and Wine; and Nursery, Turf and Gardening, industries.

Fruit

Our Fruit Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Fruit industry trends

Despite recent short-term volatility and disruption from weather events, industry is forecast to grow substantially – this will drive increases in training needs

The gradual return of working tourists, RSE workers and increased availability of air freight has improved harvest and freight logistics for the fruit industry.[6] However, climate change, with the accompanying disruptive weather patterns, such as Cyclone Gabrielle has had a severe impact on the Hawke's Bay fruit harvests, which means that there will be a long period of recovery for some growers. Warming temperatures in some parts of the country may have benefits for the fruit sector, such as extending growing seasons,[7] but any benefits are outweighed by the negative effects of increased rainfall variability, droughts, and water shortages.

For the kiwifruit industry, problems escalated with quality issues in late 2022 due to labour shortages, through to poor pollination, flooding, and other adverse weather conditions in early 2023 reducing crop size and impacting exports and finances. However, the outlook for 2024 is looking significantly better.

In the year to 31 March 2023 export revenue is forecast to fall 2.8% to $2.6 billion for the Kiwifruit industry. Despite the challenges facing the industry in the near term, the outlook for the kiwifruit export industry is still positive, with demand for fresh fruit remaining high and export revenue growing by 10% annually over the last five years.

As a niche market, cherry export revenue is forecast to increase 24% to $96 million for the year to 30 June 2023.[8]

[6] Situation and Outlook for Primary Industries (SOPI) December 2022 (mpi.govt.nz) p54
[7] Climate regulation in New Zealand: contribution of natural and managed ecosystems (landcareresearch.co.nz)
[8] (SOPI) December 2022 (mpi.govt.nz) p51

By 2022, Aotearoa export revenue for fruit was valued at $4.2 billion. This was a 2.3% increase from the previous year, although revenue for 2023 is forecast to fall by 7.4%.[9]

Horticulture export revenue as a whole has been growing steadily since 2015 and continued to grow throughout COVID-19-19. The export revenue is forecast to increase 5% to $7.1 billion in the year ending June 2023.

Actual and forecast horticulture export values year ending June, 2015 - 2024
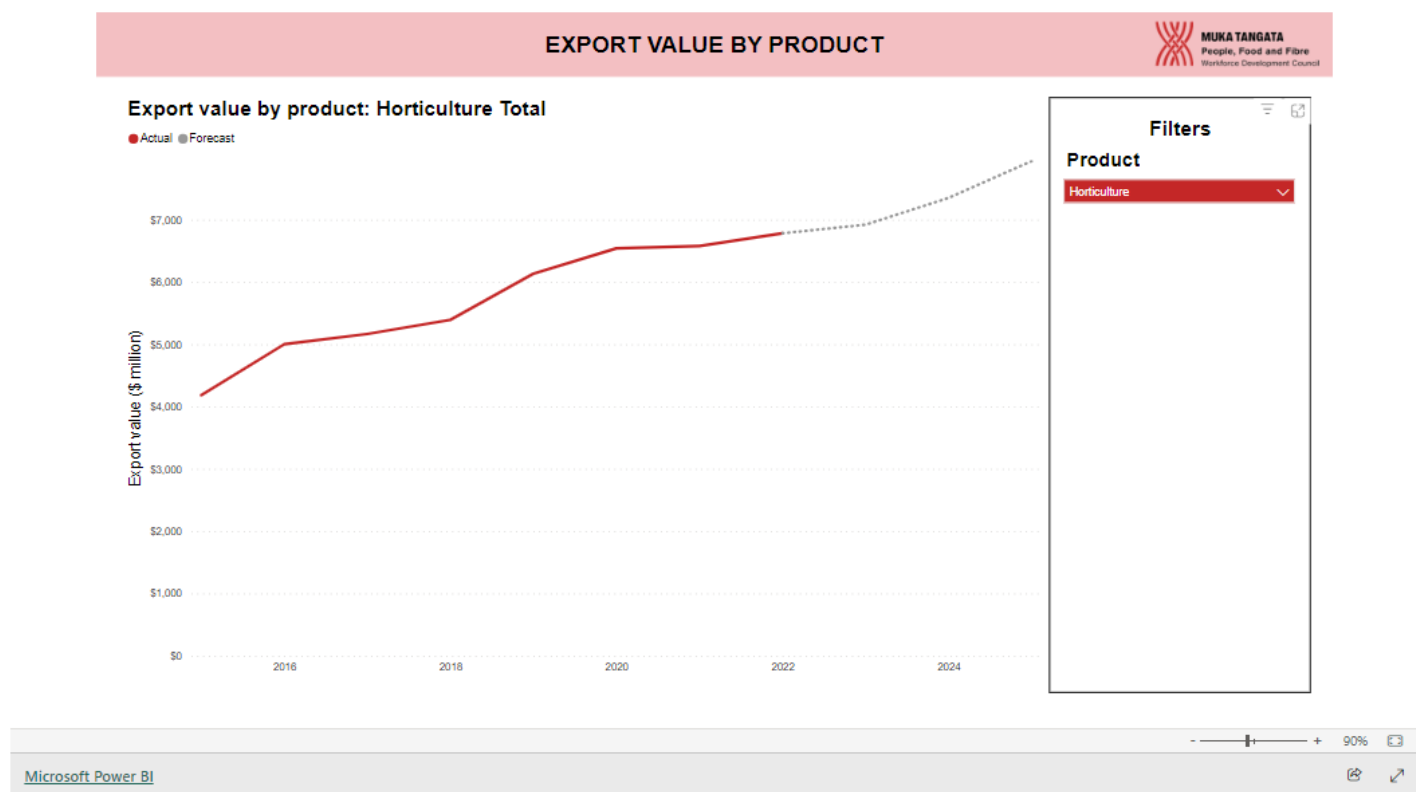
Source: Stats NZ and MPI

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[9] Fruit » Muka Tangata Workforce Development Council (workforceskills.nz)

Table 11: Horticulture export revenue 2019–27

Year to 30 June, NZ$ million

Product	Actual				Forecast				
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Kiwifruit	2,302	2,546	2,684	2,898	2,420	2,910	3,410	3,590	3,750
Wine	1,807	1,906	1,855	1,935	2,500	2,450	2,450	2,520	2,600
Apples and pears	839	883	823	865	850	800	830	880	920
Fresh* and processed** vegetables	696	701	629	622	710	750	760	790	810
Other horticulture***	489	505	588	461	440	450	490	520	550
Total export value	6,134	6,541	6,579	6,782	6,920	7,350	7,940	8,310	8,630
Year-on-year % change	14%	7%	1%	3%	2%	6%	8%	5%	4%

* Includes onions, squash, capsicum, potatoes and other fresh vegetables.

** Includes frozen vegetables (including frozen potatoes, peas, sweetcorn, etc.), dried vegetables, dry legumes, prepared and/or preserved vegetables and vegetable juices.

*** Includes other fresh fruit (including avocados, cherries, blueberries, etc.), frozen and processed fruit, fruit juices, nuts and ornamentals.

Totals may not add up due to rounding.

Percentages are rounded to the nearest whole percent.

Source: Stats NZ and MPI.

Fruit workforce trends

The workforce has been increasing over time but has high levels of seasonal variation (which affect how forecasts should be treated). The horticulture sector workforce as a whole is forecast to increase by at least 16% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements. The sector has very strong reliance on those on temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

Fruit workforce overview and highlighted demographics

26,770 individuals worked in the fruit industry across 2020. Pacific peoples are the most strongly represented in the fruit industry (of any Muka Tangata industry) at 21%, while Māori represent 17%, and 11% are Asian. The Fruit workforce has the highest reliance on temporary and work visa holders of any of our industries with 14% comprising RSE workers and a further 14% on Working holiday visas in 2020. This makes it vulnerable to changes in immigration trends and policy shifts.

The count of individuals working in the Fruit industries in 2020, by employment type

Figure 3:https://mukatangata.workforceskills.nz/explore-industries/fruit/workforce-5/
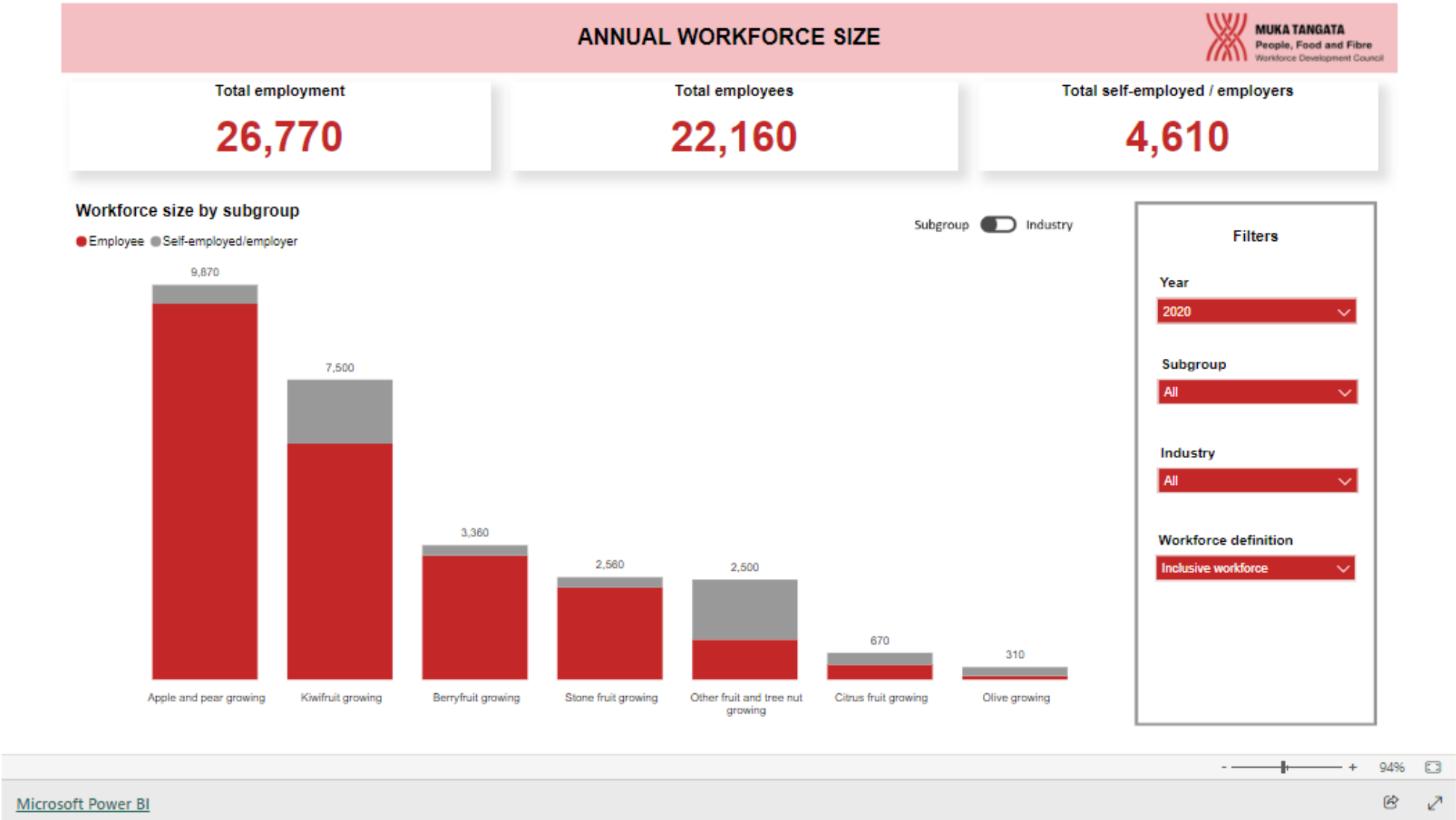
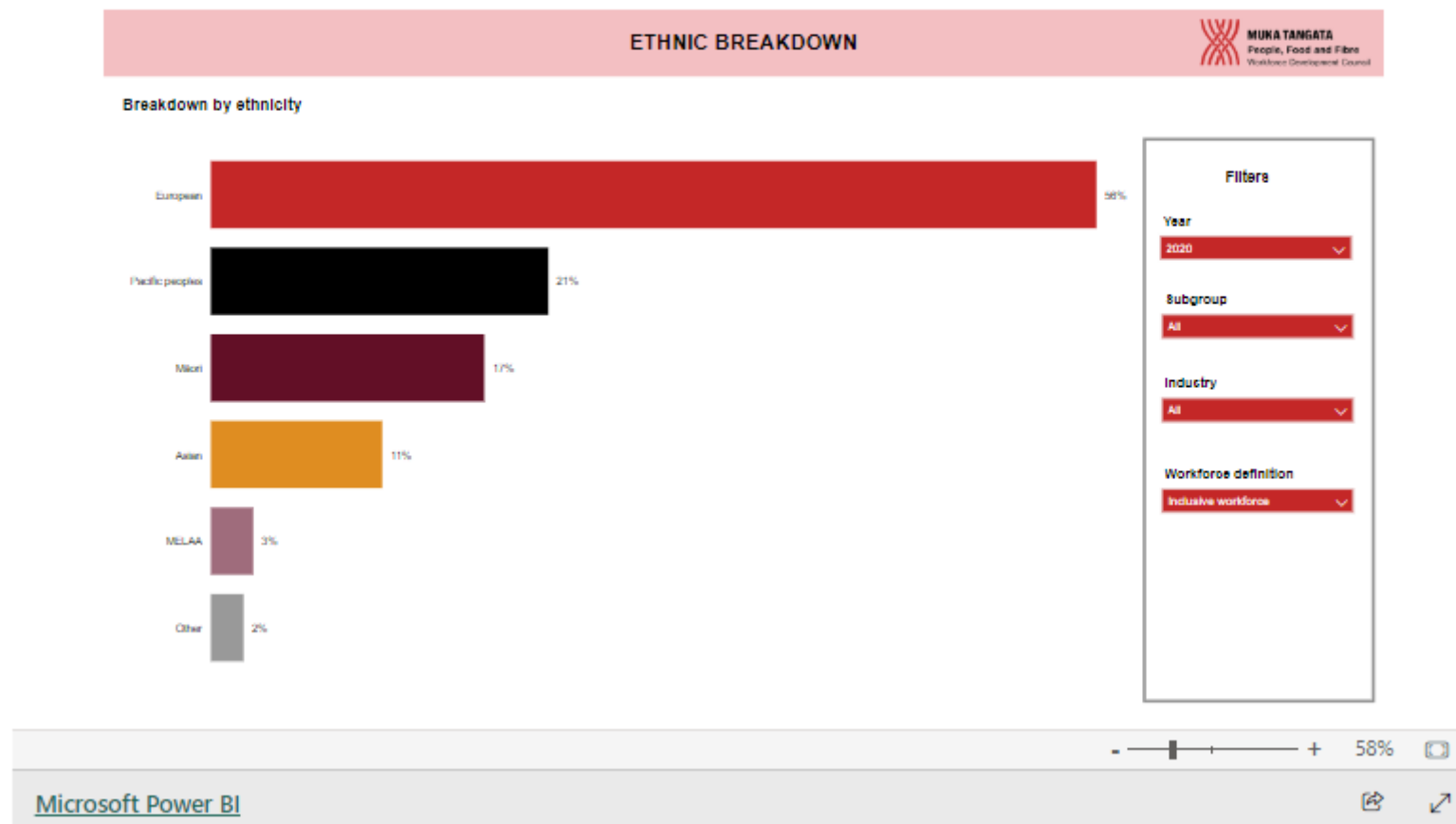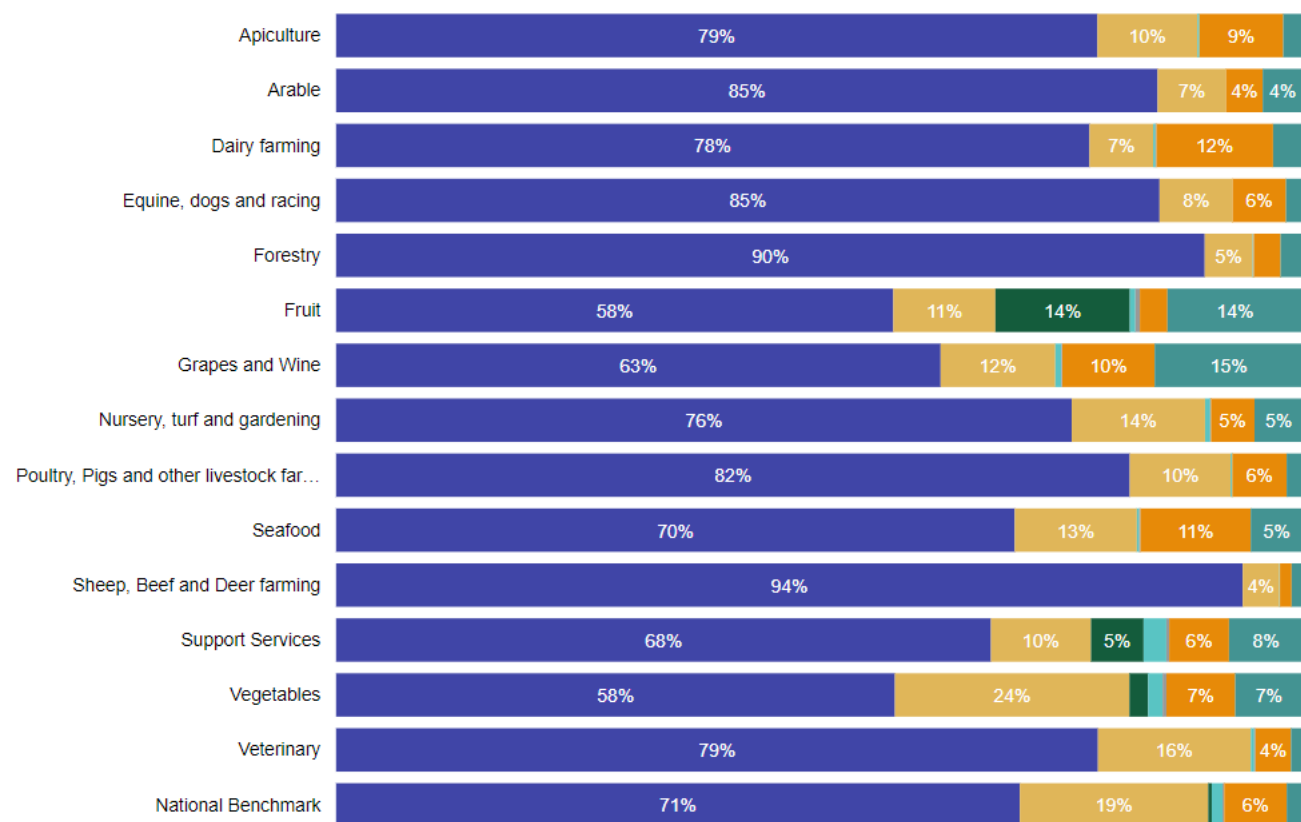# The ethnic composition of the individuals working in Fruit industries in 2020

Figure 4 https://mukatangata.workforceskills.nz/explore-industries/fruit/workforce-5/more-analysis-2/

Visa status

Legend: ● NZ citizen ● Resident visa ● RSE ● Student visa ● Visitor visa ● Work visa ● Working holiday visa

Industry	NZ citizen	Resident visa	RSE	Student visa	Visitor visa	Work visa	Working holiday visa
Apiculture	79%	10%				9%	
Arable	85%	7%				4%	4%
Dairy farming	78%	7%				12%	
Equine, dogs and racing	85%	8%				6%	
Forestry	90%	5%					
Fruit	58%	11%	14%				14%
Grapes and Wine	63%	12%				10%	15%
Nursery, turf and gardening	76%	14%				5%	5%
Poultry, Pigs and other livestock far…	82%	10%				6%	
Seafood	70%	13%				11%	5%
Sheep, Beef and Deer farming	94%	4%					
Support Services	68%	10%	5%			6%	8%
Vegetables	58%	24%				7%	7%
Veterinary	79%	16%				4%	
National Benchmark	71%	19%				6%	

Filters

Year: 2020

Industry group: All

Industry: All

Employment status: All

Workforce definition: Inclusive workforce

Figure 5 Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

Fruit workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. The Fruit workforce is highly seasonal – this affects how forecasts should be interpreted as the forecasts below are based on a version of an annual 'full time equivalent' and therefore will underrepresent the number of actual workers forecast to be in the sector. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.
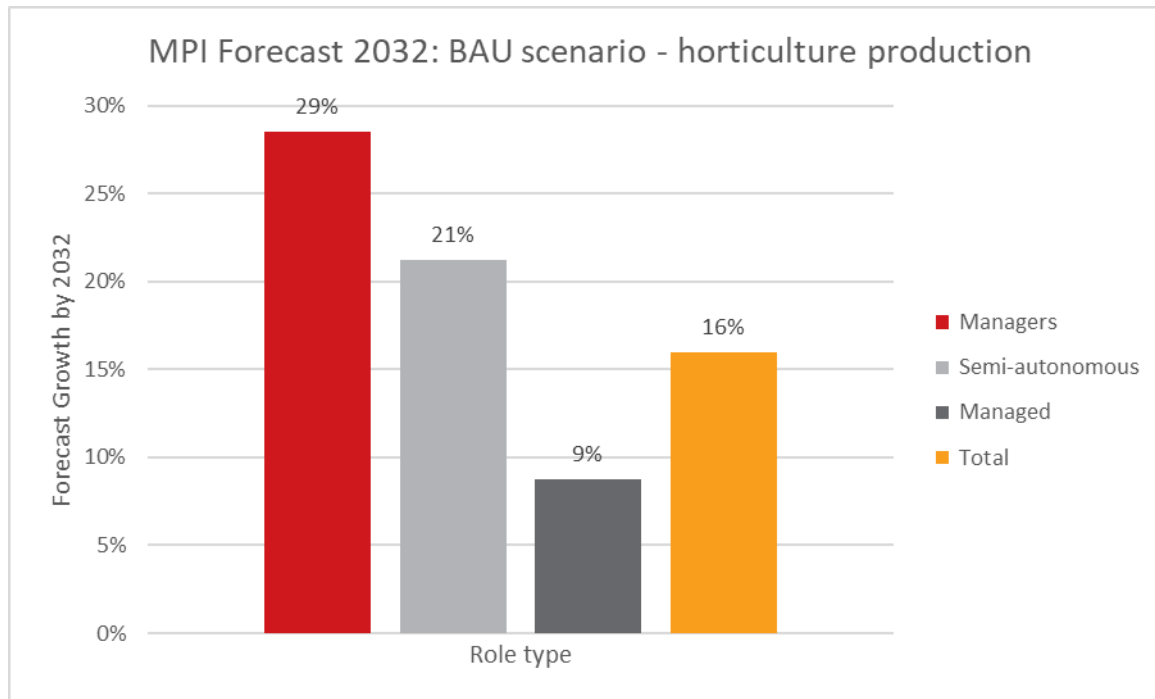

Figure 6 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

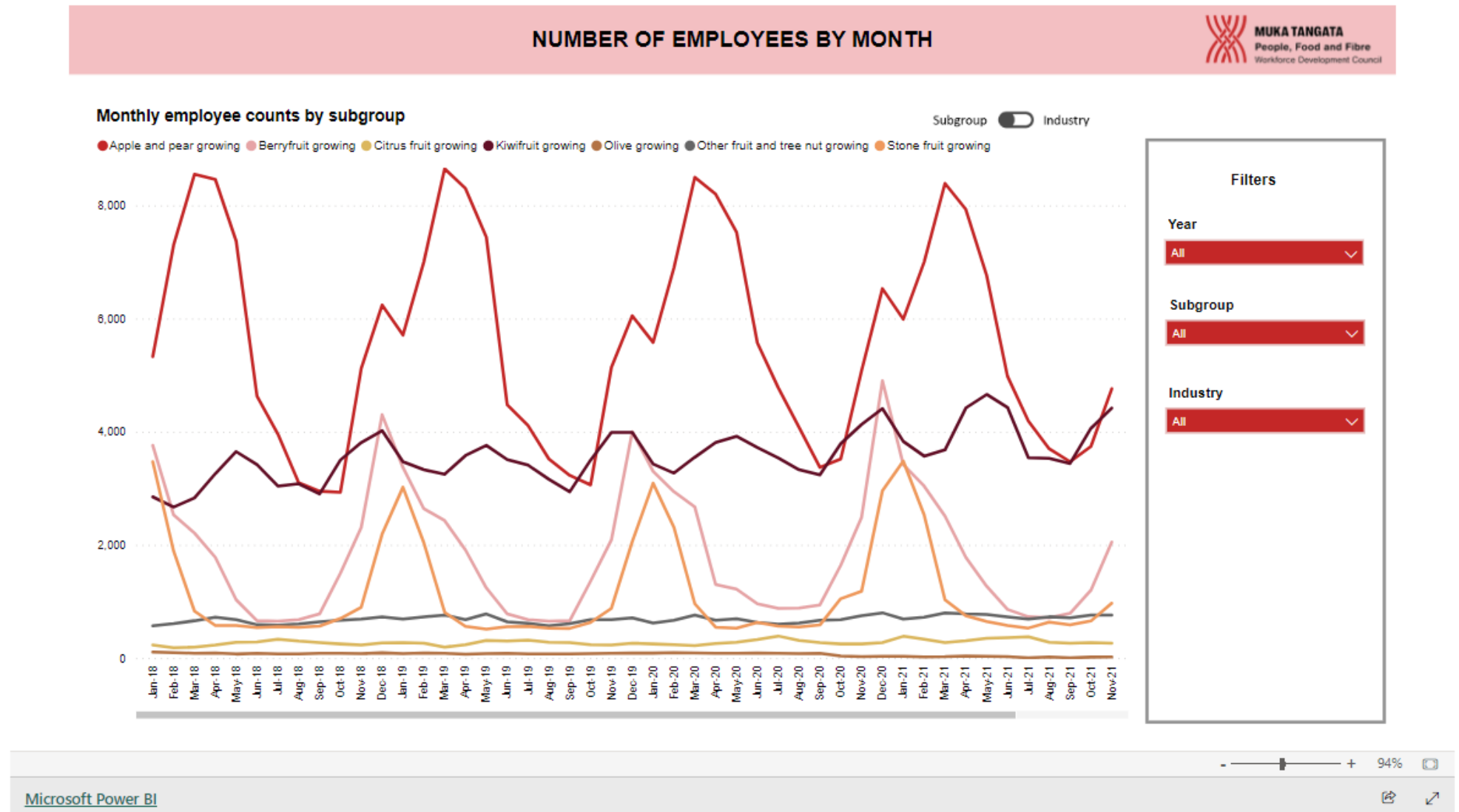# The monthly count of employees working in the Fruit industries

Figure 7 https://mukatangata.workforceskills.nz/explore-industries/fruit/workforce-5/

Fruit workforce retention and tenure

The Fruit workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.
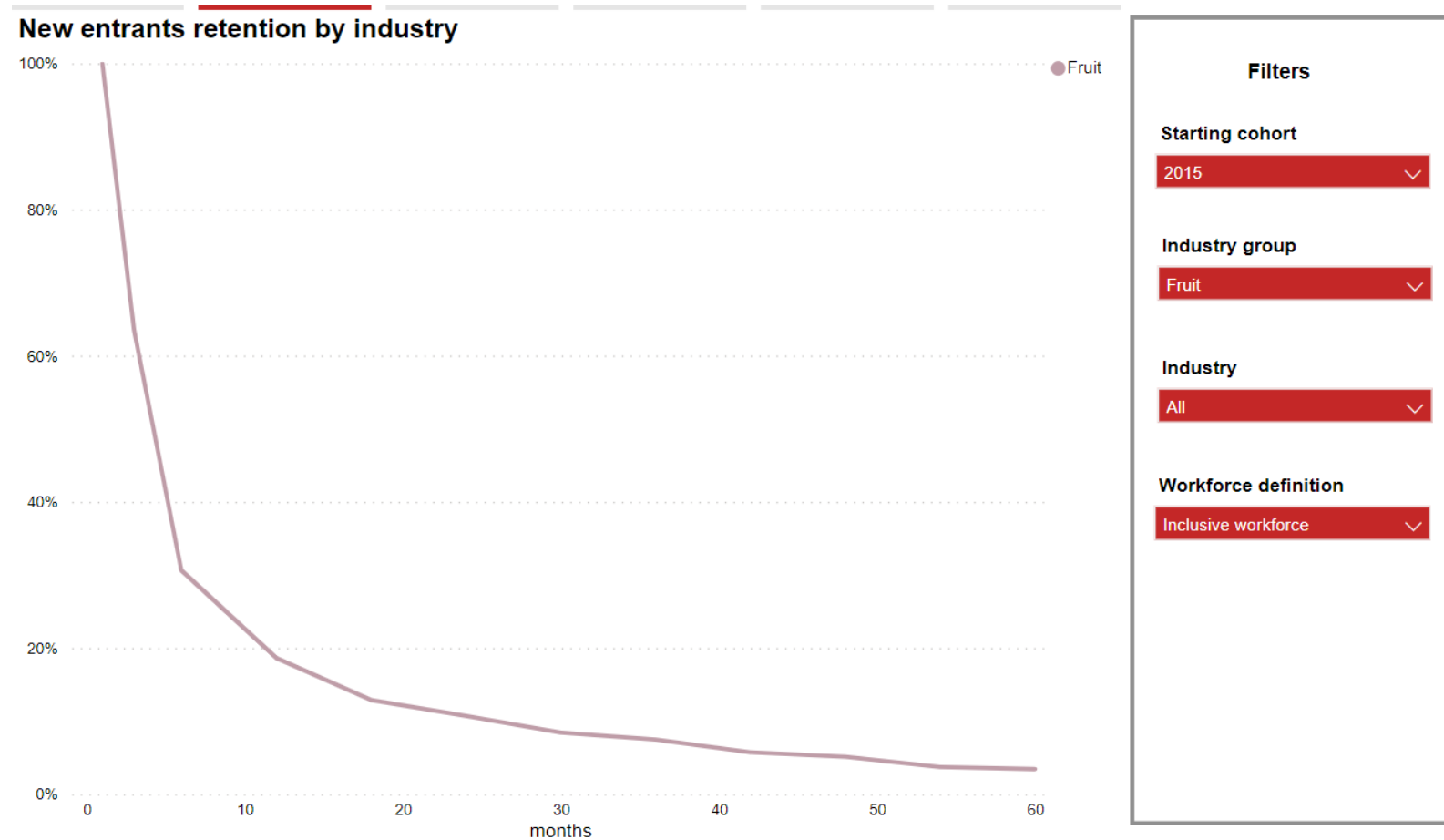

New entrants retention by industry

Filters

Starting cohort
2015

Industry group
Fruit

Industry
All

Workforce definition
Inclusive workforce

Figure 8: Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Fruit	55%	16%	7%	5%	3%	14%

Filters

Year

2020

Industry group

Fruit

Industry

All

Workforce definition

Inclusive workforce

Figure 9: Stats NZ IDI analysis 2023

Vegetables

Our Vegetables Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Vegetables industry trends

Despite recent disruption from weather events, industry is forecast to recover and expand – this will drive increases in training needs.

The past year has been challenging for the vegetable operators who have made a concerted effort to bring supplies to market despite the challenging weather conditions punctuated by Cyclone Gabrielle and flooding damaging roading and other infrastructure, which significantly limits vegetable production for the foreseeable future, especially in Northland and Hawkes Bay. Central and local government restrictions continue to preoccupy growers and worker shortages and growing input costs are also jeopardising food production. On the plus side, getting the Recognised Seasonal Employer (RSE) scheme numbers increased to 19,000 and working holiday visas once again being issued will help with seasonal shortages.[10]

The export revenue from fresh and processed vegetables was $622 million in the year ending June 2022, a 1.9% decrease on the previous year. Whilst previous forecasts (before weather events of 2023) for vegetable growing showed a modest revenue increase, industry performance is heavily dependent on growing conditions, and exports fell because of lower volumes. 2023 is expected to have a brighter outlook with export revenue, which is forecast to increase by 15.8% to $720 million in 2023.

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[10] NZ Grower I December 2022 by Horticulture New Zealand - Issuu

Actual and forecast export values for horticulture products (fresh and processed vegetables) year ending June, 2015 - 2024
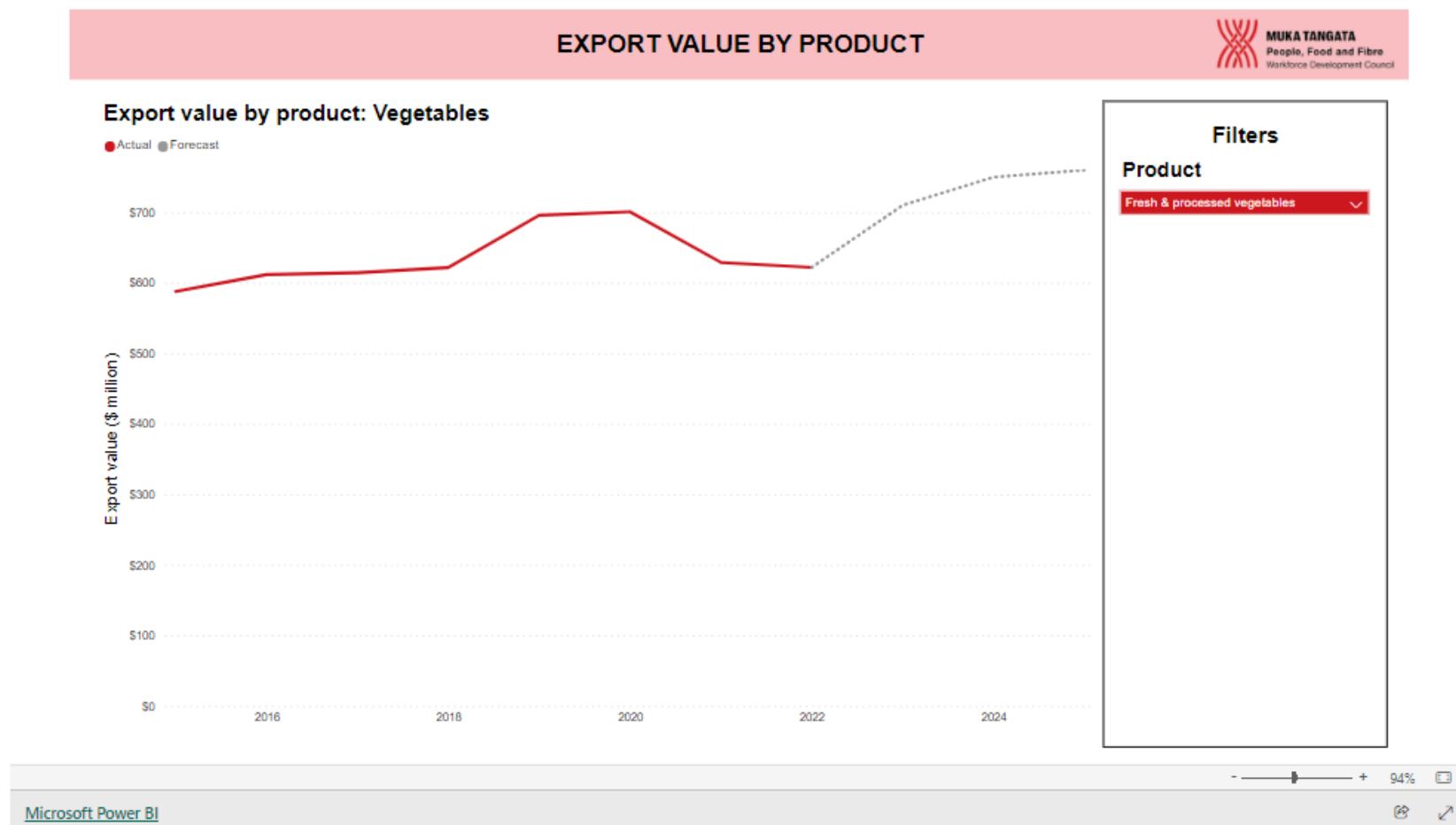

Figure 10 https://mukatangata.workforceskills.nz/explore-industries/vegetables/industry-11/

See Figure 2 for details of export forecasts for the vegetable sector from MPI.

Vegetable workforce trends

The workforce has seen modest decreases which are linked to both the industry challenges noted above and a trend towards industry consolidation. The industry has areas of high levels of seasonal variation (which affect how forecasts should be treated). The horticulture sector workforce as a whole is forecast to increase by at least 16% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements. The sector has very significant reliance on those on temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

Vegetable workforce overview and highlighted demographics

12,710 people worked in the Vegetable industry in 2020 with people who identify as Asian making up over a third of the Vegetable industry's workforce, especially in Mushroom Growing (63%) and Fruit and Vegetable Retailing (49%), while Māori make up 19% of the Outdoor Vegetable Growing workforce. Over 10% Pacific peoples also contribute to the workforce, with 16% who work in Under Cover Vegetable Growing, and 12% in Outdoor Vegetable Growing. Auckland is a key region for Under Cover Vegetable Growing, the rest of the North Island for Outdoor Vegetable Growing and Fruit and Vegetable Retailing, whereas Canterbury is the key region for Mushroom Growing.[11] The Vegetable workforce has a high reliance on temporary and work visa holders with 7% comprising Work Visa holders and a further 7% on Working holiday visas in 2020[12]. This makes it vulnerable to changes in immigration trends and policy shifts.

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[11] Vegetables » Muka Tangata Workforce Development Council (workforceskills.nz)
[12] See Figure 5 Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

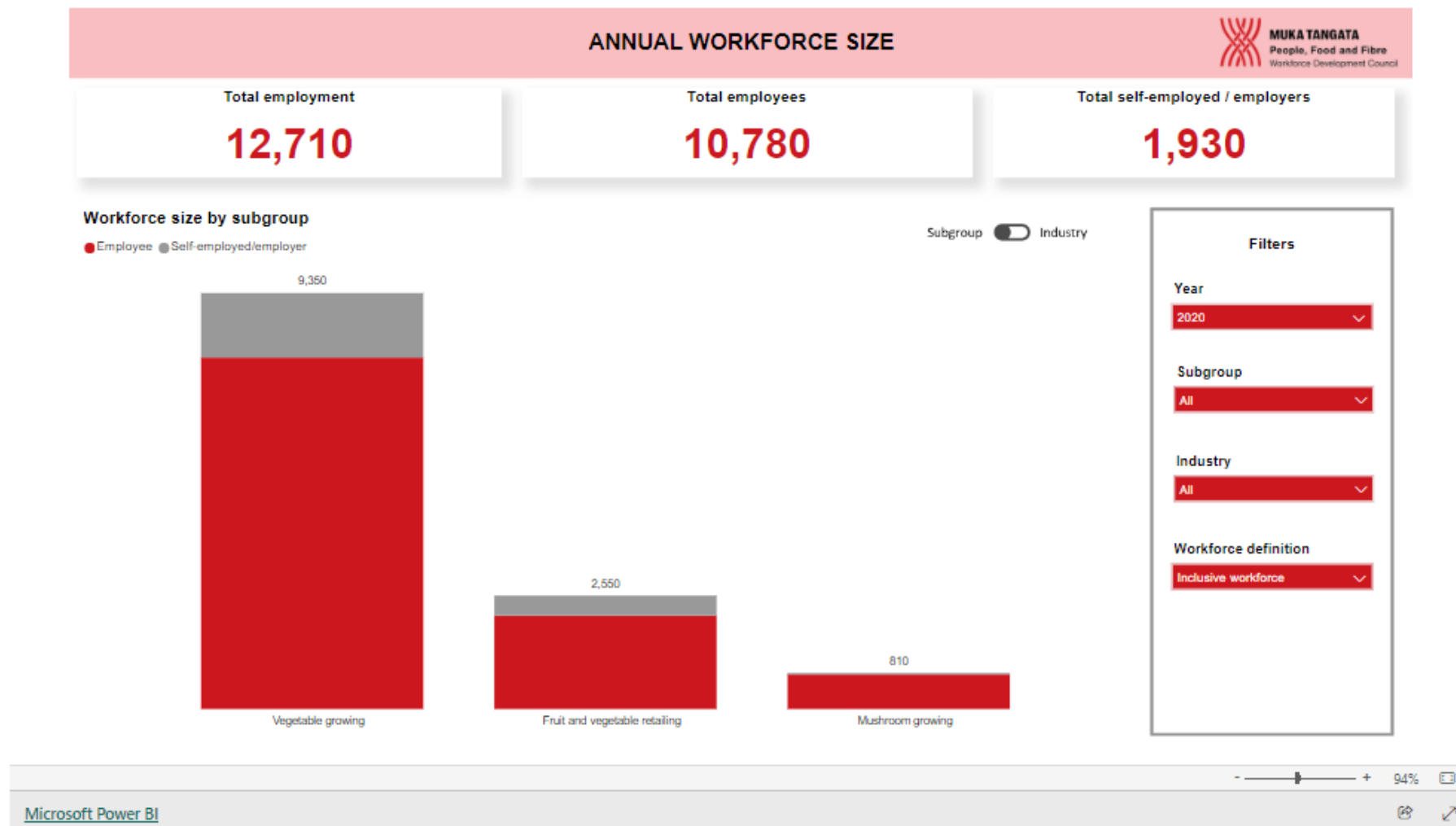# The count of individuals working in the Vegetables industries in 2020, by employment type

Figure 11 https://mukatangata.workforceskills.nz/explore-industries/vegetables/workforce-11/

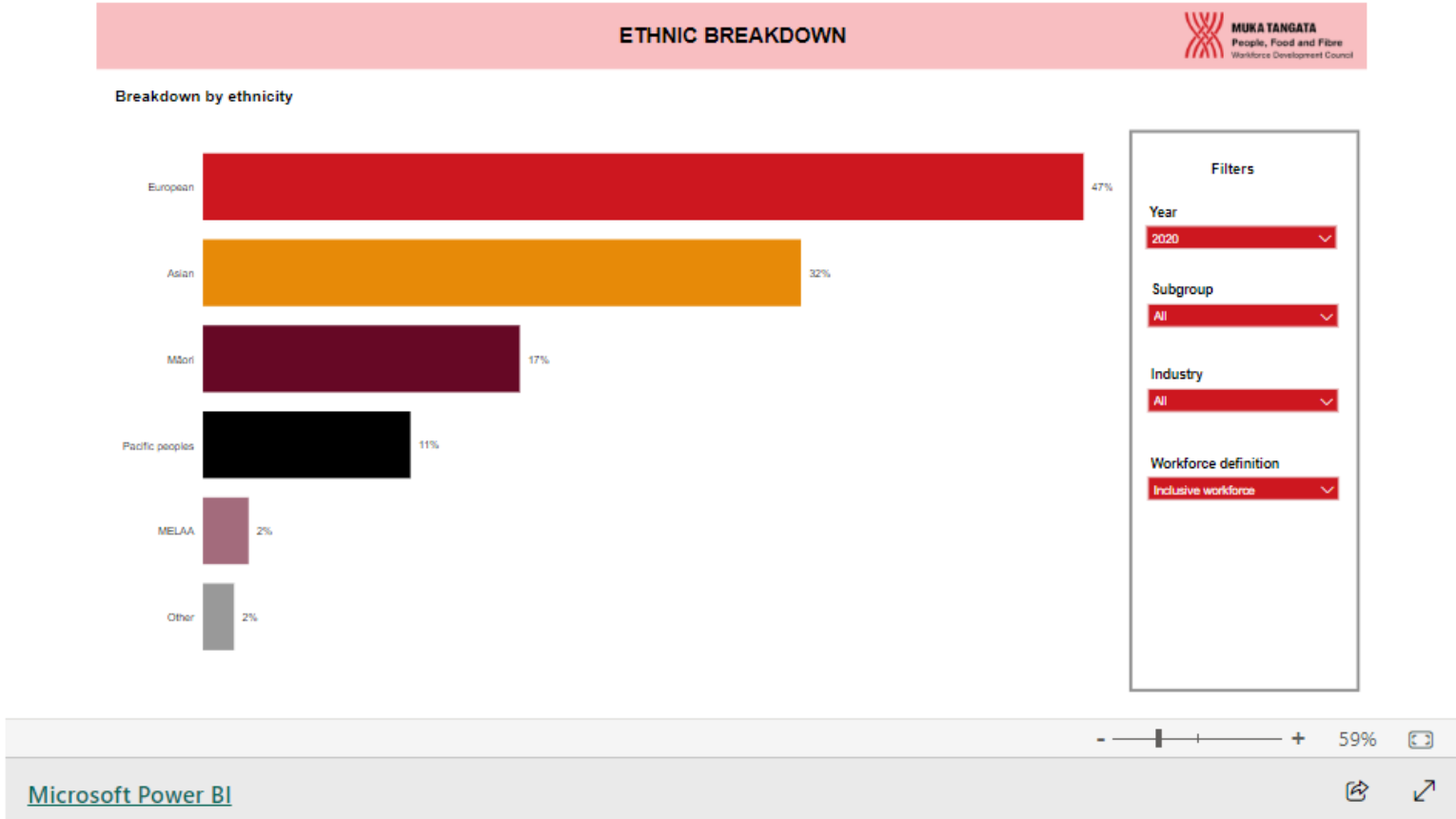# The ethnic composition of the individuals working in Vegetables industries in 2020

Figure 12 https://mukatangata.workforceskills.nz/explore-industries/vegetables/workforce-11/more-analysis-4/

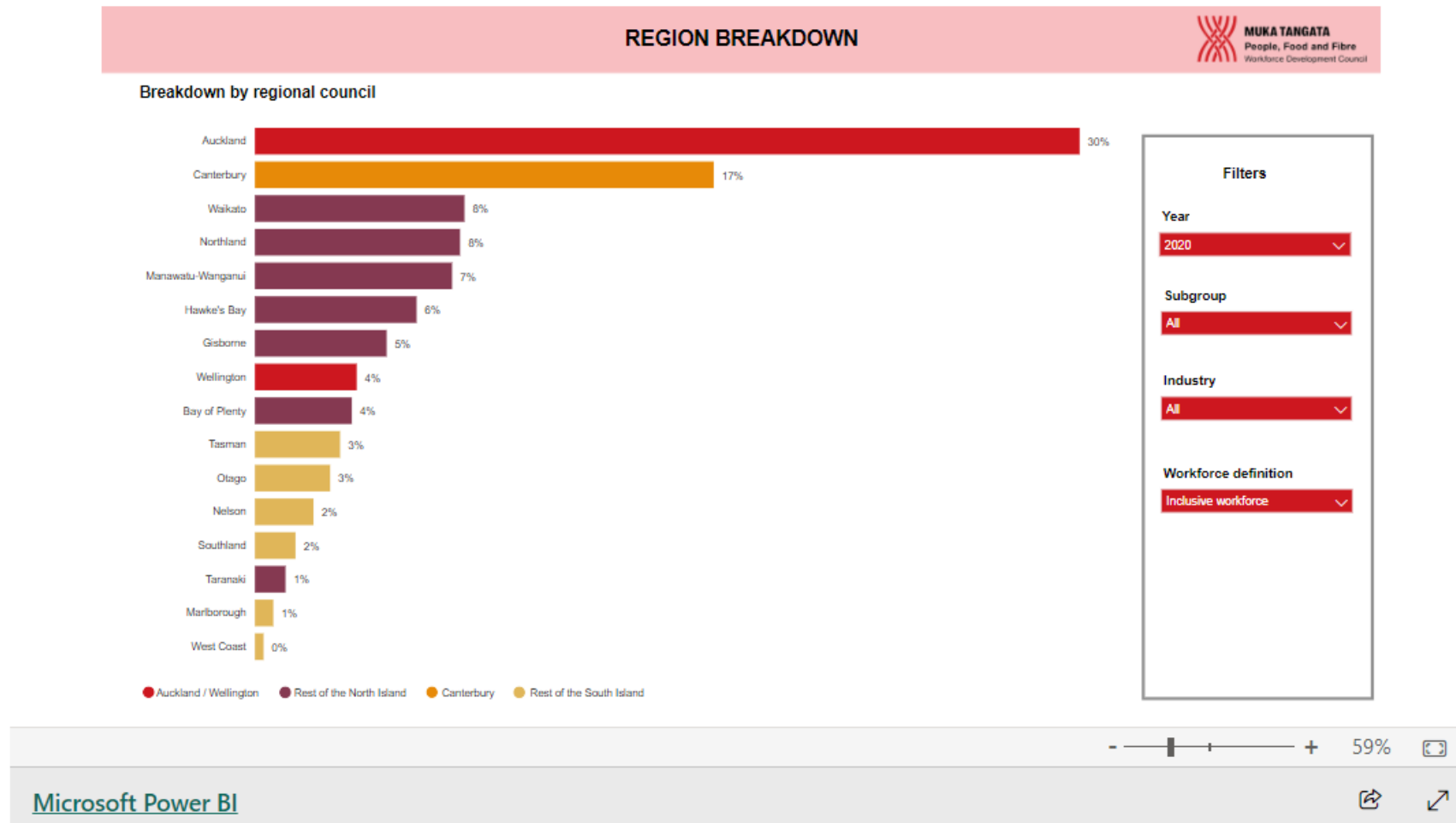# The regional distribution on the individuals working in the Vegetables industries in 2020

Figure 13 https://mukatangata.workforceskills.nz/explore-industries/vegetables/workforce-11/more-analysis-3/

Vegetable workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. Within the Vegetable workforces, the 'Vegetable Growing' area has significant season variation – this affects how forecasts should be interpreted as the forecasts below are based on a version of an annual 'full time equivalent' and therefore will underrepresent the number of actual workers forecast to be in the sector. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 14 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
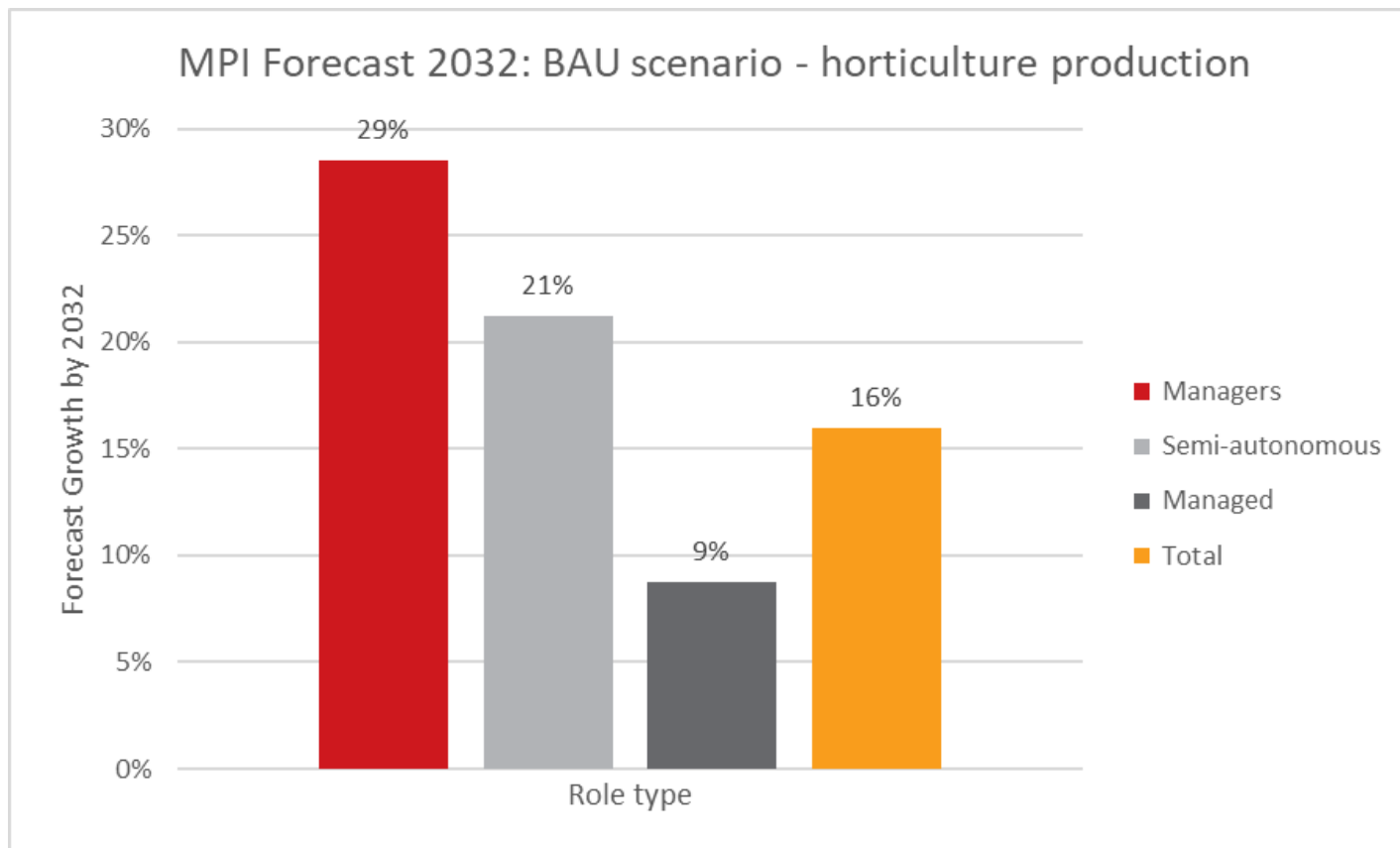
Monthly employee counts by subgroup

Subgroup ⬤ Industry

● Fruit and vegetable retailing ● Mushroom growing ● Vegetable growing
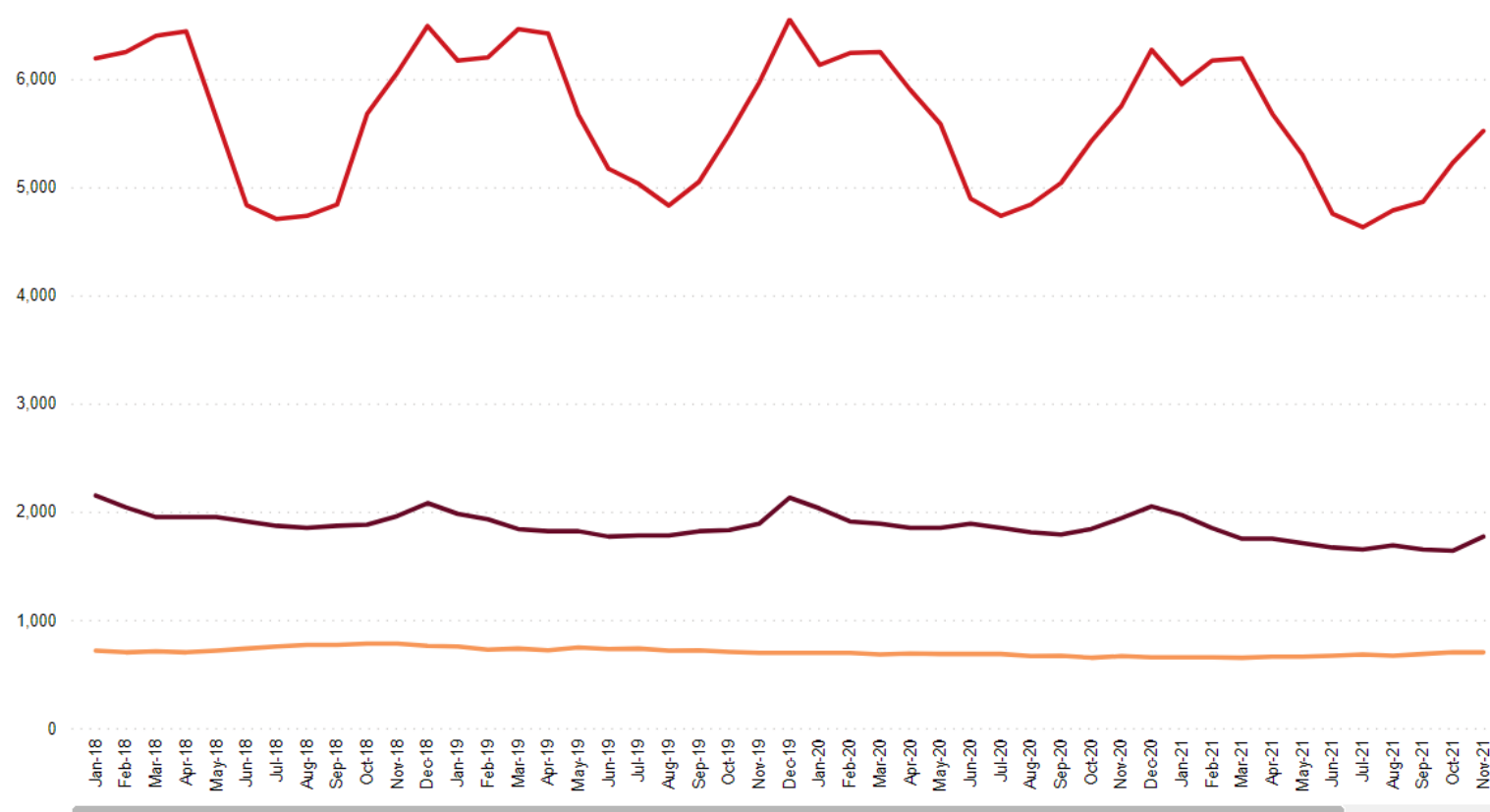
Filters

Year
All ⌄

Subgroup
All ⌄

Industry
All ⌄

Figure 15 https://mukatangata.workforceskills.nz/explore-industries/vegetables/workforce-11/

Vegetable workforce retention and tenure

The Vegetable workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry
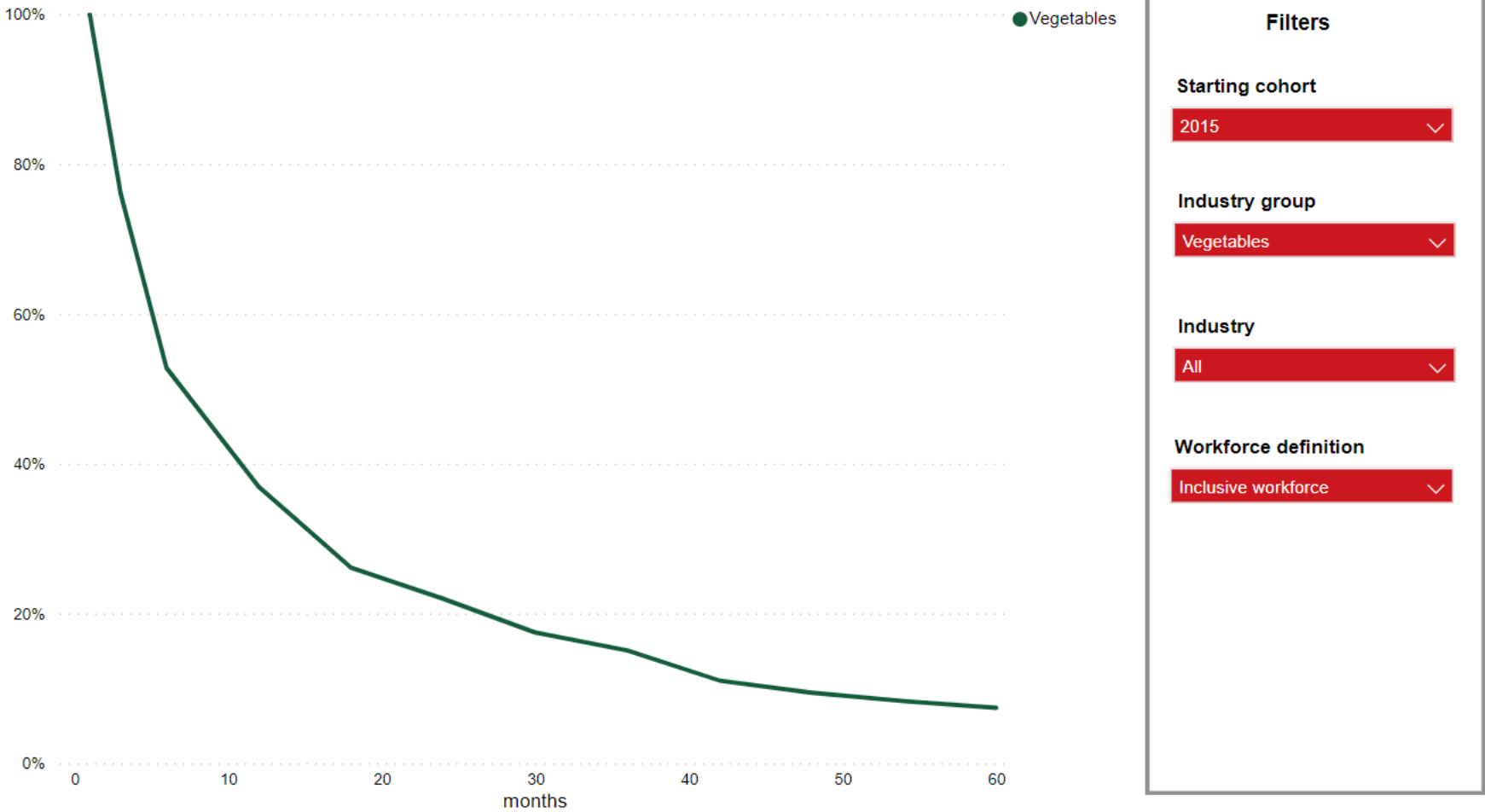
Figure 16 Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Vegetables	39%	16%	9%	7%	4%	24%
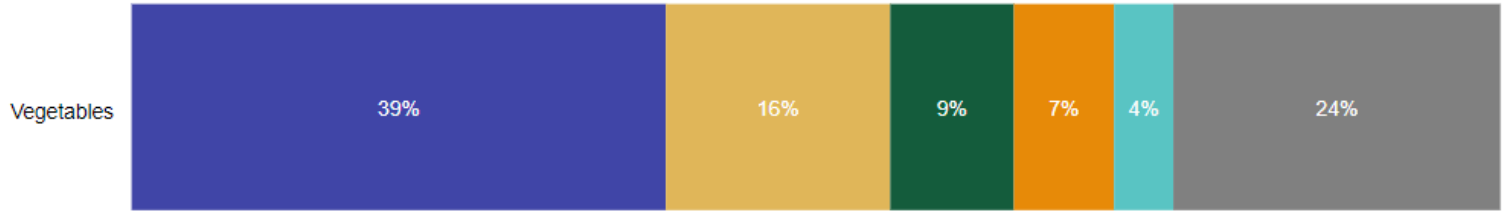
Filters

Year

2020 ⌄

Industry group

Vegetables ⌄

Industry

All ⌄

Workforce definition

Inclusive workforce ⌄

Figure 17 Stats NZ IDI analysis 2023

Grapes and Wine

Our Grapes and Wine Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Grapes and Wine industry trends

The wine industry had a 'massive' harvest in 2022 and production trends are now returning to the previous long-run increases. Consolidation, mechanisation and labour market dynamics are also increasing the need for new skills.

From Northland to Central Otago, New Zealand is home to the world's southernmost vineyards. Marlborough is the biggest wine region, 73% of New Zealand Wine Growers' members were in Marlborough in 2022.[13]

The rising global demand for New Zealand wine has driven up wine grape prices, boosting profits for growers despite challenges like labour shortages and supply cost challenges. A bountiful 2022 harvest and high export prices led to a significant increase in export revenue for the year ending June 2023. This trend is expected to continue due to a new free trade agreement with the European Union. While a few growers focus on table grapes, non-wine grape growers face tough competition from imports. In 2022, the industry experienced a 44% increase in volume of production from 2021, and is expected to continue to increase through to the year ending June 2023. The industry contributed almost $1 billion to GDP in 2022 – Grape Growing contributed $317 million and Wine Production contributed $616 million.[14] The industry has seen consolidation, increased mechanisation and changing labour dynamics which are likely to lead to changing skill requirements for the workforce.[15]
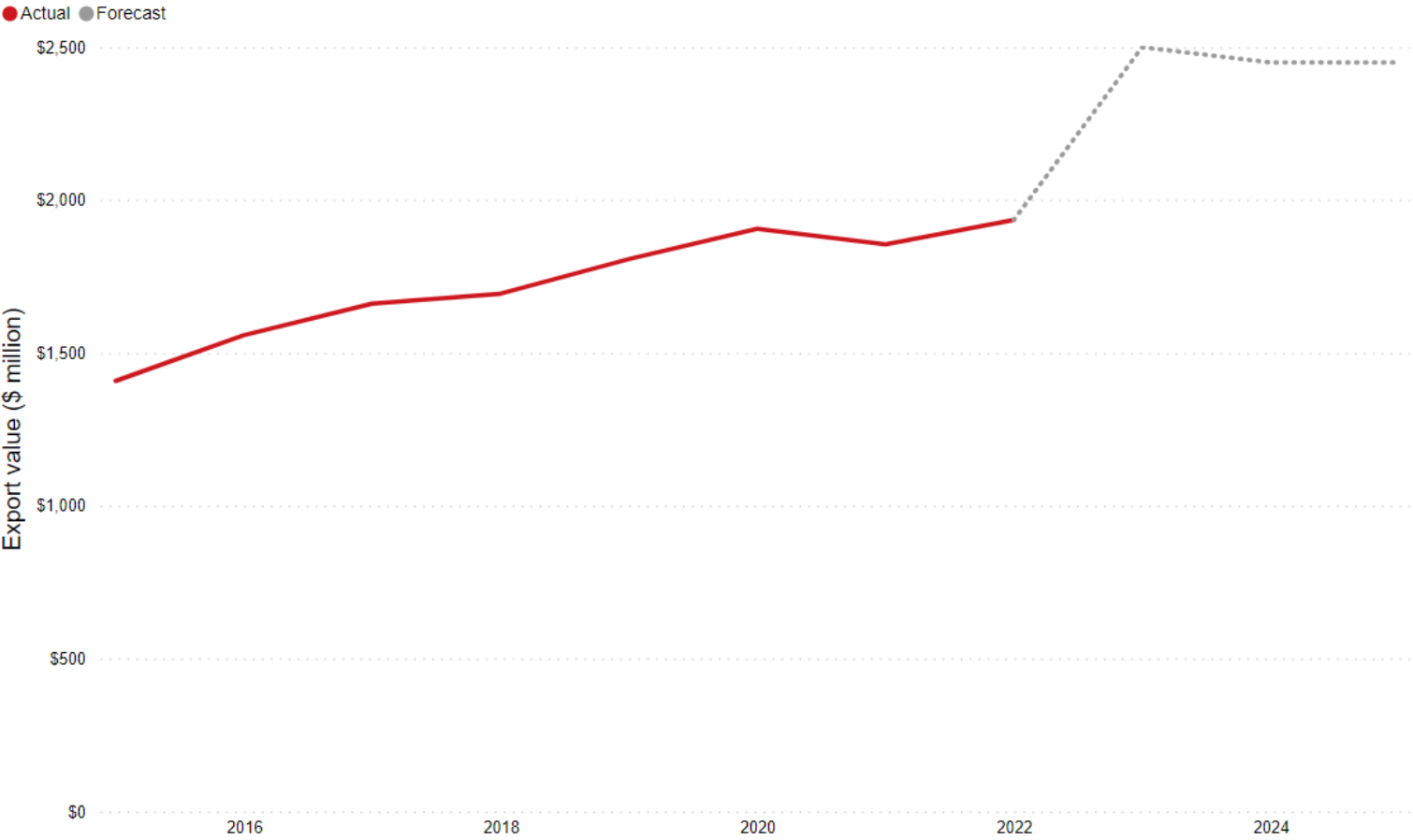
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[13] nzw-annual-report-2022.pdf (nzwine.com)
[14] Grapes and Wine » Muka Tangata Workforce Development Council (workforceskills.nz)
[15] IBISWorld A0131NZ - Grape Growing in New Zealand industry report October 2023

Export value by product: Grapes and Wine

Figure 18 https://mukatangata.workforceskills.nz/explore-industries/grapes-and-wine/industry-6/

Grapes and Wine Workforce trends

The workforce has seen modest decreases which are linked to both the industry challenges and changes in business model. The industry has areas of high levels of seasonal variation (which affect how forecasts should be treated). The horticulture sector workforce as a whole is forecast to increase by at least 16% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements. The sector has very significant reliance on those on temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

Grapes and Wine workforce overview and and highlighted demographics

In 2020, 11,390 people worked in Grapes and Wine, and 49% of the workforce were under 35 years old.[16] Out of all of the Muka Tangata industries, Grapes and Wine has the highest percentage of the workforce who leave to go overseas (14%).[17] The ethnicity of the workforce in 2020 was 82% European, and 8% Māori. People who identify as Māori have been decreasing in Grapes and Wine since 2016. The number of people who identify as female is 44%, which is higher than the average across all Muka Tangata industries. The Grapes and Wine workforce has a high reliance on temporary and work visa holders with 10% comprising Work Visa holders and a further 15% on Working holiday visas in 2020[18]. This makes it vulnerable to changes in immigration trends and policy shifts.

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[16] Grapes and Wine » Muka Tangata Workforce Development Council (workforceskills.nz)
[17] Workforce » Workforce Development Council (workforceskills.nz)
[18] See Figure 5 Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

The count of individuals working in the Grapes and Wine industries in 2020, by employment type

Figure 19 https://mukatangata.workforceskills.nz/explore-industries/grapes-and-wine/workforce-6/
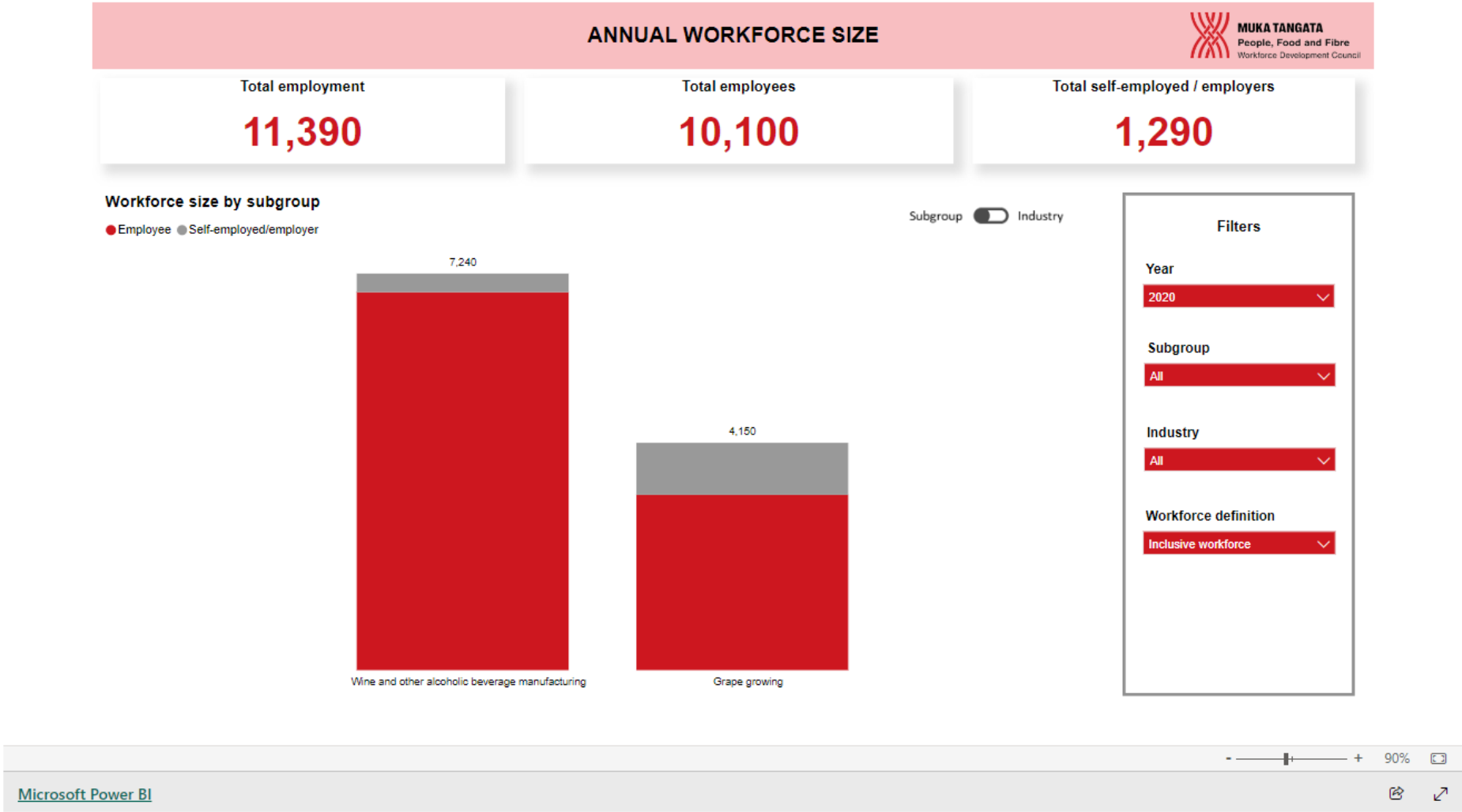
The ethnic composition of workers in Grapes and Wine industries in 2020

Figure 20 https://mukatangata.workforceskills.nz/explore-industries/grapes-and-wine/workforce-6/more-analysis-2/
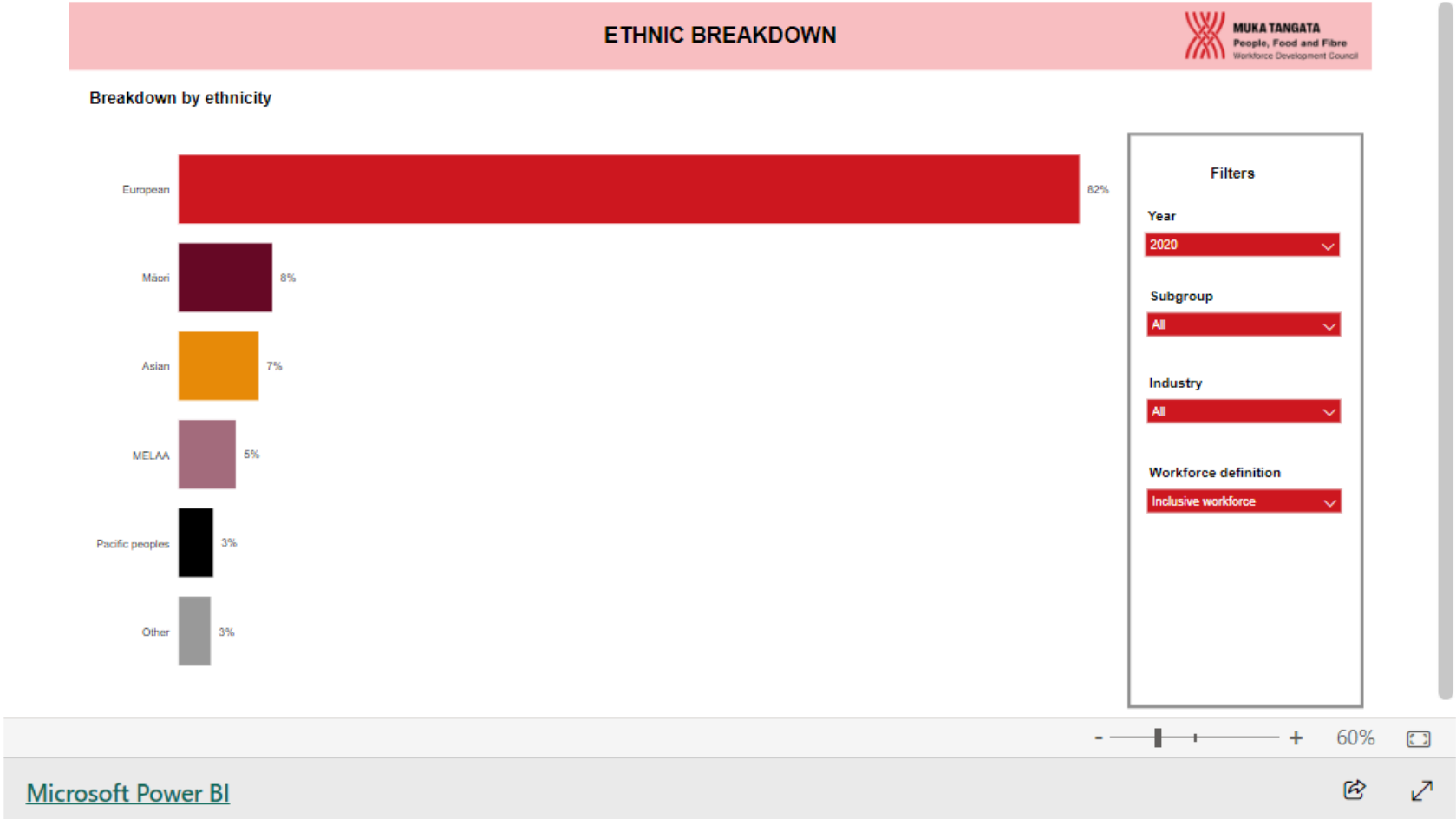
The gender of workers in Grapes and Wine industries in 2020

Figure 21 https://mukatangata.workforceskills.nz/explore-industries/grapes-and-wine/workforce-6/more-analysis-5/

Grapes and Wine workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. Within the Grapes and Wine workforce there is significant season variation – this affects how forecasts should be interpreted as the forecasts below are based on a version of an annual 'full time equivalent' and therefore will underrepresent the number of actual workers forecast to be in the sector. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 22 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

Monthly employee counts by subgroup

● Grape growing ● Wine and other alcoholic beverage manufacturing

Subgroup ⬤ Industry

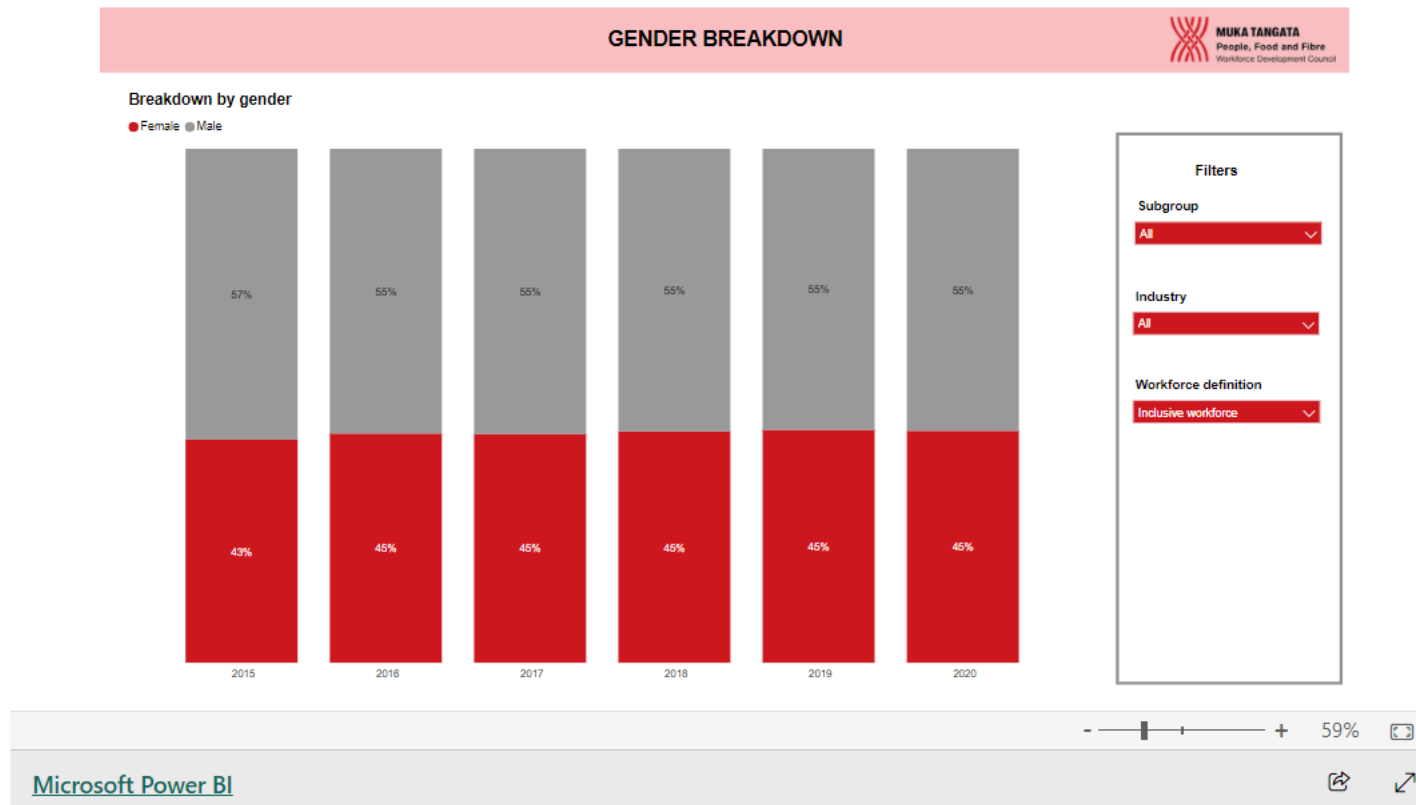*Figure 23 https://mukatangata.workforceskills.nz/explore-industries/grapes-and-wine/workforce-6/*
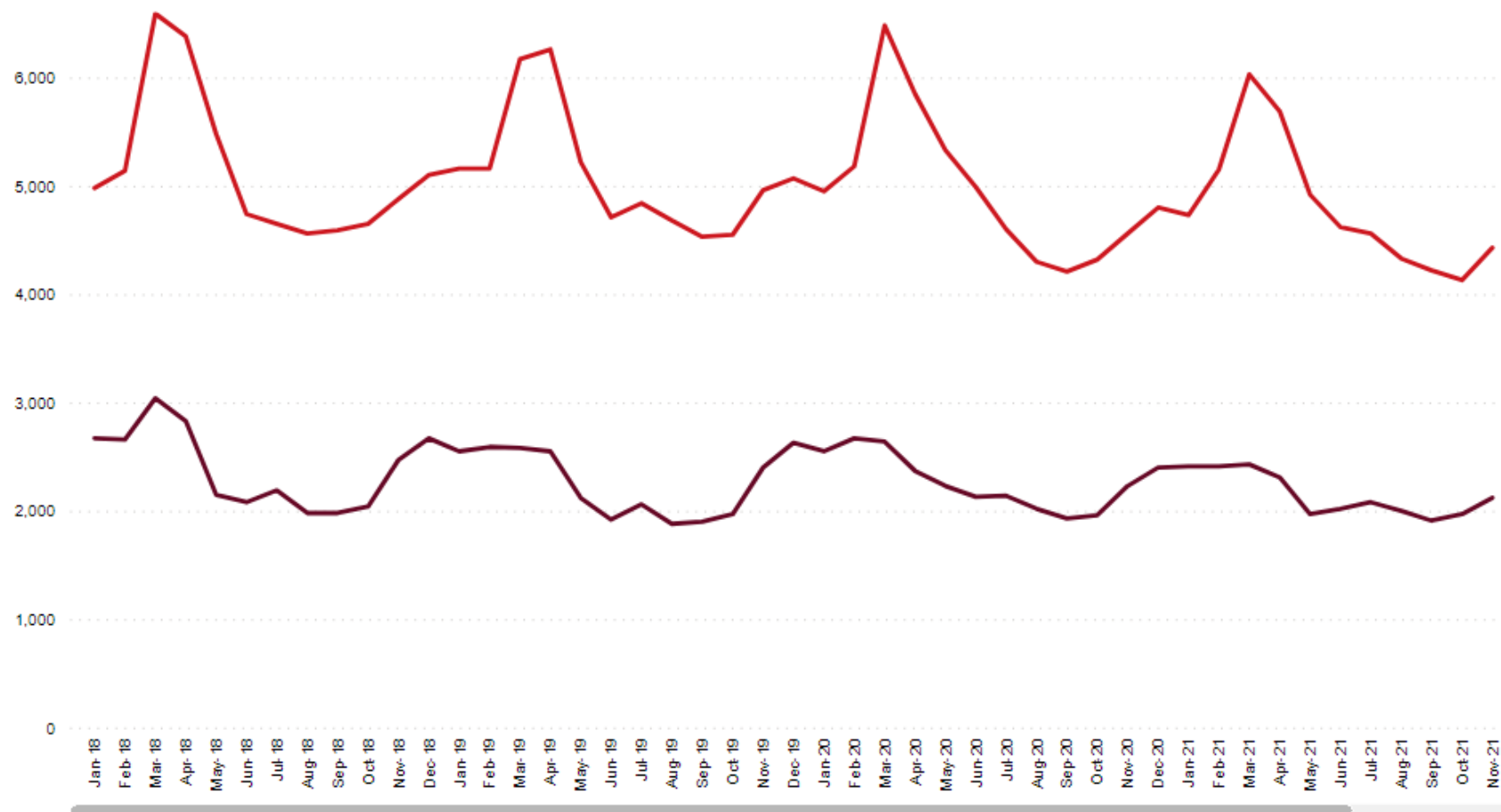
Grapes and Wine workforce retention and tenure

The Grapes and Wine workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry
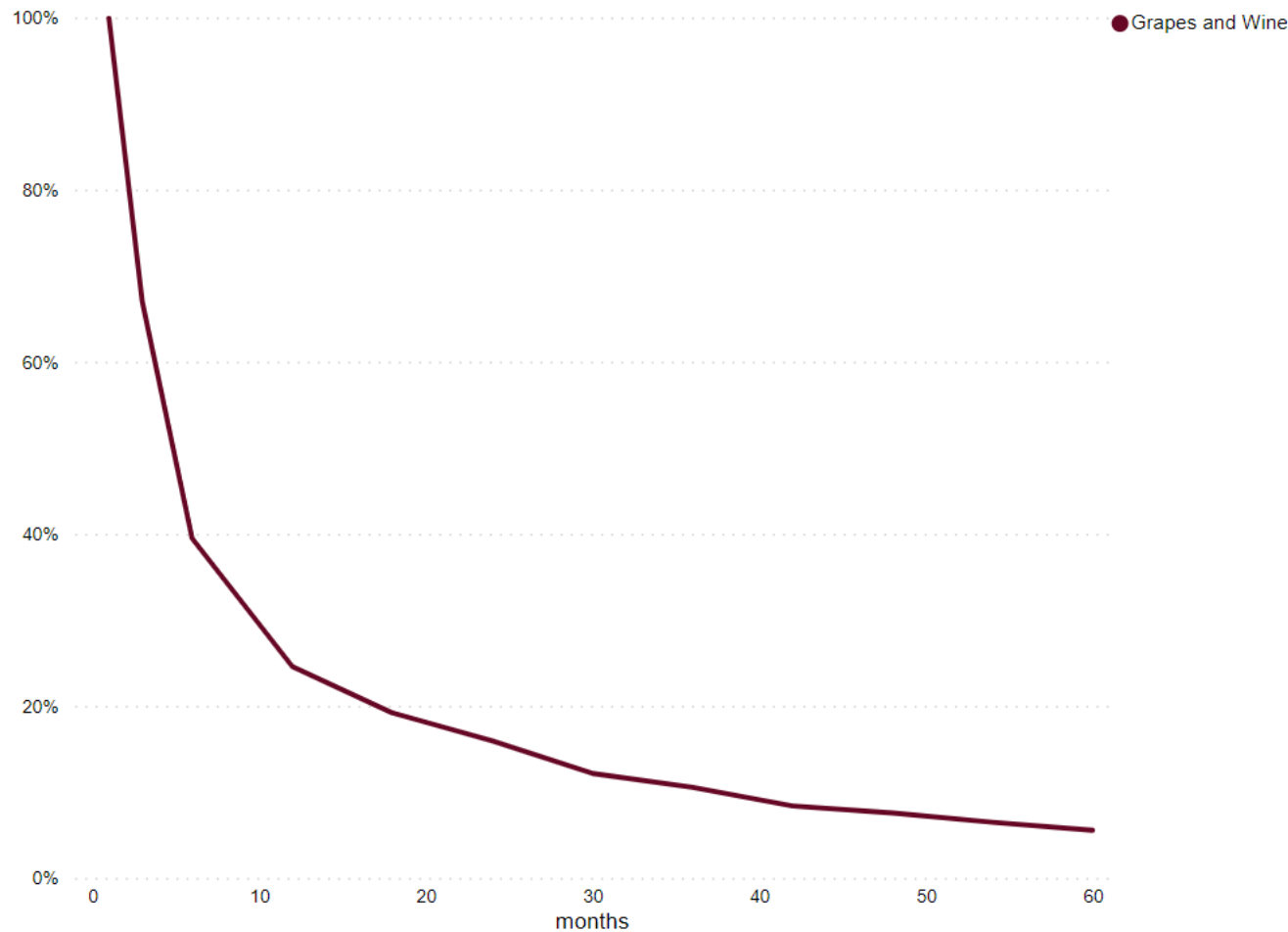
● Grapes and Wine

Filters

Starting cohort

2015

Industry group

Grapes and Wine

Industry

All

Workforce definition

Inclusive workforce

Figure 24 Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Grapes and Wine	41%	14%	9%	6%	5%	25%
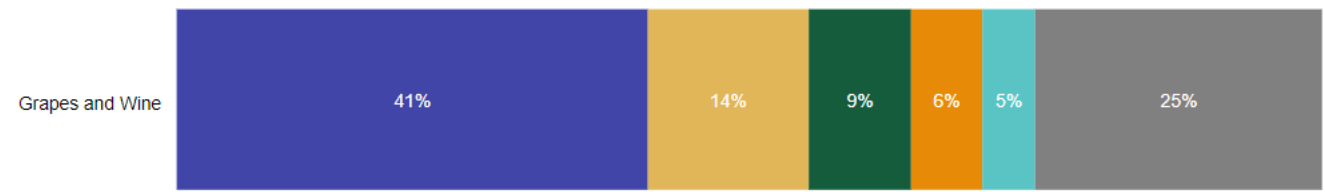
Filters

Year

2020 ⌄

Industry group

Grapes and Wine ⌄

Industry

All ⌄

Workforce definition

Inclusive workforce ⌄

Figure 25 Stats NZ IDI analysis 2023

Nursery, Turf and Gardening

Our Nursery, Turf and Gardening Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Nursery, Turf and Gardening Industry Trends

The industry was significantly impacted by COVID-19 with steep reductions for exports – particularly for cut flowers and foliage though exports for Seeds have recovered.

Nursery, Turf and Gardening is a Muka Tangata industry grouping which includes Nursery Production, Turf Growing, Gardening Services, and Floriculture Production. This also includes sub-industries such as Amenity and Sports Turf and encompasses a variety of roles from green keepers to native plantings. It does not include fruit or vegetable production, which are two separate industry groupings. Seed production for flowers and foliage also falls into Nursery, Turf and Gardening, but it does not include vegetable seeds, which are part of the Arable industry. There is a long-term downward trend in export revenue from cut flowers and foliage. COVID-19 had a significant impact on the export of cut flowers and export revenue for 2022-20203 is nearly half of what it was for 2018-2019 ($25 million). The export value for seeds has bounced back since COVID-19 and exceeded 2018-2019 export values to reach $147.8 million in 2022-2023 which represents 67.3% of exports for cut flowers, plants, seeds, bulbs, and moss.

Total export value: Nursery, turf and gardening
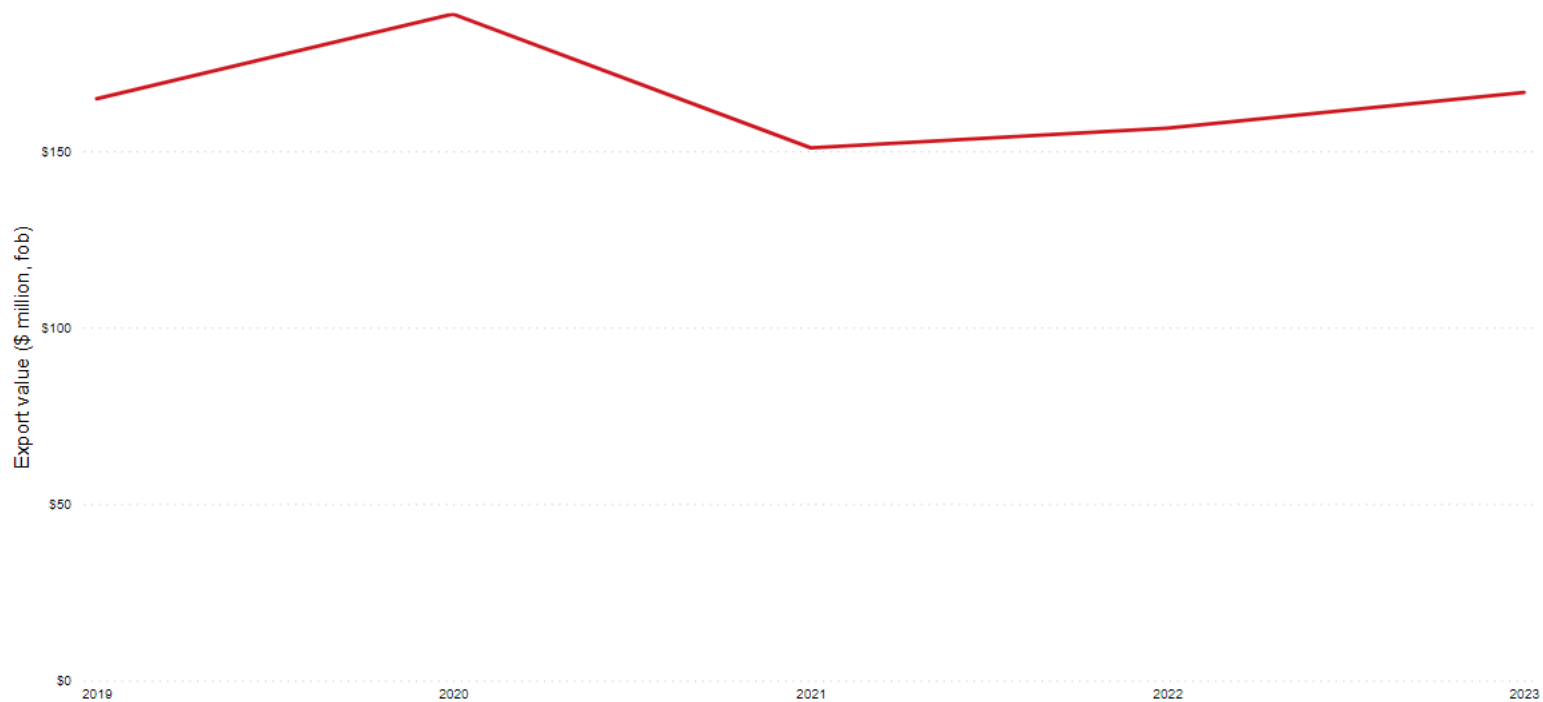
Source: Fresh Facts report (2021) [↗], Export values are expressed as FOB which stands for "free on board" or "freight on board" in shipping

Figure 26 https://mukatangata.workforceskills.nz/explore-industries/nursery-turf-and-gardening/industry-7/

Nursery, Turf and Gardening Workforce Trends

The workforce has started to rebound from disruption posed by COVID-19 though is still vulnerable to recent weather disruptions and some industry groups, like Sports Turf, have shown increases. The horticulture sector workforce as a whole is forecast to increase by at least 16% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements.

Nursery, Turf and Gardening workforce overview and highlighted demographics

In 2020, 15,131 people worked in Nursery, Turf and Gardening, with Auckland and Canterbury being key regions across the industry. Although variable amongst the different sub-industries, Nursery, Turf and Gardening has a primarily European workforce, with 13% of the workforce identifying as Māori and 10% identifying as Asian in 2020. In the same year, 33% of the workforce identified as female.[19]

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[19] [Nursery, Turf and Gardening » Muka Tangata Workforce Development Council (workforceskills.nz)](workforceskills.nz)

The count of individuals working in the Nursery, Turf, and Gardening industries in 2020, by employment type

ANNUAL WORKFORCE SIZE

MUKA TANGATA
People, Food and Fibre
Workforce Development Council

Total employment	Total employees	Total self-employed / employers
15,131	**8,940**	**6,191**

Workforce size by subgroup

● Employee ● Self-employed/employer

Subgroup ⬤ Industry

Filters

Year
2020

Subgroup
All

Industry
All

Workforce definition
Inclusive workforce

- Gardening services: 9,800
- Nursery production: 4,100
- Floriculture production: 1,225
- Turf growing: 6

Microsoft Power BI

94%

Figure 27 https://mukatangata.workforceskills.nz/explore-industries/nursery-turf-and-gardening/workforce-7/

The ethnic composition of the individuals working in Nursery, Turf, and Gardening industries in 2020

The gender of the individuals working in Nursery, Turf, and Gardening industries in 2020

GENDER BREAKDOWN

MUKA TANGATA
People, Food and Fibre
Workforce Development Council

Breakdown by gender
● Female ● Male

Year	Male	Female
2015	66%	34%
2016	67%	33%
2017	65%	35%
2018	65%	35%
2019	66%	34%
2020	65%	35%

Filters

Subgroup: All

Industry: All

Workforce definition: Inclusive workforce

— ┼ + 59%

Microsoft Power BI

Figure 29 - https://mukatangata.workforceskills.nz/explore-industries/nursery-turf-and-gardening/workforce-7/more-analysis-5/
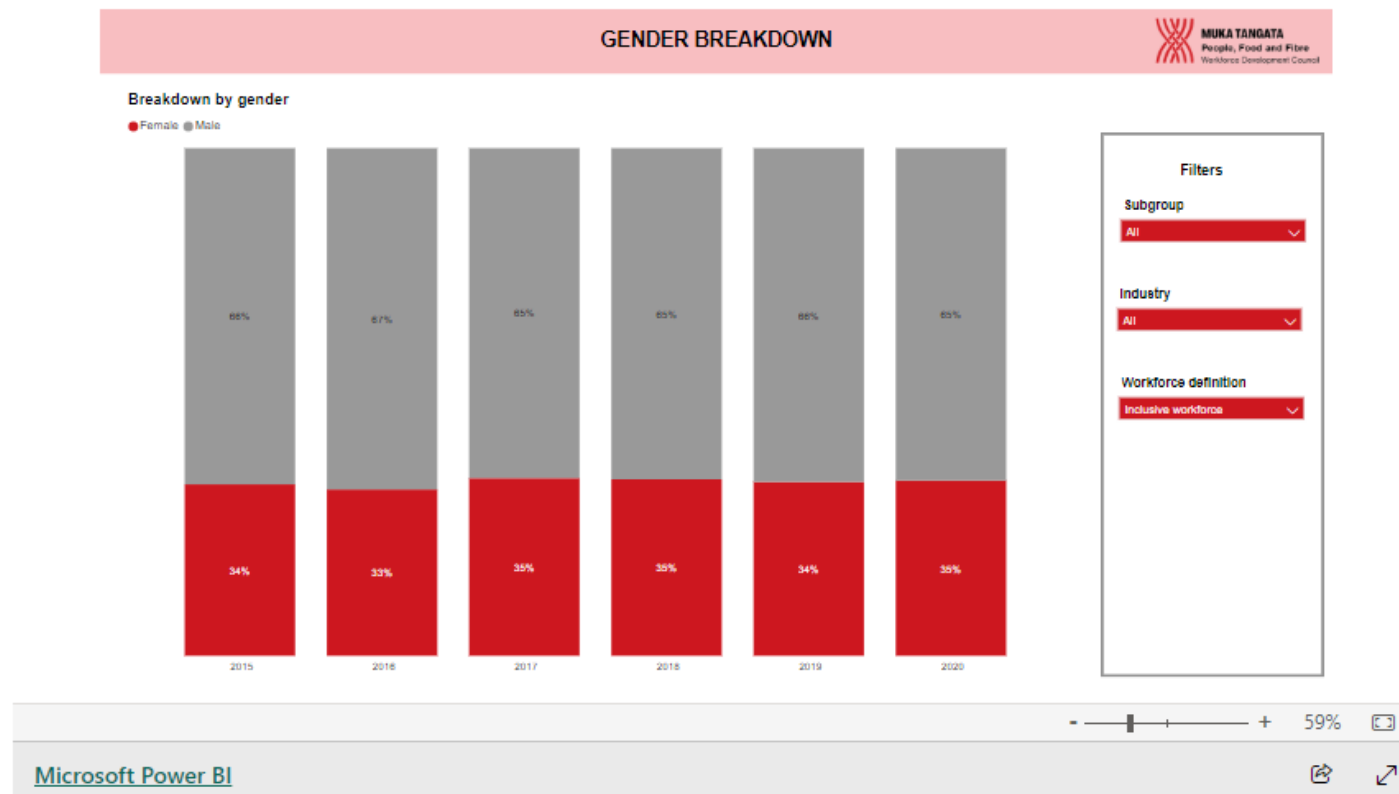
The Sports Turf industry workforce is not well represented using ANZSIC data[20] but recent analysis[21] using StatsNZ Occupation codes and qualifications data shows that the Greenkeeper workforce numbers have been increasing. Learner numbers for Sports Turf qualifications and programmes are also increasing, driven by growth in apprentices, though remain below historic trends.

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[20] See our explainer paper Data Challenges for the Sports Turf Workforce
[21] Forthcoming publication on the Muka Tangata Workforce Development Plans – working data (which is going through industry consultation) is available for TEC here

MUKA TANGATA
People, Food and Fibre
Workforce Development Council

| Total number and Gender | Regional Distribution | Age Distribution | Ethnicity |

Number of Greenkeepers

3,354 — 2018
2,652 — 2013
2,634 — 2006

% of Female Workers

● Greenkeeper ● Other Occupation

Year	Greenkeeper	Other Occupation
2006	7%	47%
2013	7%	48%
2018	7%	47%
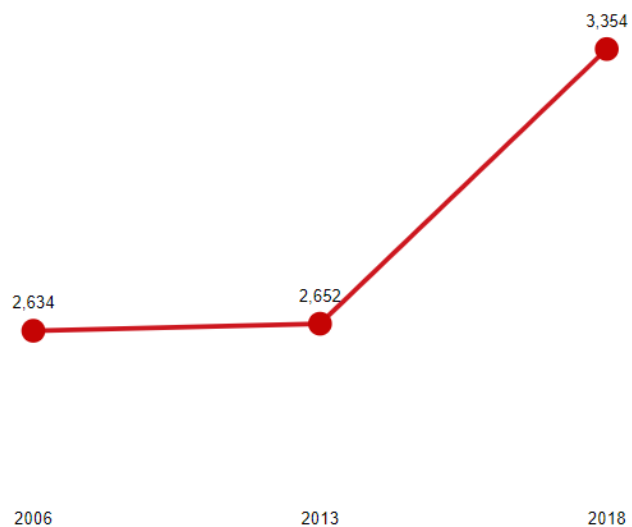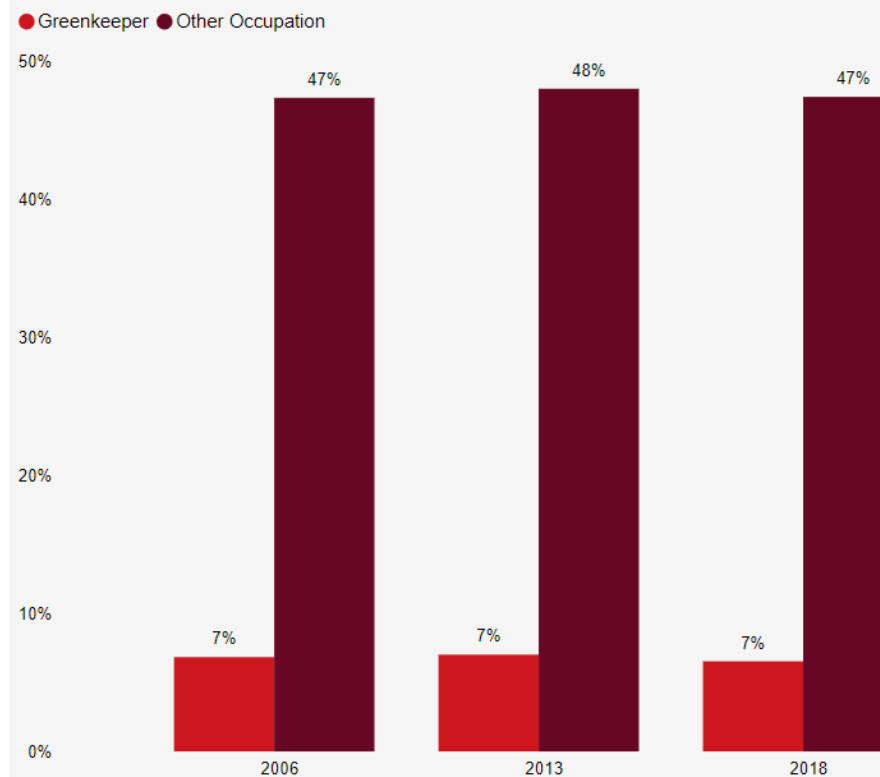
Figure 30 Forthcoming publication on the Muka Tangata Workforce Development Plans – working data (which is going through industry consultation)

Nursery, Turf and Gardening workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 31 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
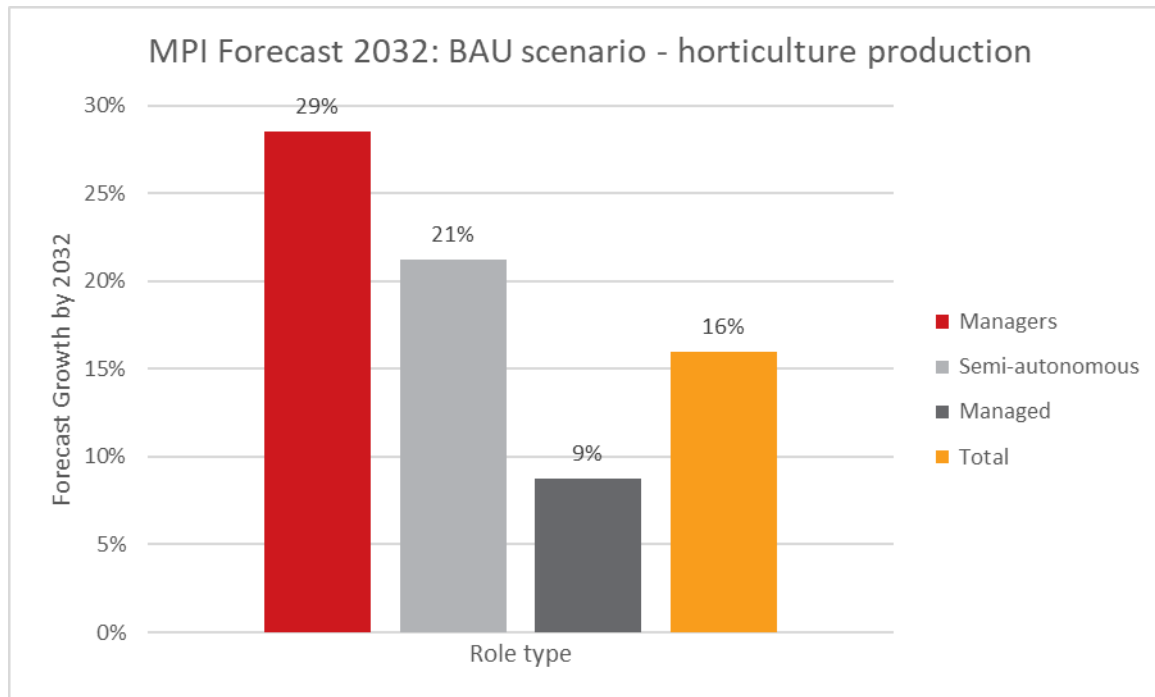
Nursery, Turf and Gardening workforce retention and tenure

The Nursery, Turf and Gardening workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry

Filters

Starting cohort

2015

Industry group

Nursery, turf and gardening

Industry

All

Workforce definition

Inclusive workforce

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Filters

Year
2020

Industry group
Nursery, turf and gardening

Industry
All

Workforce definition
Inclusive workforce

Nursery, turf and gardening — 41% | 17% | 11% | 8% | 5% | 18%

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Horticulture (Level 3) [Stranded] [2678]		All regions – but note RSLG specifics: Wellington (Wairarapa for wine growing, fruit and vegetables); and Hawke's Bay (fruit and vegetable post-harvest production, with a blended mode of level 3 and 4); Taitokerau.	10-15%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. There is a significant need for entry qualifications and this is the main entry point qualification for most of these industries. Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification: • basic 'work ready', generic team working and communication skills, as well as	The New Zealand Certificate in Horticulture (Level 3) is designed to provide the skills to work as an effective member of a team, including communication and interaction with team members and colleagues. It is a stranded qualification that enables learners to gain skills targeted to their chosen industry. It is also the qualification pathway for the two Level 4 Horticulture qualifications which provide the skills for more semi-autonomous and managerial roles (see below).	High Priority

				basic skills specific to the individual industries, as gaps (all related industries for the Horticulture qualifications) • indoor and outdoor crop production (Fruit).		
New Zealand Certificate in Horticulture Production (Level 4) [Stranded] [2676]		All regions – but note RSLG specifics: Wellington (fruit and vegetables in the Wairarapa); Manawatū-Whanganui (fruit); Hawke's Bay (fruit and vegetable post-harvest production, in the blended level 3 and 4 complex apprenticeship); Taranaki; and Taitokerau.	15-20%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. MPI forecasts greater need for managers and semi-autonomous workers. (see above) This qualification provides the industry-specific skills for those working in these higher-level roles. Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification: • leadership as a key skills gap (Fruit and	The New Zealand Diploma in Horticulture Production (Level 4) is intended for people who are experienced workers in the horticulture industry who want to develop their skills and knowledge to supervise day to day operations in horticulture production. It recognizes the specific skills and knowledge of individuals who can, in a self-managed capacity, take responsibility for the daily operations in a horticulture production sector. The qualification also includes a component around applying knowledge of environmental factors and sustainable practices.	High Priority

				Vegetable industries). • need for skills related to carbon neutrality and climate change (specifically in terms of water use) (Nursery, turf and gardening industries).		
New Zealand Certificate in Horticulture Services (Level 4): [Stranded] [2674]		All regions – but note RSLG specifics: Taitokerau; Nelson Tasman (nursery production sub-industry).	10-15%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. The total workforce across the Nursery, Turf and Gardening industry grouping has grown over the five-year period leading to 2020-21. In the Sports Turf industry, the Greenkeeper workforce numbers have been increasing. This qualification also serves the landscape construction and design industry (which form part of the Support Services	The New Zealand Certificate in Horticulture Services (Level 4) provides the specific skills and knowledge for individuals to self-manage and take responsibility for the daily operations in the amenity, arboriculture, cemetery, garden centre, landscape design, landscape construction, or sports turf sector.	High Priority

				industry grouping). This industry has also experienced workforce growth over that period. MPI forecasts greater need for managers and semi-autonomous workers. (see above). This qualification provides the industry-specific skills for those working in these higher-level roles. All of these industries have identified leadership, business and management skills as lacking.		
New Zealand Diploma in Horticulture Production (Level 5) [Stranded] [2666]		All regions – but note RSLG specifics: Taitokerau	30-35%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. MPI workforce forecasts predict strong growth for the fruit industry in particular and indicate greater need for managers and semi-autonomous workers. The forecasts also identify more managers for wine-making.	The New Zealand Diploma in Horticulture Production (Level 5) provides a set of planning and management skills, stranded to meet the needs of the different horticulture industries and sub-industries, including post-harvest quality standards and seasonal outdoor crop production tasks. It also enables graduates to apply knowledge of leadership and relationship management to engage with team	High Priority

| | | | | This qualification provides the industry-specific skills for those working in these higher-level roles.

Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification:

• leadership as a key skills gap (Fruit and Vegetable industries)
• post-harvest quality standards and seasonal outdoor crop production tasks as skills it needs in its workforce (Fruit)
• skills related to carbon neutrality and climate change (specifically in terms of water use) (Nursery, turf and gardening industries). | members and clients using a range of effective interpersonal skills relevant to a horticulture sector.

The qualification also includes a component around applying knowledge of environmental factors and sustainable practices. These skills contribute to the industries need for skills related to carbon neutrality and climate change. | |

We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:	
• New Zealand Certificate in Sports Turf (Level 5) [2675]	Medium Priority
• New Zealand Certificate in Sports Turf (Level 6) [2683]	Medium Priority
• New Zealand Diploma in Amenity Horticulture (Level 5) [4284]	Medium Priority
• New Zealand Certificate in Organic Primary Production (Level 5) [2682]	Medium Priority
Grapes and Wine qualifications We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:	
• New Zealand Certificate in Cellar Operations (Level 3) [2722]	Medium Priority
• New Zealand Certificate in Cellar Operations (Level 4) [2723]	Medium Priority
• New Zealand Certificate in Cellar Operations (Level 4): Optional strands in Vintage Operations, and Wine Analysis [4553]	Medium Priority
• New Zealand Certificate in Cellar Operations (Level 5): Optional strands in Technical Operations, and Wine Analysis [4554]	Medium Priority

Which specific qualifications and credentials do you want to see decreases in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need
New Zealand Certificate in Horticulture (General) (Level 3) [2677]			We do not have a good sense of how many learners may be industry related, though the learner profile suggests a significant reduction is likely. We want provision that shows that it is targeting industry.	Learner numbers for this qualification have rapidly increased, especially over the COVID-19 epidemic, from 535 in 2017 to a high of 4370 in 2021. Further examination of the student profile reveals that they are all SDR (and in fact mostly extramural) and over half are 40+ years old. This is quite different from the horticulture workforces in the fruit, vegetable, and grapes and wine industries leading us to conclude that the qualification has mainly been taken up by hobbyist gardeners. In an industry training context, we are therefore recommending a decrease in learner numbers.	We have checked our findings with Horticulture New Zealand, the key representative of the main industry using the Horticulture qualifications, and it has confirmed that their members are not using this qualification. Its preference is for the stranded level 3 New Zealand Certificate in Horticulture (2678).

Which specific qualifications and credentials do you want to see changes in?

Qualification or credential	Mode	Specific regions?	What is the change you are wanting to see?	Evidence of workforce need – include as text below the table or as an attachment
New Zealand Certificate in Horticulture (Level 3) [Arboriculture strand] [2678]	Prioritise classroom-based training		Prioritise classroom-based training	Industry has indicated that it has struggled to support the upskilling of workers in a work-based learning context due to the lack of capacity within industry to provide mentors and assessors.
As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.				

Are there qualifications or credentials that you are developing or plan to develop that will be available in 2025?

Area of provision and/or qualification/ credential name (if known)	Level	Mode (if specific)	Qualification or micro-credential	Estimated date it will be available	Description of content (10–20 words)	Name of qualification or micro-credential this will replace (if relevant)
Horticulture - Fresh Water Farm Plans MC				Should be available in 2024		
Leadership in Horticulture MC (working with Ringa Hora)				Should be available in 2024		

Apiculture qualifications advice

Our Apiculture Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Apiculture industry trends

The industry has been through a significant and rapid growth period and is now going through a period of consolidation and increasing focus on professionalisation and commercial discipline.

The COVID-19-19 pandemic brought with it a surge in demand for honey, particularly mānuka honey, and export prices rose significantly over 2020 and 2021, reaching an all-time high of $481 million in 2021.[22] This was good news for honey producers, who have had successive years of high yields, resulting in a stockpiling of honey. Despite these record sales, it is estimated that there is still more than a year's worth of honey in reserves. Congruently, the Government's introduction of free training in the trades as part of the COVID-19-19 response saw student enrolments in Beekeeping sharply increase in 2020. These anomalies are already beginning to change, as exports have begun declining, and free trades training came to an end in December 2022. The number of registered beehives has also been declining, with approximately 730,800 registered beehives in 2022, compared to a peak of 918,000 registered beehives in 2019.[23]

Apiculture workforce trends

The 'Pork, Poultry, Bees and Other Sector' workforces are forecast to increase by at least 11% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low levels of industry tenure which drive a need for training of replacements.

Apiculture workforce overview and highlighted demographics

3,100 individuals worked in the Apiculture industry across 2020, with 1,100 of these being self-employed. The number of employees counted per month tends to peak in summer at around 1,800 employees and is lowest in winter (June/July). Compared to the age distribution across other Muka Tangata industry groups, Apiculture is made up of a higher percentage of workers in the middle-age bands (between ages 25-54) and a lower percentage of older

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[22] https://mukatangata.workforceskills.nz/explore-industries/apiculture/industry/
[23] Farm monitoring reports | NZ Government (mpi.govt.nz)

workers (aged 55 or over). While the percentage of workers identifying as Māori and Asian is consistent with Muka Tangata industries as a whole, relatively few workers in Apiculture identify as Pacific peoples.

The count of individuals working in the Apiculture industries in 2020, by employment type

Figure 34 - *https://mukatangata.workforceskills.nz/explore-industries/apiculture/workforce/*
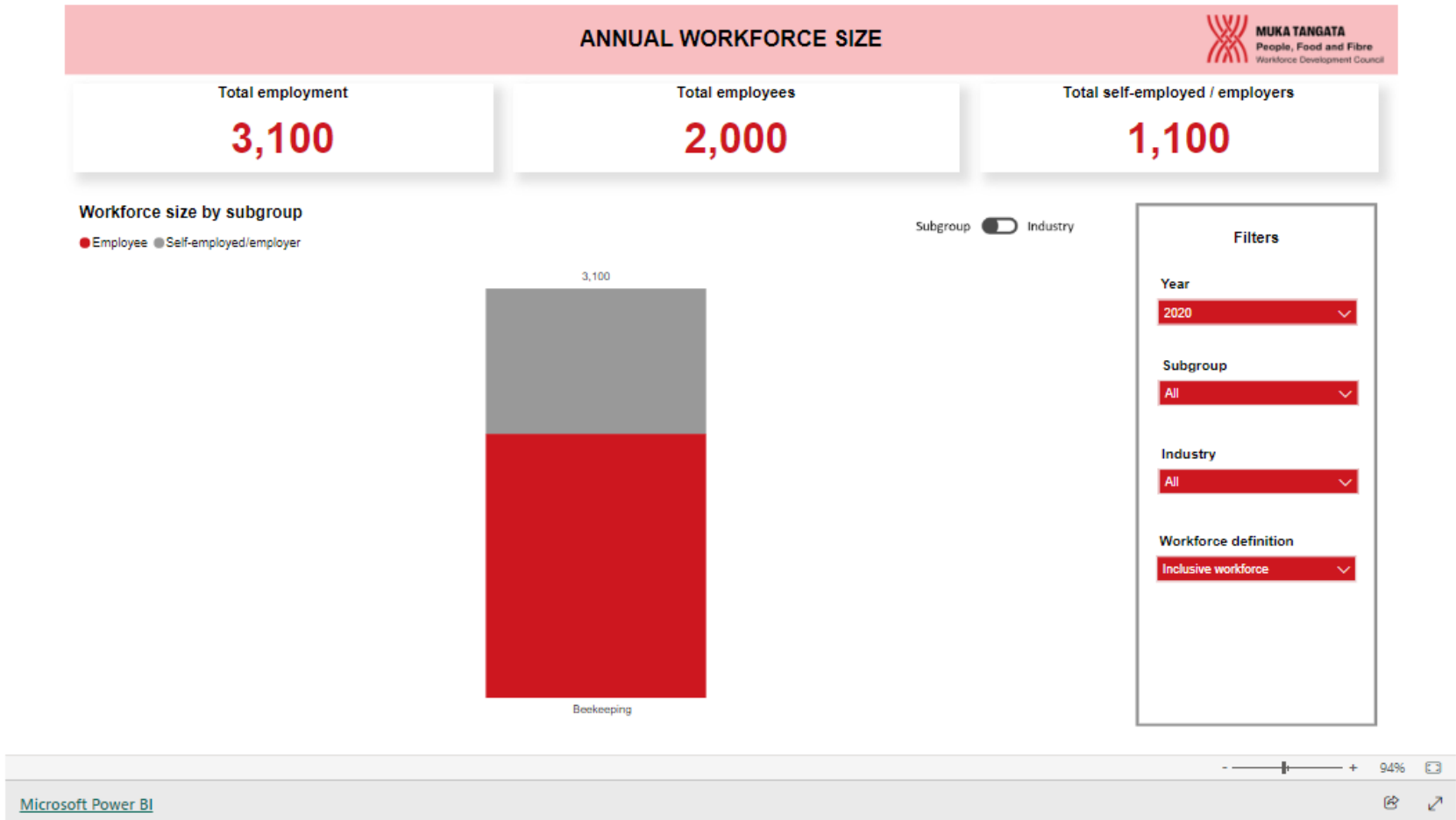
Apiculture workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 35 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
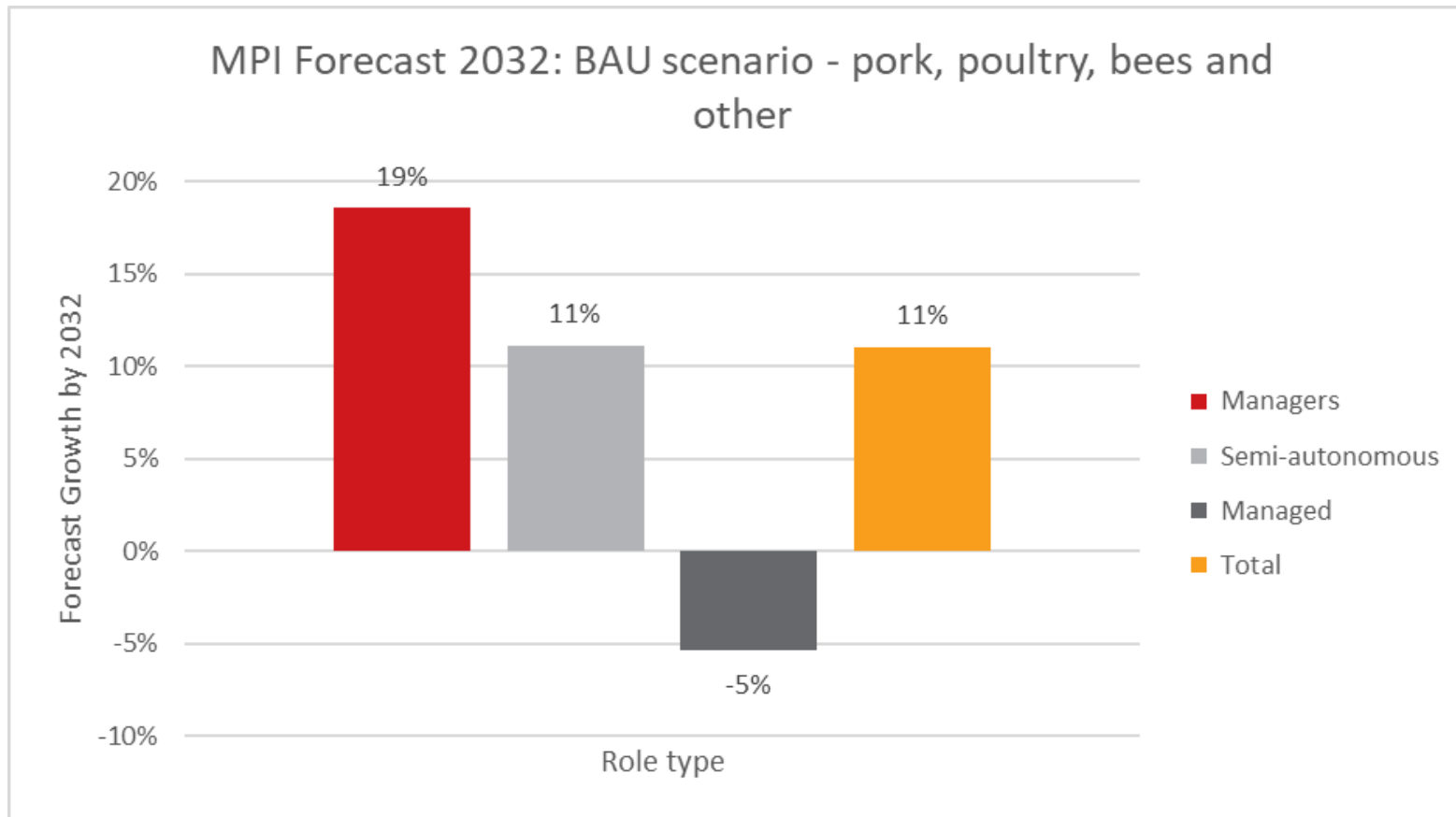
Apiculture workforce tenure

The Apiculture workforce has a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

Figure 36 - Stats NZ IDI analysis 2023

Apiculture Learner trends

In 2021, enrolment numbers increased to 2,830 learners, with 20% of learners identifying as Māori. This is a large proportion of learners compared to the total workforce count for 2020, when we counted 3,100 people, 17% of whom identified as Māori. The number of Beekeeping learners who identify as female has been increasing since 2013, reaching an all-time high of 49% in 2021. This is quite a bit higher than the number of female learners across Muka Tangata industries more broadly and is also significantly higher than the number of people in the Apiculture workforce who identify as female, which was 31% in 2020.[24]

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Apiculture (Level 3) [2223]		All regions	0-5%	As we indicated in our 2024 advice, this qualification seems to mainly serve 'hobbyist' apiarists. That is the feedback we have received from industry. In addition, we note that enrolments are roughly the same size as the total apiculture workforce. However, as the only apiculture-specific 'entry level' qualification it may also be used by potential entrants to the industry, including as part of complex apprenticeships. In addition, hive health (preventing the spread of varroa mite or American Foulbrood Disease) is important to the industry and formal training for hobbyists may be useful in this context. We are therefore reluctant to suggest a decrease in learner numbers, but do not want to	The purpose of this qualification is to provide the apiculture industry with individuals who have the skills and knowledge to work safely and effectively as an assistant beekeeper. This qualification is for people who are either intending to work, or are working in, the apiculture	Low Priority

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				see significant increases, and maintain our 2024 advice of prioritising on-job training if possible.	industry. This includes being able to apply knowledge of pest and disease control methods to carry out beehive disease management plans	
New Zealand Certificate in Apiculture (Level 4) [2224]		All regions – but note RSLG specifics: Taitokerau	20-25%	There is demand from industry driven by forecast workforce growth, significant gaps in the qualification level of the workforce and demand driven by high rates of new workers constantly needing to be brought into the industry and upskilled. The industry forecasts growth in 'Manager' level skills in particular and changing commercial and business trends also support demand for an industry-focused qualification that provides the skills necessary to supervise and oversee a viable apiculture business.	Our priority in Apiculture is the Level 4 New Zealand Certificate in Apiculture. This qualification is industry focused and provides the apiculture industry with individuals who have the knowledge and skills to supervise and oversee a viable apiculture business.	High Priority

Which specific qualifications and credentials do you want to see changes in?

Qualification or credential	Mode	Specific regions?	What is the change you are wanting to see?	Evidence of workforce need – include as text below the table or as an attachment
New Zealand Certificate in Apiculture (Level 3) [2223]	Prioritise on-job training		Prioritise on-job training	As we indicated in our 2024 advice, this qualification seems to mainly serve 'hobbyist' apiarists. That is the feedback we have received from industry. In addition, we note that enrolments are roughly the same size as the total apiculture workforce. However, as the only apiculture-specific 'entry level' qualification it may also be used by potential entrants to the industry, including as part of complex apprenticeships. In addition, hive health (preventing the spread of varroa mite or American Foulbrood Disease) is important to the industry and formal training for hobbyists may be useful in this context. We are therefore reluctant to suggest a decrease in learner numbers, but do not want to see significant increases, and maintain our 2024 advice of prioritising on-job training if possible.
As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.				

Agriculture qualifications advice

These qualifications serve our Dairy; Sheep, Beef, Deer, and Wools; and Arable industries.

Dairy

Our [Dairy Farming Workforce Development Plan](#) contains further analysis of [Industry](#), [Workforce](#) and [Learner](#) data trends.

Dairy Industry Trends

The industry remains critically important the NZ economy and trade and is forecasting export growth. The industry is dealing with significant changes from regulation, environmental and technological changes. These all drive the need for new skills to be brought into the sector.

Dairy is the country's largest export earner.[25]Regulations are tightening while compliance is becoming more complicated and time-consuming, and costs keep rising.[26] Medium to long-term challenges for the industry include higher community and government expectations for the environment, water quality, biodiversity, and climate change,[27] as well as changing technologies and consumer tastes. New Zealand's ambition of being carbon neutral by 2050 is placing considerable pressure on the dairy industry, with key policies such as the National Environmental Standards for Freshwater providing direction and controls on nitrogen pollution and high-risk farm practices.[28] Overall, despite the likely decline in milk supply, total dairy export volumes should remain similar to 2021/22. Supported largely by a weaker NZD and reduction in the supply of dairy products from key dairy exporting regions, export revenue is forecast to increase 6% and reach a record high level of $23.3 billion in the year to 30 June 2023. Dairy farming accounted for over 40% of total export revenue in the food and fibre sector for the year ending June 2022.[29]

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[25] [mpi.govt.nz/dmsdocument/57298-Situation-and-Outlook-for-Primary-Industries-SOPI-June-2023](#)
[26] ANZ New Zealand Business Outlook | December 2022

[27] https://www.dairynz.co.nz/news/dairy-committed-to-a-better-environment/

[28] https://www.tdb.co.nz/dairy-sector-extending-the-boundaries
[29] HYPERLINK "https://mukatangata.workforceskills.nz/explore-industries/dairy-farming/industry-3/"[Industry » Muka Tangata Workforce Development Council (workforceskills.nz)](#)
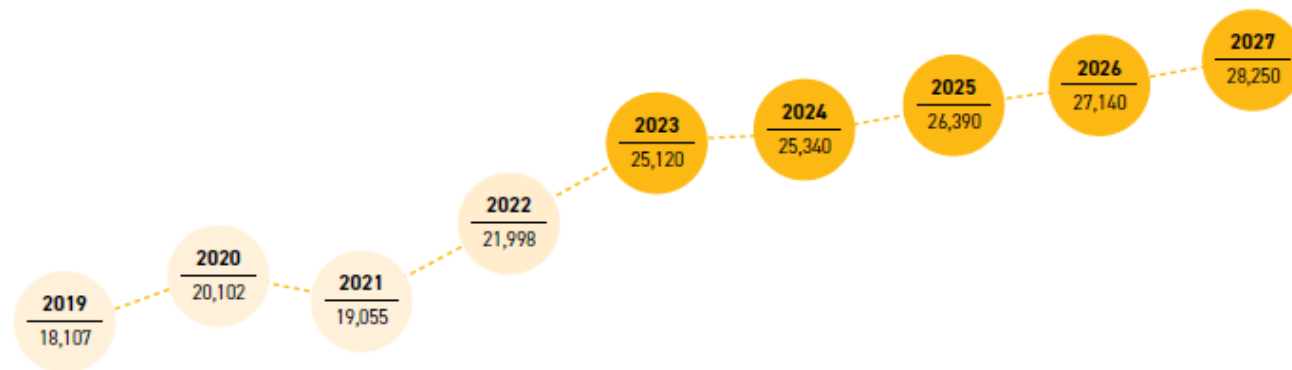
Table 2: Dairy export revenue 2019–27

Year to 30 June, NZ$ million

Product	Actual				Forecast				
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Whole milk powder	6,675	7,555	7,542	8,304	7,750	7,310	7,630	7,940	8,380
Butter, anhydrous milk fat and cream	3,612	3,360	2,667	3,519	4,330	4,390	4,570	4,470	4,700
Skim milk and butter milk powder	1,323	1,787	1,526	1,947	2,580	2,400	2,450	2,530	2,590
Casein and protein products	1,574	1,996	2,019	2,680	3,360	3,560	3,800	3,960	4,040
Cheese	1,965	2,072	2,065	2,199	2,880	2,970	2,990	3,160	3,260
Infant formula	1,641	1,842	1,588	1,435	2,090	2,460	2,590	2,710	2,870
Other dairy products*	1,318	1,491	1,648	1,914	2,120	2,250	2,350	2,370	2,420
Total export value	18,107	20,102	19,055	21,998	25,120	25,340	26,390	27,140	28,250
Year-on-year % change	9%	11%	-5%	15%	14%	1%	4%	3%	4%

Figure 37 - mpi.govt.nz/dmsdocument/57298-Situation-and-Outlook-for-Primary-Industries-SOPI-June-2023

Dairy Workforce Trends

The workforce has experienced ongoing labour and skill shortage needs and has significant levels of seasonal variation (which affect how forecasts should be treated). The Dairy sector workforce as a whole is forecast to increase by at least 6% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The sector has very strong reliance on those on temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

Dairy workforce overview and highlighted demographics

The Dairy industry has the third largest workforce out of all Muka Tangata industries. In 2020 there were 44,400 people working in the dairy industry, and the workforce was predominantly European/Pākehā (80%) with 13% identifying as Māori, 13% identifying as Asian, and less than 2% identifying as Pacific peoples.[30] Immigration is an important source of labour; however, there are persistent long-term labour force shortages in the dairy industry, and farmers remain under pressure due to workforce shortages.[31] Attracting New Zealanders into the industry rather than relying on foreign workers to fill the gaps where there are ongoing labour and skills shortages across a variety of roles is a key challenge. Also, operating a dairy farm in New Zealand is becoming increasingly complex.

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[30] [Workforce » Workforce Development Council (workforceskills.nz)](workforceskills.nz)
[31] [Sub-043-DairyNZ.pdf (productivity.govt.nz)](productivity.govt.nz)

The count of individuals working in the Dairy industry in 2020, by employment type

ANNUAL WORKFORCE SIZE

MUKA TANGATA
People, Food and Fibre
Workforce Development Council

Total employment	Total employees	Total self-employed / employers
44,400	**29,200**	**15,200**

Workforce size by subgroup

● Employee ● Self-employed/employer

Subgroup ⬤ Industry

Filters

Year
2020 ⌄

Subgroup
All ⌄

Industry
All ⌄

Workforce definition
Inclusive workforce ⌄

44,400

Dairy cattle farming

− | + | 94%

Microsoft Power BI

Figure 38 - https://mukatangata.workforceskills.nz/explore-industries/dairy-farming/workforce-3/

Visa status

● NZ citizen ● Resident visa ● RSE ● Student visa ● Visitor visa ● Work visa ● Working holiday visa

Industry	NZ citizen	Resident visa	RSE	Work visa	Working holiday visa
Apiculture	79%	10%		9%	
Arable	85%	7%		4%	4%
Dairy farming	78%	7%		12%	
Equine, dogs and racing	85%	8%		6%	
Forestry	90%	5%			
Fruit	58%	11%	14%		14%
Grapes and Wine	63%	12%		10%	15%
Nursery, turf and gardening	76%	14%		5%	5%
Poultry, Pigs and other livestock far…	82%	10%		6%	
Seafood	70%	13%		11%	5%
Sheep, Beef and Deer farming	94%	4%			
Support Services	68%	10%	5%	6%	8%
Vegetables	58%	24%		7%	7%
Veterinary	79%	16%		4%	
National Benchmark	71%	19%		6%	

Filters

Year

2020 ⌄

Industry group

All ⌄

Industry

All ⌄

Employment status

All ⌄

Workforce definition

Inclusive workforce ⌄

Figure 39 Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

Dairy workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. The Dairy workforce has seasonal peaks – this affects how forecasts should be interpreted as the forecasts below are based on a version of an annual 'full time equivalent' and therefore will underrepresent the number of actual workers forecast to be in the sector. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 40 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

The monthly count of employees working in the Dairy industry

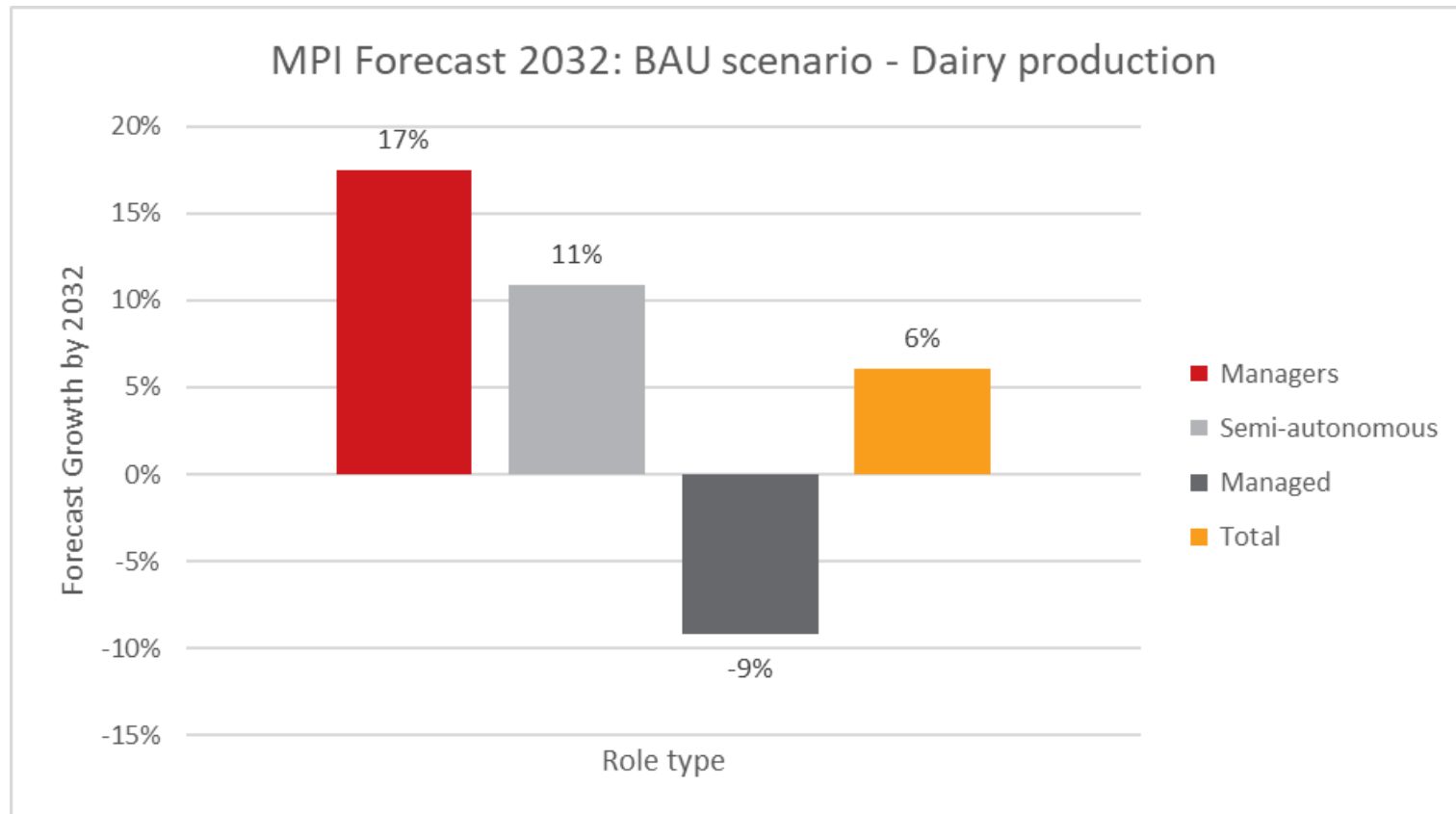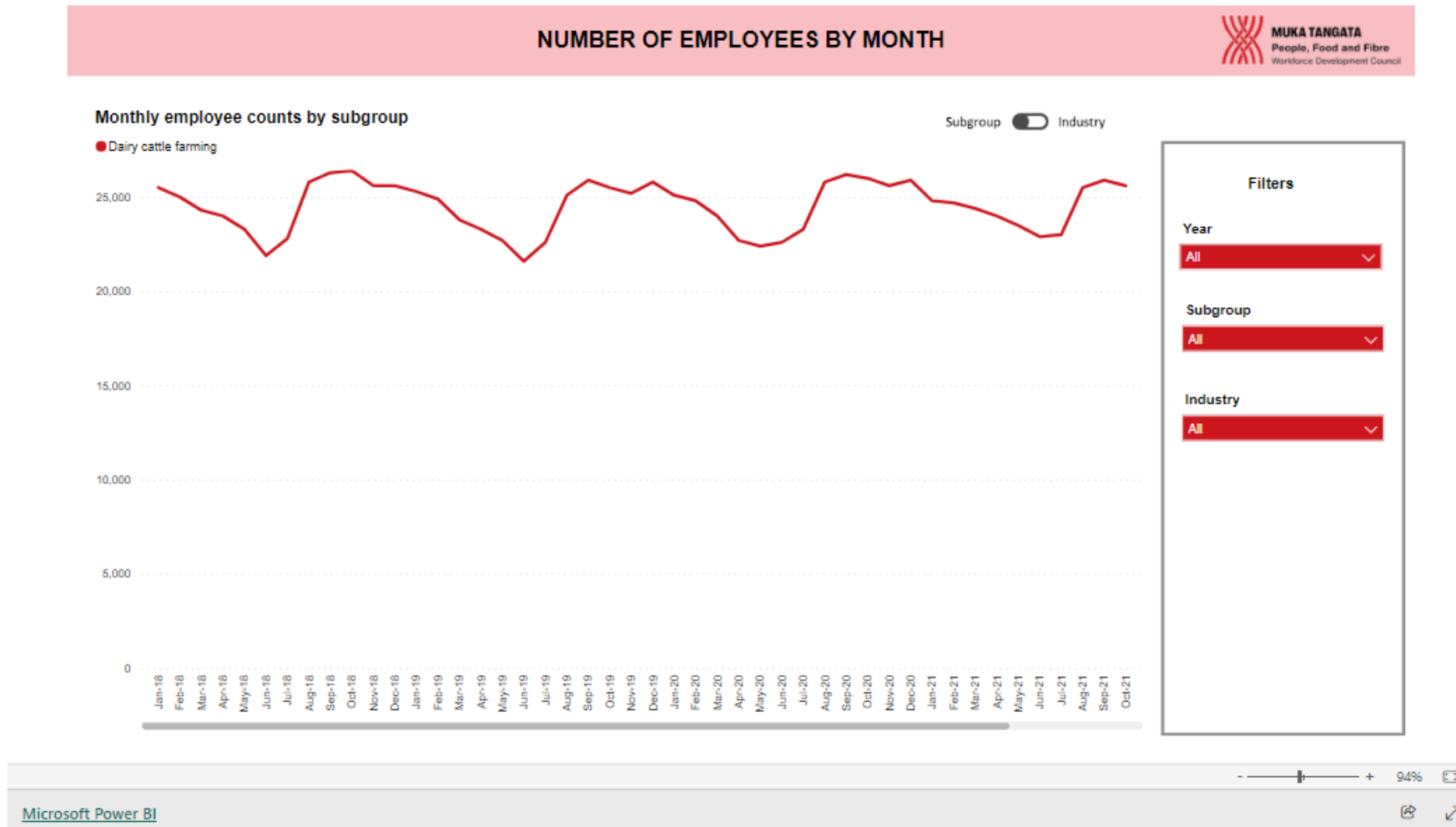
Figure 41 https://mukatangata.workforceskills.nz/explore-industries/dairy-farming/workforce-3/

Sheep, Beef, Deer and Wool

Our Sheep, Beef, Deer and Wool Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Sheep, Beef, Deer and Wool industry trends

The industry is a significant contributor to our sector's exports but has faced significant challenges and is forecasting a slight decline in export revenue. The industry is dealing with significant changes from regulation, environmental business and technological changes. These all drive the need for new skills to be brought into the sector.

The industry collectively made up 23% of export revenue for the food and fibre sector in the year ending June 2022, with a total of $12.3 billion. Beef, veal and lamb were the highest contributor to this revenue (66%), with carpets and other wool products contributing the least (<%1). Overall export revenue for Sheep, Beef, Deer and Wool has fluctuated over the last couple of years, seeing some increases despite the hectarage of sheep and beef farms decreasing, but is forecasted to decline slightly through 2024. The Sheep, Beef, Deer and Wool industry is facing the pressure of keeping up with rapidly changing farming systems due to changing technologies, new ways of farming, and external pressures and regulations.[32]

Sheep, Beef, Deer and Wool workforce trends

The industry is facing an aging workforce and is looking to how to support a replacement pipeline of workers and upskill existing workers to move into roles as experienced workers age-out from the workforce. The 'Red Meat and Wool' sector workforce as a whole is forecast to decrease by 1% by 2032 but is forecasting an increase in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology).

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[32] Sheep, Beef, Deer and Wool farming » Muka Tangata Workforce Development Council (workforceskills.nz)

Sheep, Beef, Deer and Wool workforce overview and highlighted demographics

In 2020, 53,850 people worked in the Sheep, Beef, Deer and Wool industry, with 87% working in Sheep and Beef farming. The industry is facing an aging workforce – 21% of workers were aged 65 or over in 2020. Across the industry, 17% of the workforce identified as Māori in 2020, but in Shearing Services this is much higher, with 65% of the workforce identifying as Māori in 2020. In 2020, 36% of the workforce identified as female, which is similar to the percentage of the workforce identifying as female across all Muka Tangata industries.

The count of individuals working in the Sheep, Beef, Deer and Wool industries in 2020, by employment type

Figure 42 - https://mukatangata.workforceskills.nz/explore-industries/sheep-beef-and-deer-farming/workforce-9/
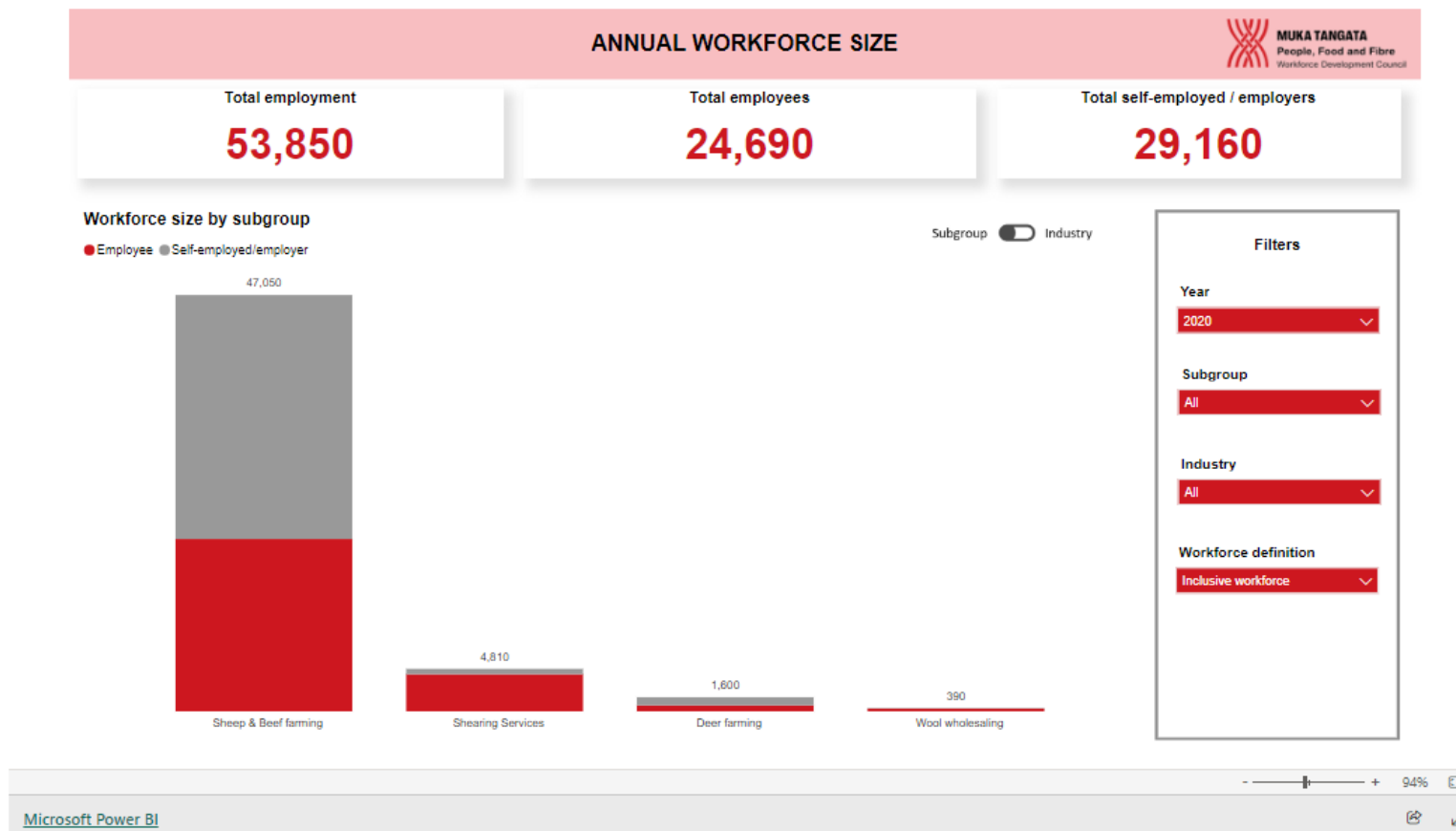
The age distribution of the individuals working in Sheep, Beef, Deer, and Wool industries in 2020

Figure 43 - https://mukatangata.workforceskills.nz/explore-industries/sheep-beef-and-deer-farming/workforce-9/more-analysis-2/
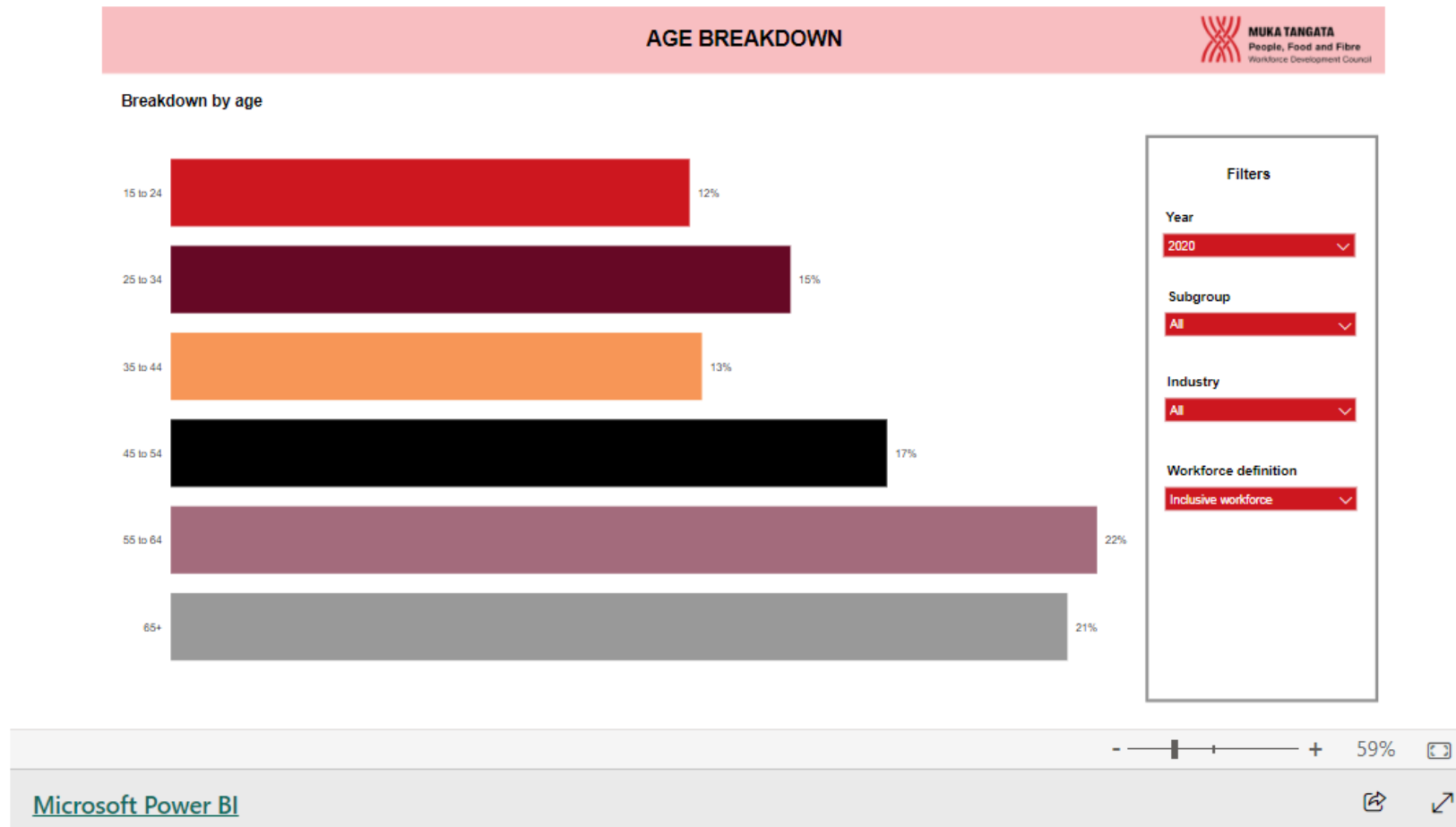
Sheep, Beef, Deer and Wool workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario' for 'Red Meat and Wool' sector workforce as a whole, is for a decrease by 1% by 2032 but is forecasting an increase in higher skill role types that will require increased levels of training. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 44 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

Arable

Our [Arable Workforce Development Plan](#) contains further analysis of [Industry](#), [Workforce](#) and [Learner](#) data trends.

Arable industry trends

The industry has faced challenges with recent weather but is forecast to grow its export revenue.

Through the production of grain, seed, and other crops, it accounted for 1% (NZ $ 252 million) of the total export revenue in the food and fibre sector.[33] New Zealand arable systems are unique in that they generally include livestock. Crops are produced on 180,000 hectares of land around New Zealand with the bulk of production centred in the South Island – in the Canterbury region and Southland. The Arable industry supplies seed for animal pastures, grain, and silage for complementary animal feed which means it is the driving force behind our $20 billion livestock industry.[34] The 2021/22 harvest is considered to be one of the worst on record. The 2022/23 season also had some challenges 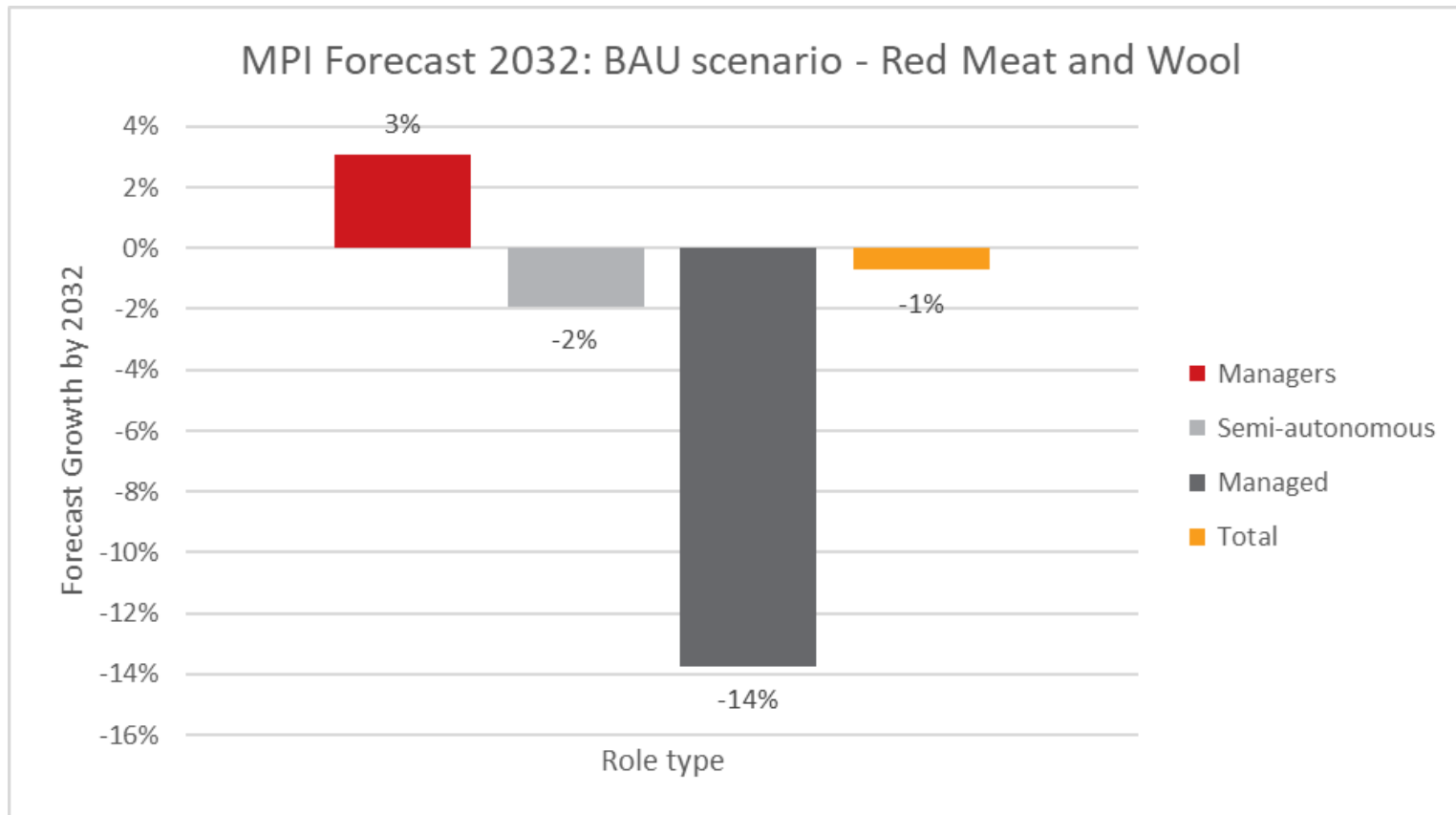with cold snaps and heavy rainfall events which made spring planting difficult and delayed planting schedules – especially in the North Island. Yields for maize, grain and silage were slightly down on the previous year but considering the variable weather conditions crop yields exceeded expectations. Based on an average production season, export revenue is forecast to increase five percent for the year to 30 June 2023.[35]

Arable workforce trends

The Arable production sector workforce as a whole is forecast to increase by at least 4% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements.

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[33] [Situation and Outlook for Primary Industries (SOPI) December 2022 (mpi.govt.nz)](#)
[34] [FAR Research | Arable Industry Profile](#)
[35] [Situation and Outlook for Primary Industries (SOPI) December 2022 (mpi.govt.nz)](#) p60/p63

Arable workforce overview and highlighted demographics

Arable is one of the smallest Muka Tangata industries, with the second smallest workforce overall, and the smallest production workforce. In 2020 6,210 individuals worked across arable industries. The arable workforce is not as ethnically diverse as other workforces across Muka Tangata industries, with 89% identifying as European (which is the second highest concentration of all the Muka Tangata industries), 9% Māori, 6% Asian and 1% Pacific peoples.[36]

The count of individuals working in the Arable industries in 2020, by employment type

Figure 45 - https://mukatangata.workforceskills.nz/explore-industries/arable/workforce-2/

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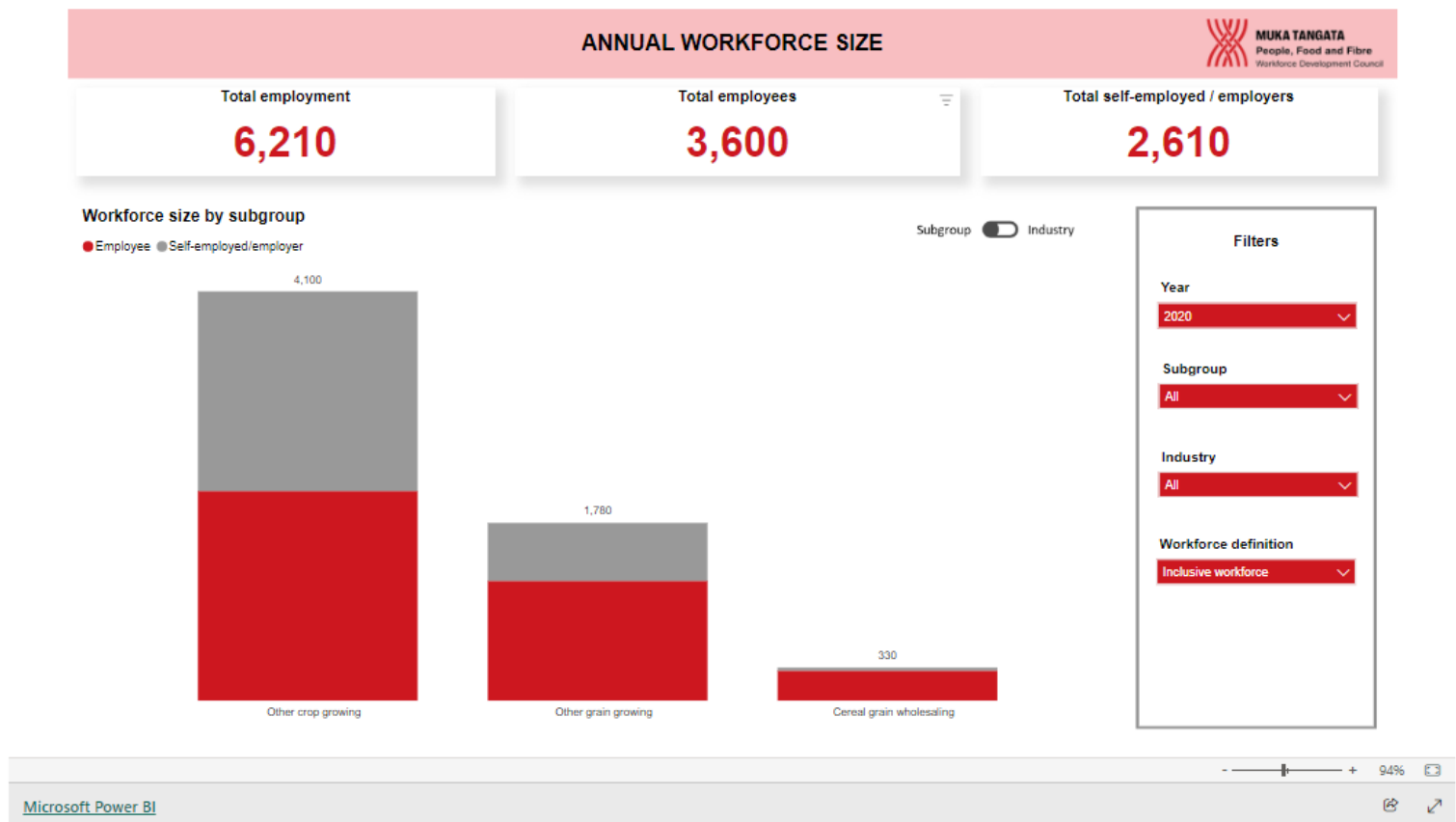
[36] Arable » Muka Tangata Workforce Development Council (workforceskills.nz)

Arable workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 46 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
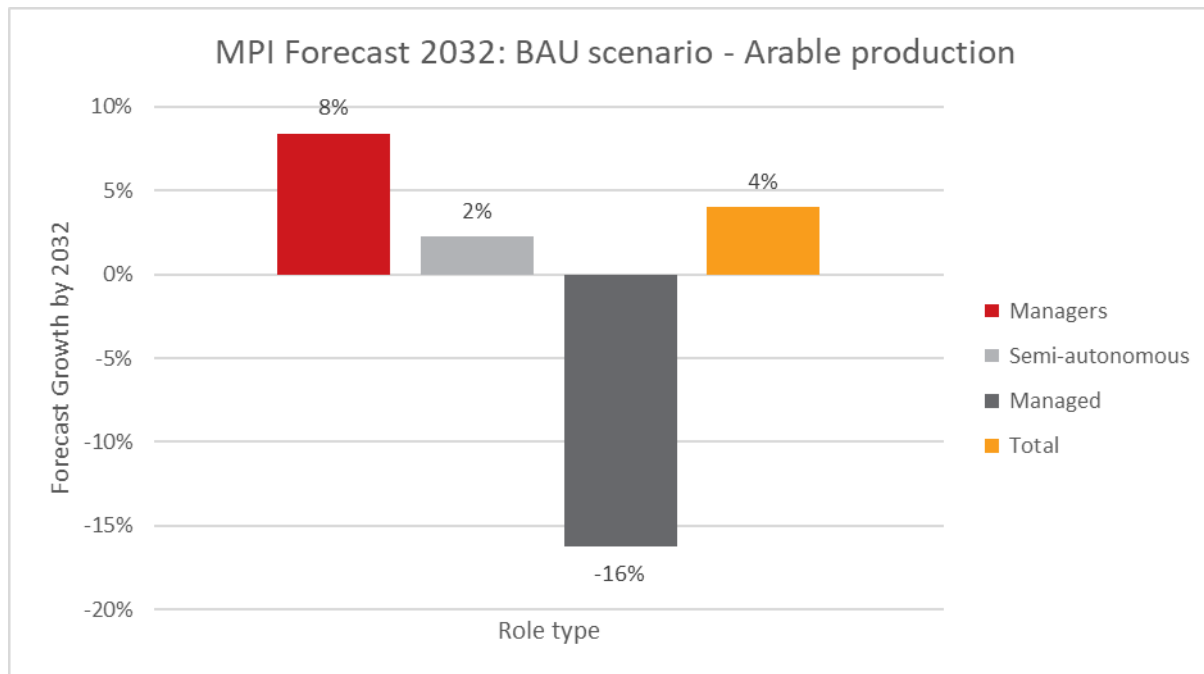
Arable workforce retention and tenure

The Arable workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry
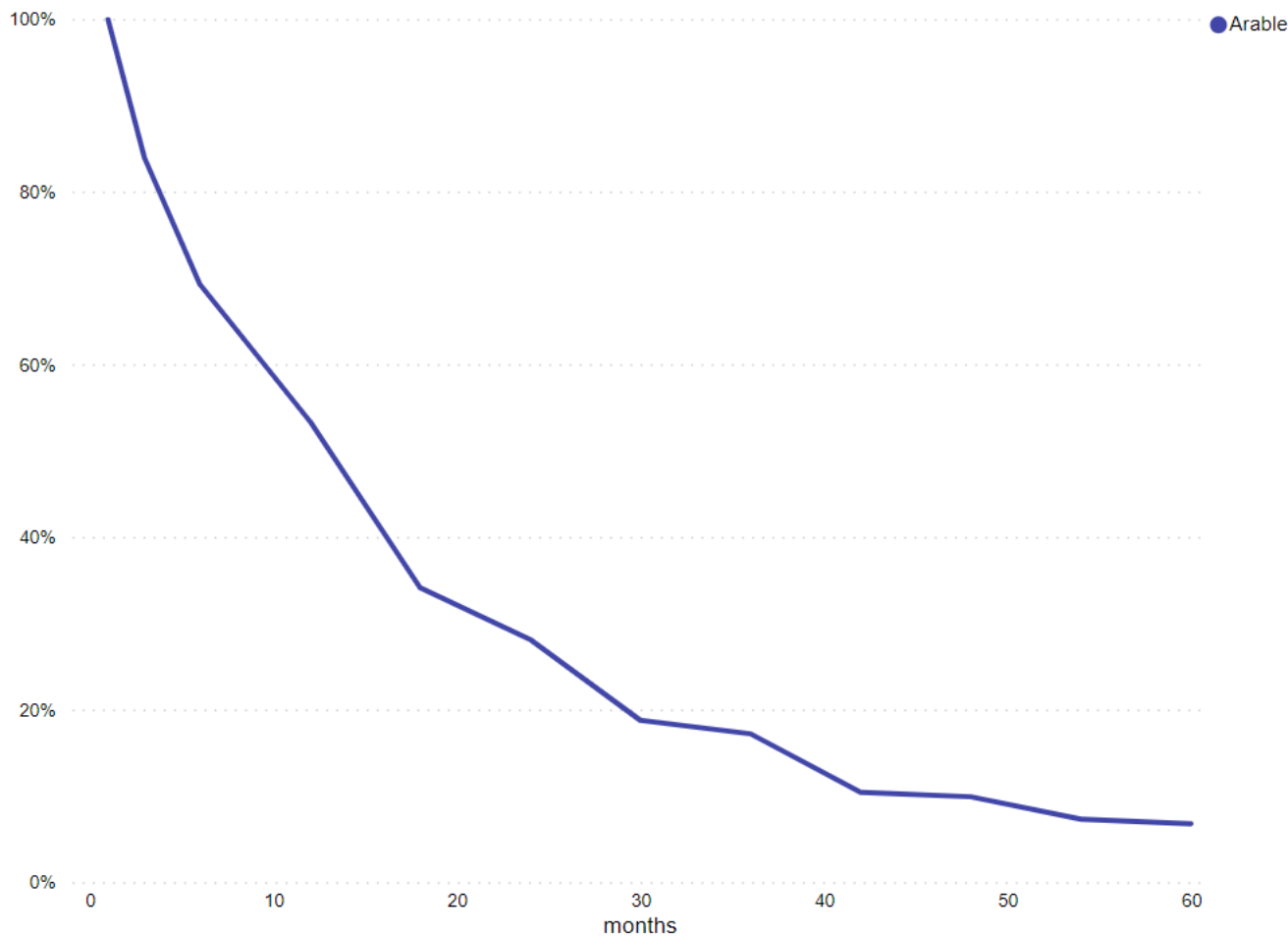
● Arable

Filters

Starting cohort

2015

Industry group

Arable

Industry

All

Workforce definition

Inclusive workforce

Figure 47 - Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Arable — 51% | 19% | 9% | 7% | 11%

Filters

Year
2020

Industry group
Arable

Industry
All

Workforce definition
Inclusive workforce

Figure 48 - Stats NZ IDI analysis 2023

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Agriculture (Level 3) [3869]		All regions – but note RSLG specifics: Taitokerau	15-20%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and business practices. Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification: • need to strengthen a core set of capabilities for workers (both already in the industry and new to the industry), including soil and pasture management, animal husbandry (including animal health and welfare), and milk quality, finance, best management practice, feed plans, fencing, and communication skills (Sheep, beef, and deer and dairy farming industries) • soil biology skills, as well as communication and technology skills (Arable).	The purpose of the New Zealand Certificate in Agriculture (Level 3) is to provide pastoral livestock farming sectors with individuals who have the skills and knowledge to carry out a range of core tasks relevant to either dairy or meat and/or fibre farming (including the skills identified by industries). The dairy farming industry views this qualification as its entry level qualification, providing the career path for herd managers (where there are currently significant labour shortages) through the level 4 Certificate in Agriculture.	Priority

					We are currently planning a review of all the agriculture qualifications, but in the meantime are recommending increases across many of the current qualifications to address ongoing skill shortages.	
New Zealand Certificate in Agriculture (Farming Systems) (Level 3) [2220]		All regions – but note RSLG specifics: Taitokerau; Canterbury (dairy)	30%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and business practices. Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification: • need for new workers to have a knowledge of farm systems and the importance of sustainable farming practices in a time of growing change (Sheep, beef and deer and Dairy industries) • skills related to climate change and resilience (Arable).	The New Zealand Certificate in Agriculture (Farming Systems) meets these needs by providing graduates who have an understanding of the key inputs into farming systems, and the wider context of the pastoral farming industry in terms of environmentally and financially sustainable farming practices.	Priority
New Zealand Certificate in Land Based Sustainability Practices (Level 3) [2684]			30-35%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and	The New Zealand Certificate in Land Based Sustainability Practices (Level 3) provides the skills and knowledge to actively	Priority

				business practices. In addition, our land-based industries, both horticulture and agriculture, are facing challenges from the impact of climate change and changing views on environmental protection and what sustainable land use may be. This is also in line with key government-industry partnership strategies like 'Fit for a Better World'[37] New workforce skills and a greater variety of production practices, supported and led by a workforce with the relevant skills, are needed to face these challenges.	contribute to the skills needed by industry to deal with climate change impacts and changing land use practices. These include environmental, conservation and land-based management practices to enhance sustainability. Communities will benefit by having graduates who can apply sustainable practices to their workplace to ensure the continuation of current land-based management activities while conserving the environment. Current enrolments reflect a high percentage of Māori learners.	
New Zealand Certificate in Agriculture (Level 4) [Stranded] [2212]		All regions – but note RSLG specifics: Canterbury (dairy); Taitokerau.	20-25%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and business practices. MPI forecasts greater need for managers and semi-autonomous workers. (see above) This	The Level 4 Certificate in Agriculture provides the pastoral farming sector with individuals who have the skills and knowledge to take responsibility for the day-to-day operational management of a pastoral or arable	High Priority

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[37] https://fitforabetterworld.org.nz/

				qualification provide the industry-specific skills for those working in these higher level roles (including for herd managers, where there is a shortage and is an occupation on the Green List occupation).	farming production system (a leadership role). It is the qualification for herd managers in the dairy farming industry.	
				Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification:	Learners of this qualification may gain knowledge around how to use appropriate technology as well as strategies for improving farm physical and financial performance (monitoring and recording of information). This qualification also has a component of sustainable crop management (relevant to climate change and resilience).	
				• leadership (highlighted by nearly all of our industries as a pressing gap) • animal health and welfare, and monitoring and recording of information skills (Sheep, Beef, Deer and Wool) • technical expertise, including to improve skills and understanding around climate change and resilience (Arable).		
					We are currently planning a review of all the agriculture qualifications, but in the meantime are recommending increases across many of the current qualifications to address ongoing skill shortages as new qualifications may not be in place and	

					industry will continue to have need for these skills.	
New Zealand Certificate in Sustainable Primary Production (Level 4) [2685]		All regions – but note RSLG specifics: Taranaki and the West Coast (arable, dairy and support services); while Wellington (Wairarapa for the arable industry); Taitokerau.	20-25%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and business practices. MPI forecasts greater need for managers and semi-autonomous workers. (see above) This qualification provides the industry-specific skills for those working in these higher-level roles. Our land-based industries, both horticulture and agriculture, are facing challenges from the impact of climate change and changing views on environmental protection and what sustainable land use may be. This is also in line with key government-industry partnership strategies like 'Fit for a Better World'[38] New skills and a greater variety of production practices are needed to face these challenges.	The New Zealand Certificate in Sustainable Primary Production (Level 4) builds on the level 3 Land Based Sustainability Practices to provide the land based primary industries with individuals who have attained the skills and knowledge to develop and manage sustainable practices to comply with a recognised production standard. Current enrolments reflect a high percentage of Māori learners.	High Priority
New Zealand Certificate in Primary Industry Production Management (Level 5) [Stranded] [2211]		All regions – but note RSLG specifics: Canterbury.	20-25%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing technological, regulatory and business practices.	The New Zealand Certificate in Primary Industry Production Management provides the industry-specific skills for those working in the higher-level roles identified in the	High Priority

[38] https://fitforabetterworld.org.nz/

					MPI forecasts greater need for managers and semi-autonomous workers. (see above) Our industry engagement analysis and review of key industry documents has highlighted the following skill needs that map to this qualification: • increased technical and management skills to improve productivity (many of our industries) • feed budgeting, creating a farm strategy and financial budgeting and management skills (Sheep and beef farming) • employees skilled in feeding, breeding, and animal health (Poultry and Pork industries). The diversity of the qualification means that Arable learners may also gain skills in using technology to achieve production targets, which industry has identified as a need.	MPI workforce forecasts and the skills identified by industries. It provides land-based industries with individuals who have the technical skills and knowledge to manage primary industry production systems to maximise productivity in either livestock or crop production.	

We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:

• New Zealand Certificate in Agriculture (Arable Production) (Level 3) [2624]	Medium Priority
• New Zealand Certificate in Rural Contracting (Level 3): Crop Production, Harvesting, and Mechanical Vegetation Control [2728]	Medium Priority
• New Zealand Certificate in Seed Processing and Handling (Level 3) [4496]	Medium Priority
• New Zealand Certificate in Seed Processing and Handling (Level 4) [2468]	Medium Priority

Wools Qualifications

The current qualification set for wools has not been supported by industry. We are currently working with industry to design fit-for-purpose qualifications and broker appropriate delivery mechanisms. Apart from the New Zealand Certificate in Wool Technology and Classing (Level 4) [4113], we have not seen any enrolments in the other qualifications. We know that in the past we have had 400-500 learners a year across the wools qualifications.

New Zealand Certificate in Wool Technology and Classing (Level 4) [4113]			10-15%	MPI workforce forecasts project a small increase for the wool workforce. As indicated above, formal training in the wool industry has been negligible for some time. We are designing new qualifications and are not recommending increases in most of the existing set. However, the New Zealand Certificate in Wool Technology and Classing (Level 4) is being used and we believe that improving industry circumstances will see demand for the qualification and we are recommending a small increase to reflect this.	The New Zealand Certificate in Wool Technology and Classing (Level 4) provides the skills and knowledge of wool classification, production, processing, and technology that meet wool supply chain, market, and customer requirements, that maximise return in the wool supply chain. The qualification is intended to help build leadership, with graduates being able to manage responsibilities and output of a team in a woolshed.	Priority

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Are there qualifications or credentials that you are developing or plan to develop that will be available in 2025?

Area of provision and/or qualification/ credential name (if known)	Level	Mode (if specific)	Qualification or micro-credential	Estimated date it will be available	Description of content (10–20 words)	Name of qualification or micro-credential this will replace (if relevant)
Wool Micro-credential development project: Sheep Shearing and Wool Harvesting MCs				Should be available in 2024	We are already working with industry leaders and vocational education and training bodies to research, analyse and construct a workable solution for the wools industry.	
Agricultural Qualification Development Project: including stackable MCs				Should be available in 2024	We are planning to review all Agriculture qualifications, micro credentials, and standards to build flexible, sustainable, and enduring learning pathways for learners, employers, and agriculture industries.	

Pork, Poultry and other livestock qualifications advice

Our [Poultry, Pigs and Other Livestock Farming Workforce Development Plan](#) contains further analysis of [Industry](#), [Workforce](#) and [Learner](#) data trends.

Pork, Poultry and other livestock industry trends

These industries have been through significant changes from regulation, business model and technological changes. These all drive the need for new skills to be brought into the sector.

The Poultry and Pork industries have both been going through some significant changes over the past year, which on the surface are largely down to changes in government regulations around animal welfare. However, for the Poultry industry, the country's two major supermarket chains have announced changes to their supply based on changing consumer demands, which is resulting in additional pressure on the industry to change their practices. Neither Poultry nor Pork have substantial export markets, but New Zealanders contribute locally to keep these industries in demand. In fact, we eat nearly 240 eggs per person per year, which equates to $286 million worth of eggs being sold.[39] The local Pork market is quite small, with 60% of the pork consumed in Aotearoa coming from overseas. In 2022, total revenue for the Poultry Meat and Eggs industry was $687.4 million and is forecast to increase at 2.5% year on year until 2028. However, we understand anecdotally that when regulatory changes banning caged egg farming were introduced in December 2022, some egg farms closed permanently. This caused significant disruption to the market, which no longer had enough supply to meet demand.

Pork, Poultry and Other Livestock Workforce Trends

The 'Pork, Poultry, Bees and Other Sector' workforces are forecast to increase by at least 11% by 2032 with increases being particularly concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements and has historically relied on high levels of migrants to fill skilled roles.

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[39] [NZ Chicken | Poultry Industry Association New Zealand (pianz.org.nz)](#)

Pork, Poultry and Other Livestock workforce overview and highlighted demographics

The total workforce count across all of Poultry, Pigs and other Livestock farming was 5330 people in 2020. The number of people who identified as Māori in 2020 is higher for both learners (19%) and the workforce (25%) in the Poultry industry, compared to the Pork industry where 8.7% of learners and 7% of the workforce identified as Māori. In 2020, there were also more female learners (51.5%) and females in the workforce (44%) in the Poultry industry than in the Pork industry (32.1% of learners and 31% of the workforce identified as female). Across the wider Poultry, Pigs and other Livestock farming industry, 19% of the workforce identified as Māori and 43% as female in 2020.[40]

The Pork industry requires more specific skills due to the requirements of the work, and has historically filled these skilled roles with migrants, but COVID-19-19 has made this harder. While it appears that there is a low uptake in qualifications, it is unclear if COVID-19-19 and labour shortages have exacerbated this.

The count of individuals working in the Poultry, Pig and Other Livestock farming industries in 2020, by employment type

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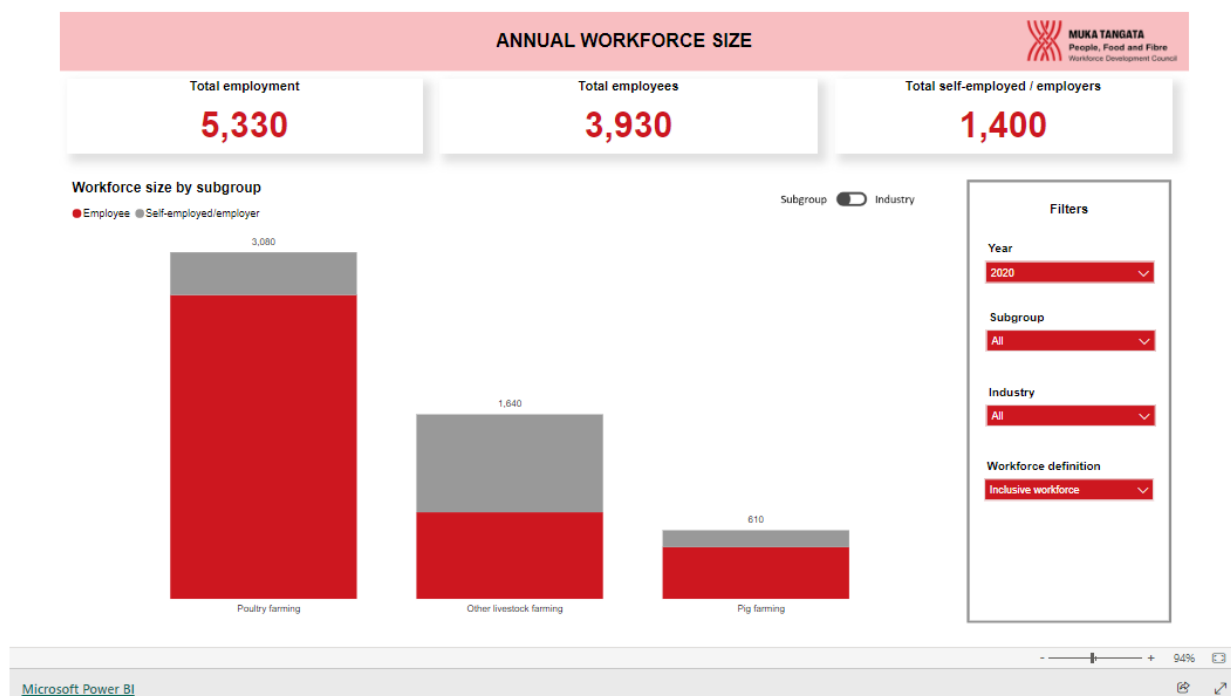
[40] Poultry, Pigs and other livestock farming » Muka Tangata Workforce Development Council (workforceskills.nz)

Pork, Poultry and Other Livestock workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 50 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
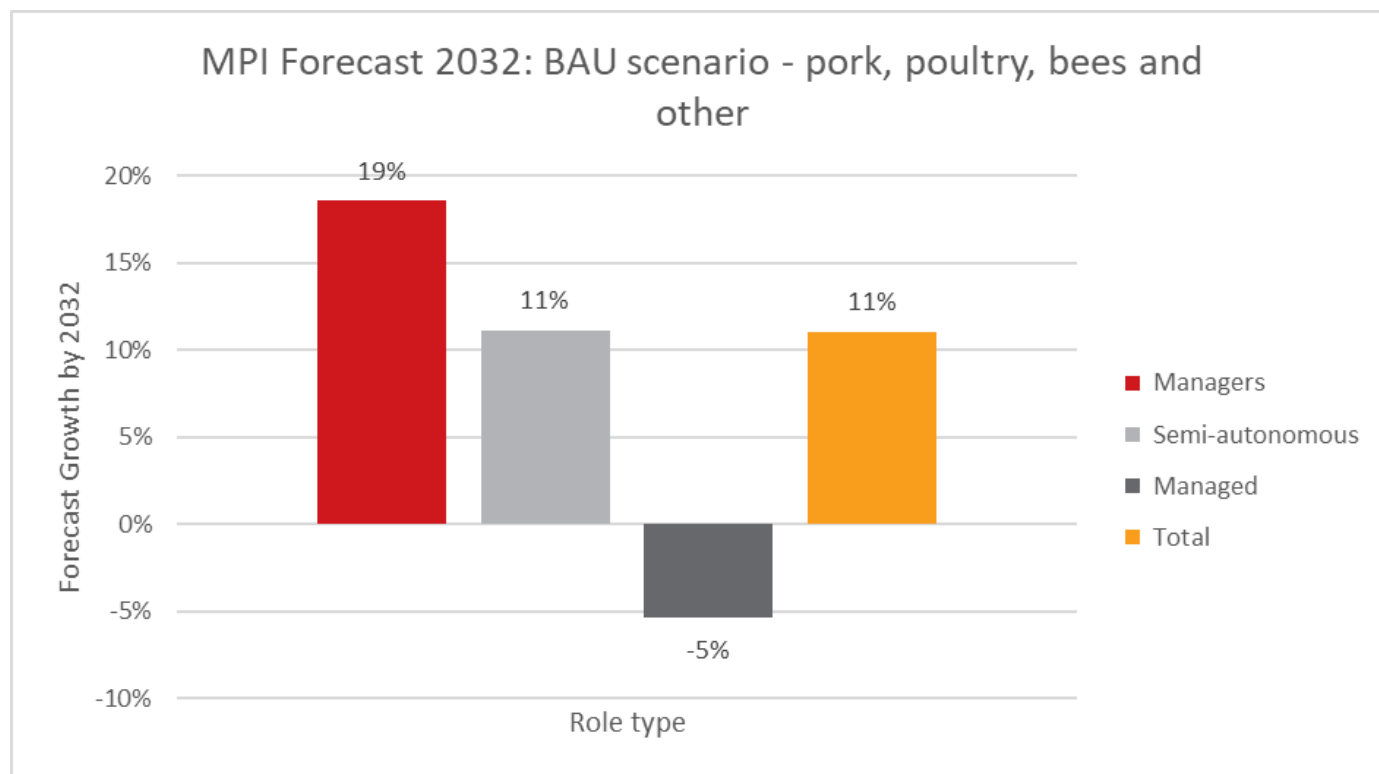
Pork, Poultry and Other Livestock workforce retention and tenure

The Pork, Poultry and Other Livestock workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry

● Poultry, Pigs and other livestock far...
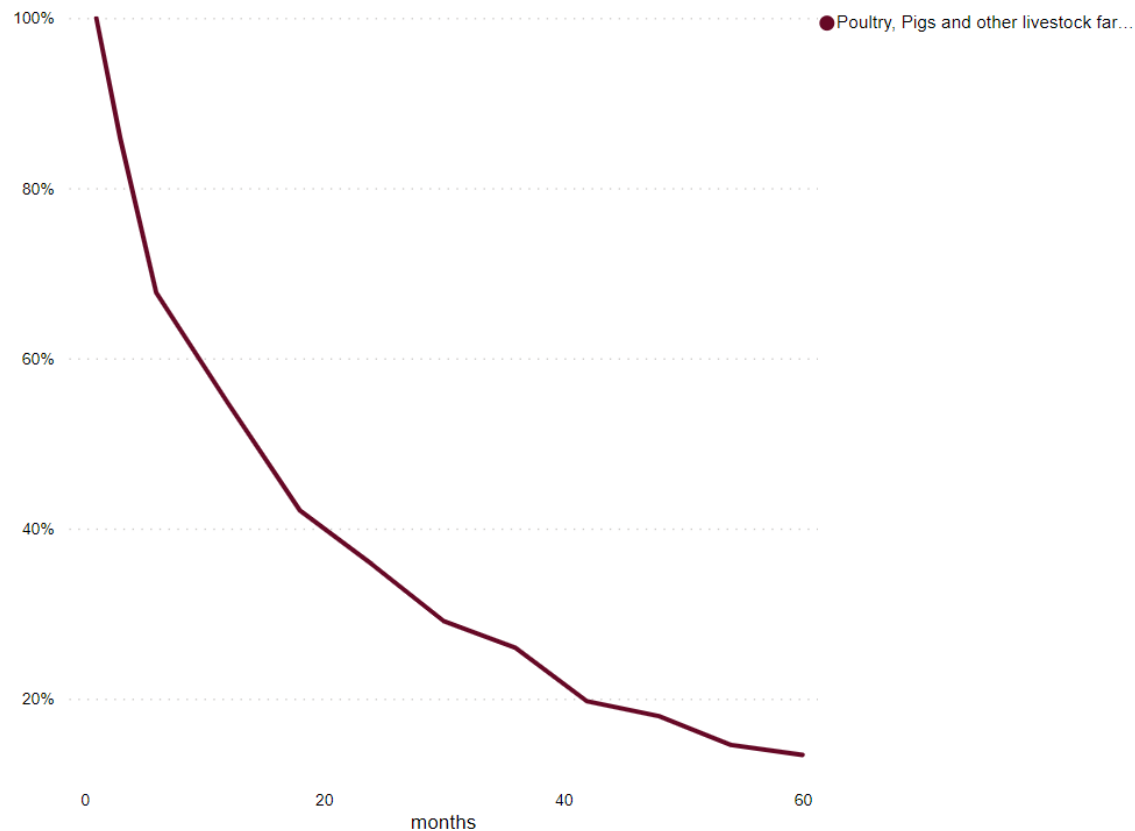
Filters

Starting cohort
2015

Industry group
Poultry, Pigs and other lives...

Industry
All

Workforce definition
Inclusive workforce

Figure 51 - Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

| Poultry, Pigs and other livestock far... | 34% | 17% | 10% | 11% | 5% | 23% |
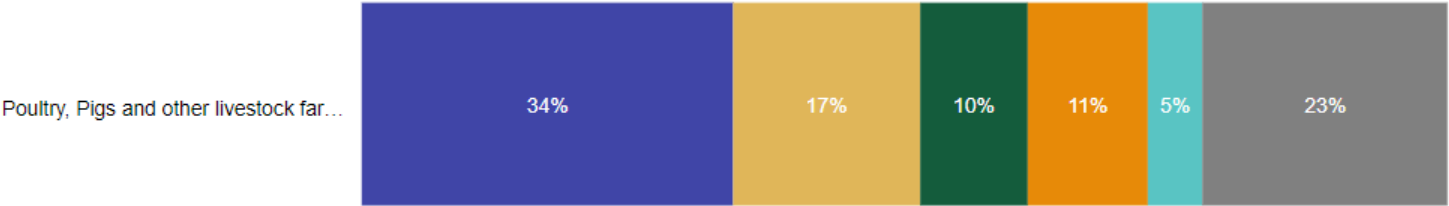
Filters

Year

2020 ⌄

Industry group

Poultry, Pigs and other lives... ⌄

Industry

All ⌄

Workforce definition

Inclusive workforce ⌄

Figure 52 - Stats NZ IDI analysis 2023

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Pork Production (Stockperson) (Level 3) [Stranded] [2525]			Learner numbers for this qualification have been consistently low. As such, we expect any increase in enrolments to be able to be met.	There is demand from industry driven by forecast workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing regulatory and business practices. The pork industry is relatively small in terms of workforce and traditionally has relied on lower skilled workers – the industry has a very high level of workers with no qualifications. The pork industry wants to change that situation by increasing skills levels, especially upskilling to meet new regulations for animal welfare; land and water use; and protection and to improve productivity to remain competitive against international competition, and providing better career paths to aid attraction and retention. But its learner numbers will never be large.	The New Zealand Certificate in Pork Production (Stockperson) (Level 3) provides the pork production industry with individuals who have the knowledge and skills to assist with all aspects of pig feeding and health in a pig unit. It enables employees to improve skills and knowledge which enables the industry to remain internationally competitive, and also enhances their own employment opportunities across the pork production industry (supporting career pathways and retention). The community benefits by having	High Priority

					trained people who are able to manage biosecurity risks and waste management within their workplaces, thereby reducing the potential to negatively affect the wider community and nation.	
New Zealand Certificate in Poultry Production (Level 3): Poultry Egg Production, Poultry Hatchery, and Poultry Rearing [2932]			Should a programme be available, we expect any enrolments to be small.	There is demand from industry driven by forecast workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing regulatory and business practices. The poultry industry is relatively small in terms of workforce and traditionally has relied on lower skilled workers – the industry has a very high level of workers with no qualifications. The industry wants to change that situation, increasing skills levels, especially as compliance regulation increases, and providing better career paths to aid attraction and retention. But its learner numbers will never be large, and they are struggling to get programmes designed. For example, this qualification currently has no programme available.	The New Zealand Certificate in Poultry Production (Level 3) is ideal for people who may have entry level experience in the sector, or a desire to work in the poultry industry and want to develop their skills and knowledge in a specific operation of a poultry facility. The qualification provides the poultry industry with individuals who have the skills and knowledge to assist with a range of core tasks relevant to the poultry industry.	High Priority

New Zealand Certificate in Poultry Management (Level 4): Poultry Egg Production, Poultry Hatchery, and Poultry Rearing [2933]			Should a programme be available, we expect any enrolments to be small.	There is demand from industry driven by forecast workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing regulatory and business practices. As part of the industry's aim to increase skills levels, especially as compliance regulation increases, and providing better career paths to aid attraction and retention, it is looking to develop better leadership skills. As noted above, learner numbers will never be large, and they are struggling to get programmes designed. For example, this qualification currently has no programme available.	The purpose of the New Zealand Certificate in Poultry Production (Level 3) is to provide the poultry industry with experienced individuals who have the skills and knowledge to take responsibility for the day to-day operational management of a section in a poultry facility. This qualification is targeted at poultry employees who aspire to move from a poultry production role and pathway into a management role in a section of a poultry facility.	High Priority
New Zealand Certificate in Pork Production (Management) (Level 4): Optional strand in Pig Farm Production Planning [4222]			30 learners	There is demand from industry driven by forecast workforce growth across the related industries, significant gaps in the qualification level of the workforces, demographic challenges and the need to adapt to changing regulatory and business practices. The industry is looking to raise skills levels, including to meet compliance regulation changes, and better leadership skills.	Graduates of the New Zealand Certificate in Pork Production (Management) (Level 4) will have pig husbandry and farm management knowledge which will support the industry to be internationally competitive and

| | | | | This qualification currently has no programme available, but industry has secured agreement to have a new programme developed to be available for 2025.

This programme will cover identified skills needs including biosecurity, feeding, health and reproductive programmes for a pig farm, and also some leadership training in the way of preparing learners to supervise staff.

Only a maximum of 30 learners are expected. | enhance their own employment opportunities in key management roles across a pig farm and throughout the pork industry.

The community will benefit by having trained people who are competent in operating a pig farm in an efficient and sustainable manner to maximise pork production. | |

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Equine, Greyhounds and Racing qualifications advice

Our Equine, Greyhounds and Racing Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Equine, Greyhounds and Racing industry trends

These industries have been through significant challenges as a result of recent (and ongoing) Government reviews calling for reforms. The move to a more tightly regulated industry and focus on both animal welfare and worker safety will require increased training and skills to meet these needs.

The Equine, Greyhounds and Racing industry is made up of three racing codes which include Thoroughbred racing, Harness racing and Greyhound racing. The Equine, Greyhounds and Racing industry contributes about $1.6 million to GDP annually. The industries have faced challenges with Government recent reviews calling for significant changes and reforms.

Equine, Greyhounds and Racing workforce trends

The workforce currently has low levels of formal qualifications, with a critical proportion having no qualifications at all, and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The industries have struggled with attraction and recruitment and have low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements and to provide pathways to attract and retain workers.

Equine, Greyhounds and Racing workforce overview and highlighted demographics

In 2020, 5,000 people worked in the industry. Between 2011 and 2021, 8% of learners identified as Māori and 71% identified as female. This is comparable to the workforce counts for people identifying as Māori, which was 9% in 2021, but significantly higher than the percentage of the workforce who identified as female in 2021, at 48%. However, this is a comparatively higher percentage of females than the average across all Muka Tangata industries, but a lower percentage of Māori representation. We understand through engagement with industry that low wages may be contributing to difficulty attracting and retaining staff. This aligns with the data which shows that median earnings for workers in Horse and Dog racing activities is lower than for workers across all industries in NZ, and the worker turnover rate is higher. Industry have expressed concerns about low staff retention, which they also feel is linked to a

lack of clear pathways. Recruitment is a challenge, particularly for Thoroughbred and Harness racing. A change in immigration settings has exacerbated the difficulty in recruiting a skilled workforce.[41]

The count of individuals working in the Equine, Greyhounds and Racing industries in 2020, by employment type

Figure 53 - https://mukatangata.workforceskills.nz/explore-industries/equine-greyhounds-and-racing/workforce-2/

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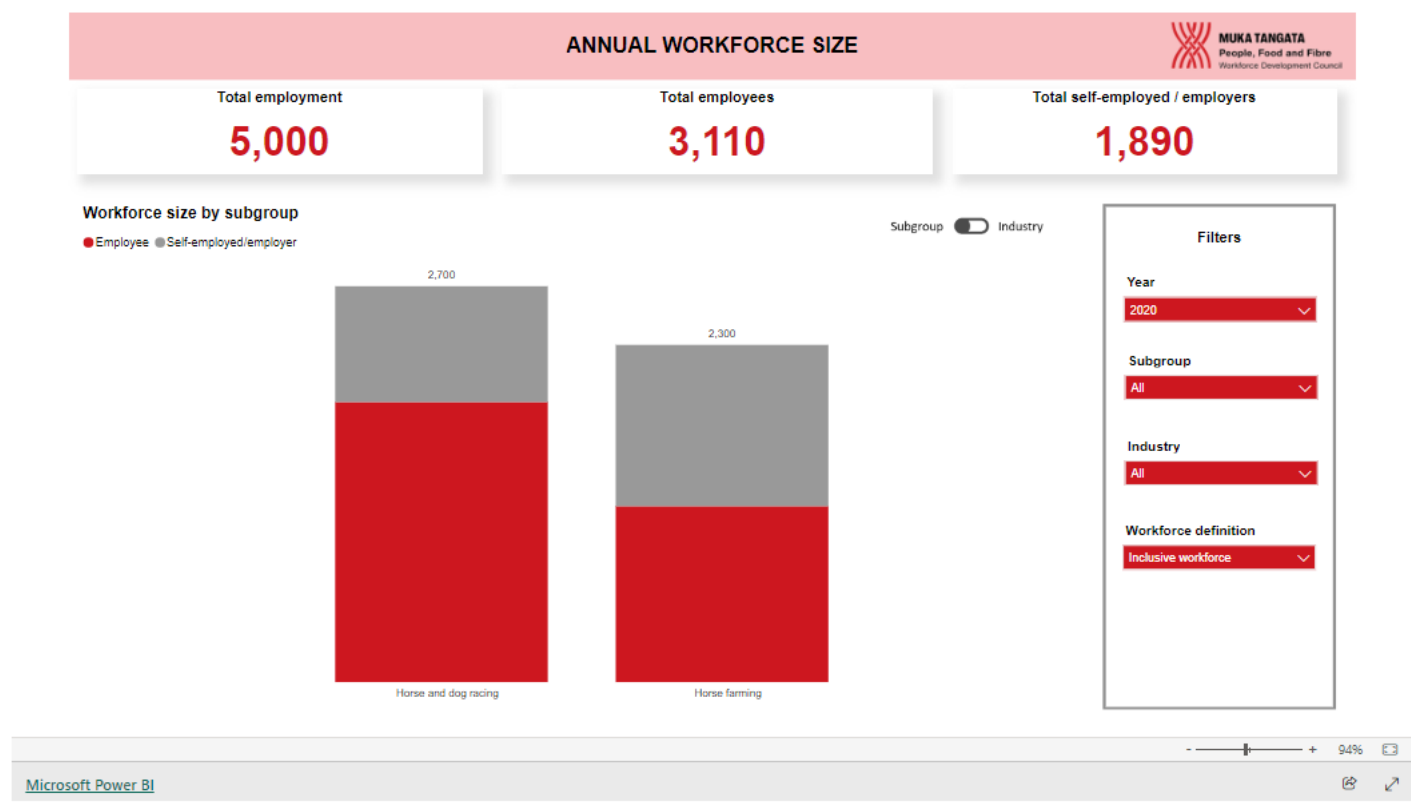
[41] Equine, Greyhounds and Racing » Muka Tangata Workforce Development Council (workforceskills.nz)

Equine, Greyhounds and Racing Workforce retention and tenure

The Equine, Greyhounds and Racing Workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry
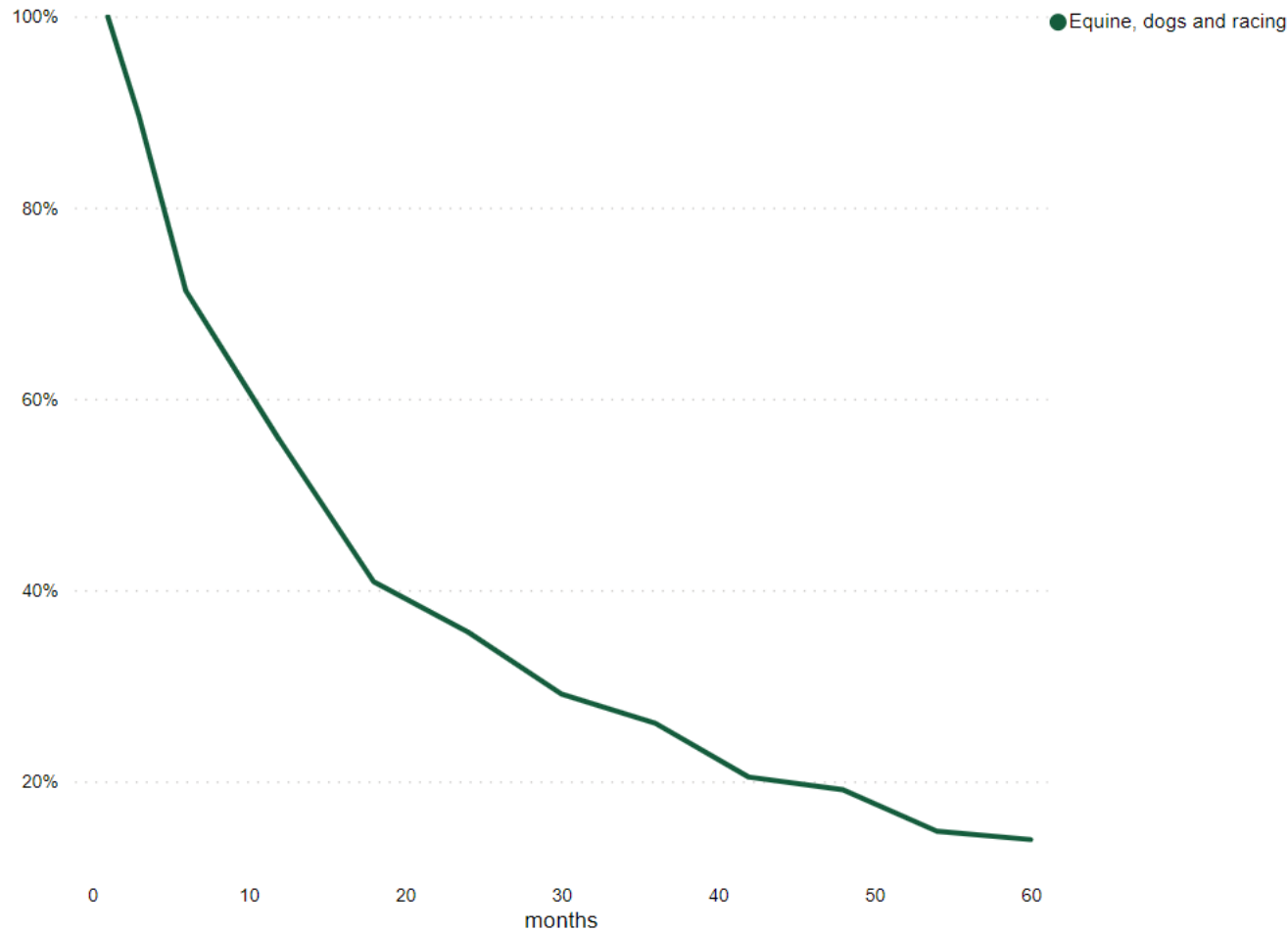
Filters

Starting cohort
2015

Industry group
Equine, dogs and racing

Industry
All

Workforce definition
Inclusive workforce

Figure 54 -Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

Equine, dogs and racing	27%	15%	11%	8%	6%	32%
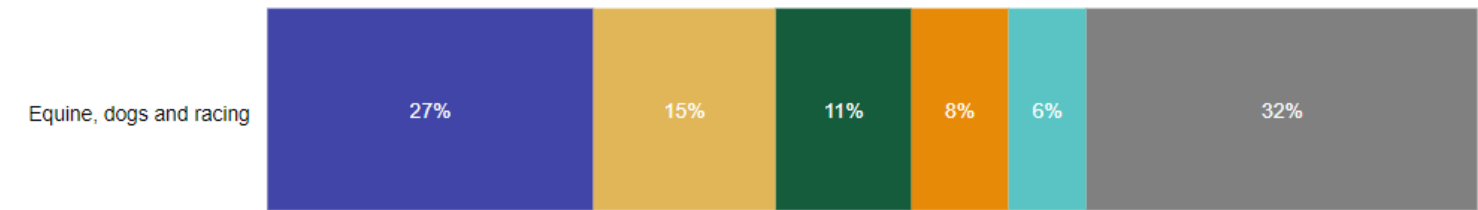
Filters

Year

2020 ⌄

Industry group

Equine, dogs and racing ⌄

Industry

All ⌄

Workforce definition

Inclusive workforce ⌄

Figure 55 - Stats NZ IDI analysis 2023

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Equine Skills (Level 2) [2375]			10-15%	The equine industry has noted that new entrants are often school leavers with no qualifications and in need of greater support (the industry has one of the highest level of workers with no qualifications out of all Muka Tangata industries. Industry is looking to raise the skills of this group to better meet its needs, especially as health and safety have been key issues, and to provide better career pathways to sustain industry.	The industry is currently redeveloping its training from levels 2 - 4. In the meantime, we propose a modest increase in the Level 2 New Zealand Certificate in Equine Skills due to the increasing levels of learners in this qualification and to support the raising of the workforces/' skills. The New Zealand Certificate in Equine Skills is an introductory qualification providing the equine industry with individuals who have the skills and knowledge to work safely and effectively around horses in the equine industry.	Priority

New Zealand Certificate in Assistant Trainer (Level 4) [4825]			30 learners	The industry is working to redevelop training for its industry from Levels 2-4 to make it more fit for purpose and responsive to both employer and employee needs. A key aim is to strengthen career and skill development pathways.	Industry is developing a programme to deliver the new New Zealand Certificate in Assistant Trainer (Level 4). This qualification provides the equine racing industry with individuals who have the skills and knowledge to manage horses and oversee staff in racing stables. Graduates will be able to contribute effectively and professionally in a supervisory role in the equine racing industry. The new programme is expected to be available in 2025, but learner numbers are only expected to be approximately 30 learners.	Priority
We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:						
• New Zealand Certificate in Equine Breeding (Stud Groom) (Level 3) [2370]				Medium Priority		

• New Zealand Certificate in Equine Skills (Level 3): Harness Racing Stable Assistant, Thoroughbred Raceday Strapper, Thoroughbred Stable Assistant, Thoroughbred Racing Track Rider, and Sporthorse Stable Assistant [2376]	Medium Priority
• New Zealand Certificate in Equine Racing (Level 4): Thoroughbred Racing Jockey, Harness Driver/Trainer, and Harness Racing Driver [2374]	Medium Priority
• New Zealand Certificate in Equine Skills (Sporthorse Groom) (Level 4) [2377]	Medium Priority
• New Zealand Certificate in Equine Breeding (Senior Stud Groom) (Level 4)	Medium Priority
• New Zealand Certificate in Equine Racing (Level 4): Thoroughbred Racing Jockey, Harness Trainer, and Harness Racing Driver [4221]	Medium Priority
• New Zealand Diploma in Equine Management (Level 5): Broodmare Management, Yearling Management, Stallion Management, and Racing Stable Foreman [2380]	Medium Priority

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Veterinary Services and Animal Care qualifications advice

Our Veterinary Services and Animal Care Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Veterinary Services and Animal Care Industry Trends

The industry is steadily growing with expansion expected to continue over the next 5 years.

Veterinary Services and Animal Care is an industry grouping that includes rural veterinary technicians, animal care, equine nursing, pet grooming and veterinary nursing. In 2022, industry revenue for Veterinary Services and Animal Care was $1.4 billion and GDP was $570 million. GDP has been steadily growing and industry expansion is expected to continue over the next five years.

There has been strong increased demand for veterinary services. There has been a significant increase in the numbers of pets and pet ownership, especially during and since the COVID-19 epidemic. According to Companion Animals NZ, there were almost 2.1 million pet cats and dogs in New Zealand in 2020 (latest data available), up from 1.8 million in 2015. This has driven a rise in pet-related services, such as animal 'daycare' and grooming. (IBISWorld, Veterinary Services in New Zealand, Feb 2023). A steady uptake of pet insurance has pushed demand for veterinary services higher.

Veterinary Services and Animal Care Workforce Trends

The workforce has been steadily growing with corresponding increases in learner numbers. We expect this trend to follow industry growth forecasts.

Veterinary Services and Animal Care workforce overview and highlighted demographics

The median earnings for the Veterinary Services and Animal Care industry have been consistently lower than that of all industries from 2015 to 2021, although they show a similar increasing trend. In 2020 there were 7,120 individuals in the Veterinary Services workforce, with 81% identifying as female, and 6% identifying as Māori. These figures were higher amongst learners. Out of the 2,785 learners in Veterinary Studies in 2021, 91% identified as female and 15% as Māori. Overall, both learner and workforce numbers have been increasing since 2015.[42]

The count of individuals working in the Veterinary industries in 2020, by employment type

Figure 56 - https://mukatangata.workforceskills.nz/explore-industries/veterinary/workforce-12/

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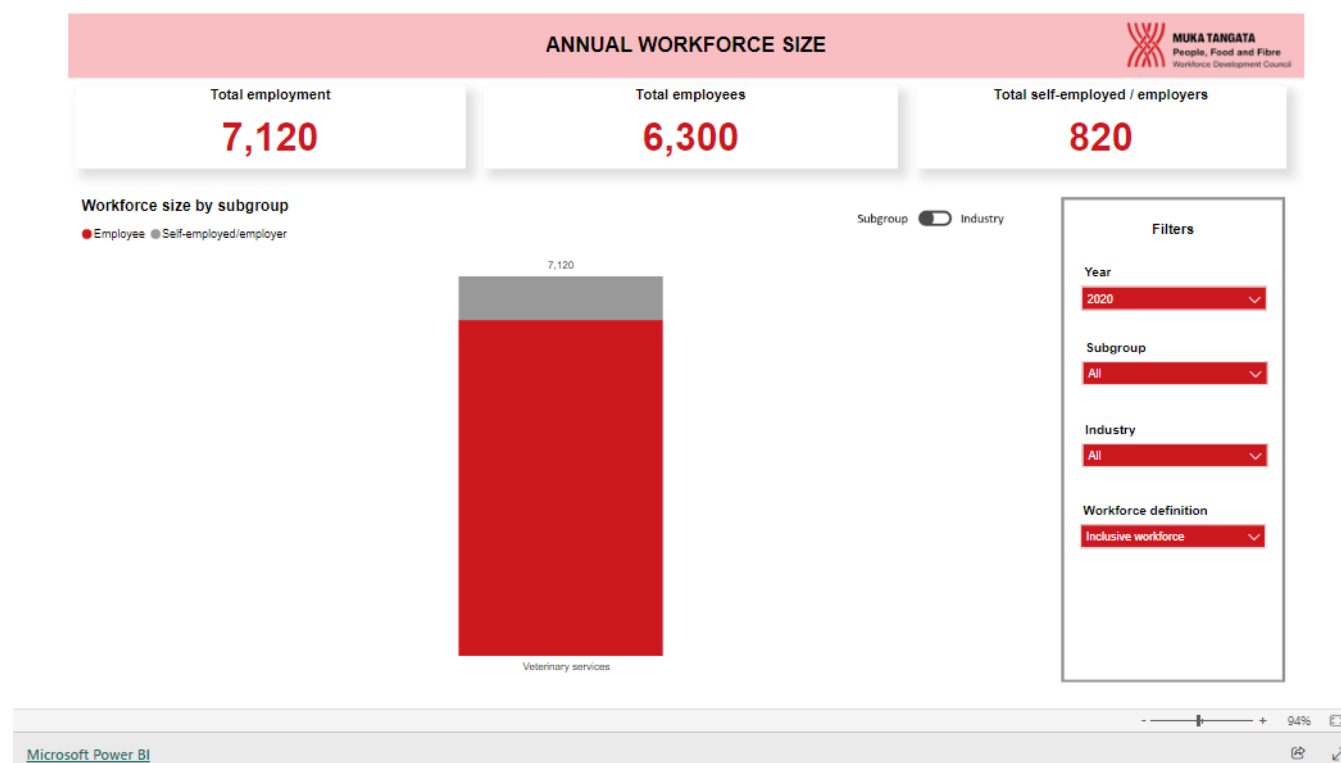
[42] [Veterinary Services and Animal Care » Muka Tangata Workforce Development Council (workforceskills.nz)](workforceskills.nz)

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Animal Care (Level 3): Companion Animals, Equine, and Rural Animals [2487]			10-15%	There has been a significant increase in the numbers of pets and pet ownership, especially during and since the COVID-19 epidemic. According to Companion Animals NZ, there were almost 2.1 million pet cats and dogs in New Zealand in 2020 (latest data available), up from 1.8 million in 2015. This has driven a rise in pet-related services, such as animal 'daycare' and grooming. Industry is looking to ensure that workers are appropriately skilled to maintain standards, including the interpersonal skills required to deal regularly with clientele, sometimes in emotionally charged environments.	The New Zealand Certificate in Animal Care (Level 3) is the level entry qualification to the industry that provides individuals with the skills and knowledge to care for animals within welfare standards and practices. Enrolment growth has been strong over a reasonably short period, reflecting market demand. The proposed increase recognises this, but takes a balanced approach to ensure that there is not over-supply. This is something we will continue to monitor.	Medium Priority

| New Zealand Certificate in Animal Technology (Level 5): Rural Animal Technician, and Veterinary Nursing Assistant [2490]

and

New Zealand Certificate in Animal Healthcare Assisting (Level 4): Companion Animal Healthcare, Equine Healthcare, and Rural Animal Healthcare [4388] | | | 5% | There has been strong increased demand for veterinary services. There has been a high and increasing pet ownership rate which has greatly increased demand for veterinary services and a steady uptake of pet insurance has pushed demand for veterinary services higher. (IBISWorld, Veterinary Services in New Zealand, Feb 2023).

The industry has highlighted ongoing need for trained staff.

The New Zealand Certificate in Animal Healthcare Assisting (Level 4) [4388] has replaced the New Zealand Certificate in Animal Technology (Level 5): Rural Animal Technician, and Veterinary Nursing Assistant [2490], but we still expect some final enrolments in the replaced qualification. In addition, as a new qualification the New Zealand Certificate in Animal Healthcare Assisting (Level 4) [4388] does not yet have significant enrolments. We are, therefore, basing our increase on the enrolments for the New Zealand Certificate in Animal Technology (Level 5): Rural Animal Technician, and Veterinary Nursing Assistant [2490]. | The New Zealand Certificate in Animal Healthcare Assisting (Level 4): Companion Animal Healthcare, Equine Healthcare, and Rural Animal Healthcare provides the animal healthcare sector with people who have technical knowledge and skills to assist in the provision of healthcare for animal patients, working in collaboration with clients and multidisciplinary animal healthcare teams, and following protocols in all aspects of clinical veterinary practice or animal healthcare settings. | Priority |
| New Zealand Diploma in Veterinary Nursing (level 6) [2491]

and

New Zealand Diploma in Veterinary Nursing | | | 10-15% | There has been strong increased demand for veterinary services. There has been a high and increasing pet ownership rate which has greatly increased demand for veterinary services and a steady uptake of pet insurance has pushed demand for veterinary services higher. (IBISWorld, Veterinary Services in New Zealand, Feb 2023).

The industry has highlighted ongoing need for trained staff, especially veterinary nurses, with | Graduates of the New Zealand Diploma in Veterinary Nursing (level 6) will have technical knowledge and skills to work as a veterinary nurse in a clinical veterinary setting. They will | Priority |

				claims of high turnover and therefore a need for replacement workers. The New Zealand Diploma in Veterinary Nursing (level 6) [2491] has been replaced by the New Zealand Diploma in Veterinary Nursing (level 6): Companion Animal Veterinary Nursing, and Equine Veterinary Nursing [4389]. However, we understand that the date for last enrolment is likely to be extended and that the new qualification does not currently have strong provision. Our increase estimate is based on the trends we have seen in enrolments for New Zealand Diploma in Veterinary Nursing (level 6) [2491].	have a high level of responsibility and discretion within their scope of practice, in a wide range of dynamic and often unpredictable situations and following protocols in all aspects of clinical veterinary practice or animal healthcare settings.	
(level 6): Companion Animal Veterinary Nursing, and Equine Veterinary Nursing [4389]						

In addition to the new qualifications set out above in the veterinary nursing/technician and animal care space designed with industry to meet its needs. As programmes are developed it is expected that enrolments will be low. As such we cannot specify the number of learners, but our expectation is that all enrolments would be able to be met. The qualifications are:

- New Zealand Diploma in Animal Healthcare Technology (Level 6): Canine and Equine Rehabilitation Technology, and Equine Dental Technology [4390]
- New Zealand Diploma in Rural Animal Veterinary Technology (Level 6) [4391]

We also have the following qualification where we believe any increase will be minimal. We want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualification is:

- New Zealand Certificate in Animal Management (Level 4): Canine Behaviour and Training, Companion Animals, Fish, Amphibians and Reptiles, Pet Grooming, and Zookeeping [2489]

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Seafood qualifications advice

Our [Seafood Workforce Development Plan](#) contains further analysis of [Industry](#), [Workforce](#) and [Learner](#) data trends.

Seafood industry trends

The industry is poised for growth, with rising export demand driven by global economic recovery post-COVID-19-19 and a focus on Aquaculture by government.

New Zealand's seafood industry is a significant earner for the economy. Aquaculture is set to take centre stage over the next five years and is likely to be a key driver of the industry's performance.[43] In Marlborough, for instance, the aquaculture industry has a considerable presence, with more than half of New Zealand's production of both Pacific Salmon and Greenshell Mussels.[44] Seafood accounted for 4% (NZ $1,919 million) of the total export revenue in the food and fibre sector for the year ending June 2022 and is forecast to increase by 4% to $2 billion in 2023. After a challenging period of dealing with the effects of COVID-19-19, the industry is forecast to expand over the next five years, due to increasing demand from Asian export markets and the aquaculture industry becoming increasingly important.

Seafood is a significant sector for Māori, with nearly a third of businesses in the industry owned by Māori, as well as significant investment in land-based processing operations and aquaculture.[45]

Seafood workforce trends

Both the seafood production and seafood processing sectors are forecast to increase by at least 3% and 10% respectively by 2032. The forecasts show significantly higher required increases (21%- 35%) for higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology). The workforce has low new entrant retention rates and low levels of industry tenure which drive a need for training of replacements. The sector has very significant reliance on those on temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

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[43] IBIS World - Report on Fishing and Aquaculture (page 9)

[44] https://fs.fish.govt.nz/Doc/24891/AEBR-261-Assessment-Of-Potential-Effects-Of-Climate-Change-On-Seafood-Sector-3389.pdf.ashx

[45] Seafood » Muka Tangata Workforce Development Council (workforceskills.nz)

Seafood workforce overview and highlighted demographics

In 2020 there were 16,482 individuals working in the Seafood industries – Māori represented one quarter (25%) of the Seafood workforce, followed by 16% Asian and 8% Pacific peoples[46] making it one of our more ethnically diverse workforce. Immigration is an important source of labour. There are key challenges affecting the sector such as attracting New Zealanders into the industry rather than relying on foreign workers to fill the gaps where there are ongoing labour and skills shortages across a variety of roles.[47] The seasonal nature of some roles also limits the opportunities for full-time employment.

The count of individuals working in the Seafood industries in 2020, by employment type

Figure 57 - https://mukatangata.workforceskills.nz/explore-industries/seafood/workforce/

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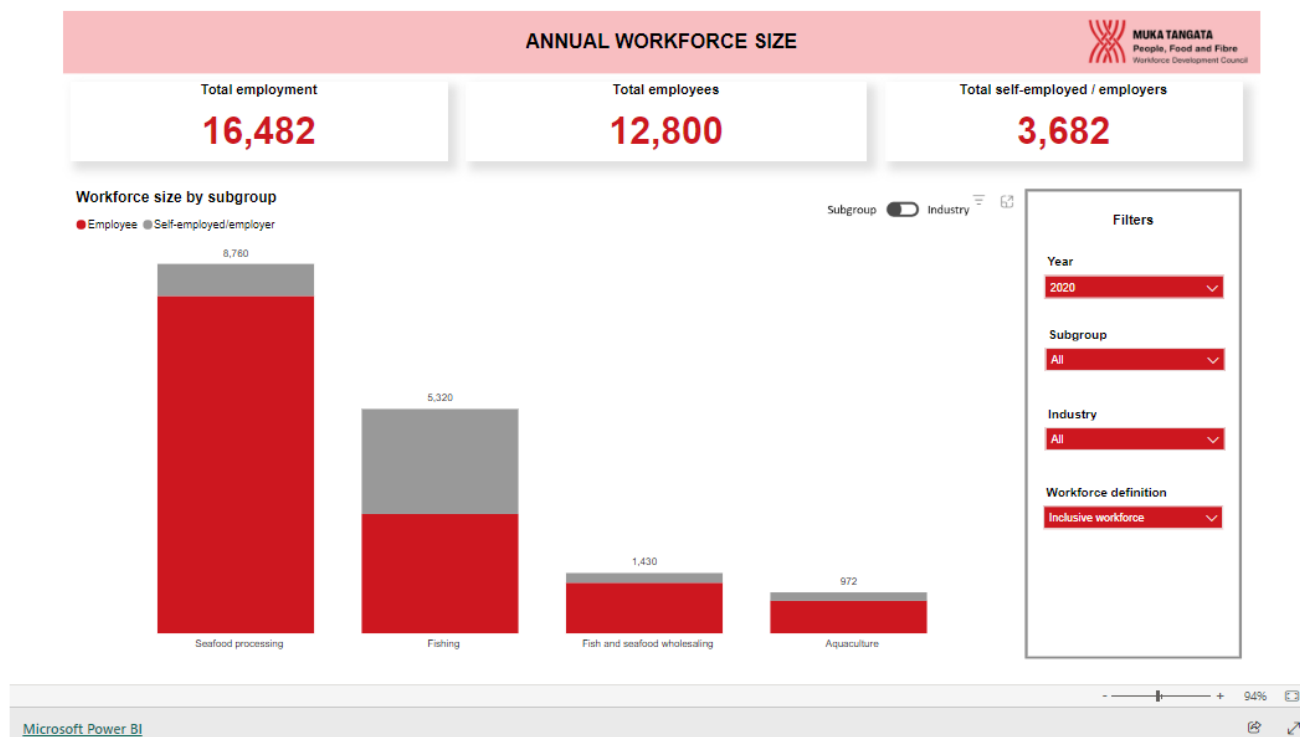
46 [Seafood » Muka Tangata Workforce Development Council (workforceskills.nz)](#)

47 [Te whakatipu I ngā tāngata o Tangaroa Growing ocean people: Report of the Ministerial Inquiry into the use and allocation of migrant labour in the seafood sector (mpi.govt.nz)](#)

Visa status

Legend: ● NZ citizen ● Resident visa ● RSE ● Student visa ● Visitor visa ● Work visa ● Working holiday visa

Industry	NZ citizen	Resident visa	RSE	Student/Visitor	Work visa	Working holiday visa
Apiculture	79%	10%			9%	
Arable	85%	7%			4%	4%
Dairy farming	78%	7%			12%	
Equine, dogs and racing	85%	8%			6%	
Forestry	90%	5%				
Fruit	58%	11%	14%			14%
Grapes and Wine	63%	12%			10%	15%
Nursery, turf and gardening	76%	14%			5%	5%
Poultry, Pigs and other livestock far…	82%	10%			6%	
Seafood	70%	13%			11%	5%
Sheep, Beef and Deer farming	94%	4%				
Support Services	68%	10%	5%		6%	8%
Vegetables	58%	24%			7%	7%
Veterinary	79%	16%			4%	
National Benchmark	71%	19%			6%	
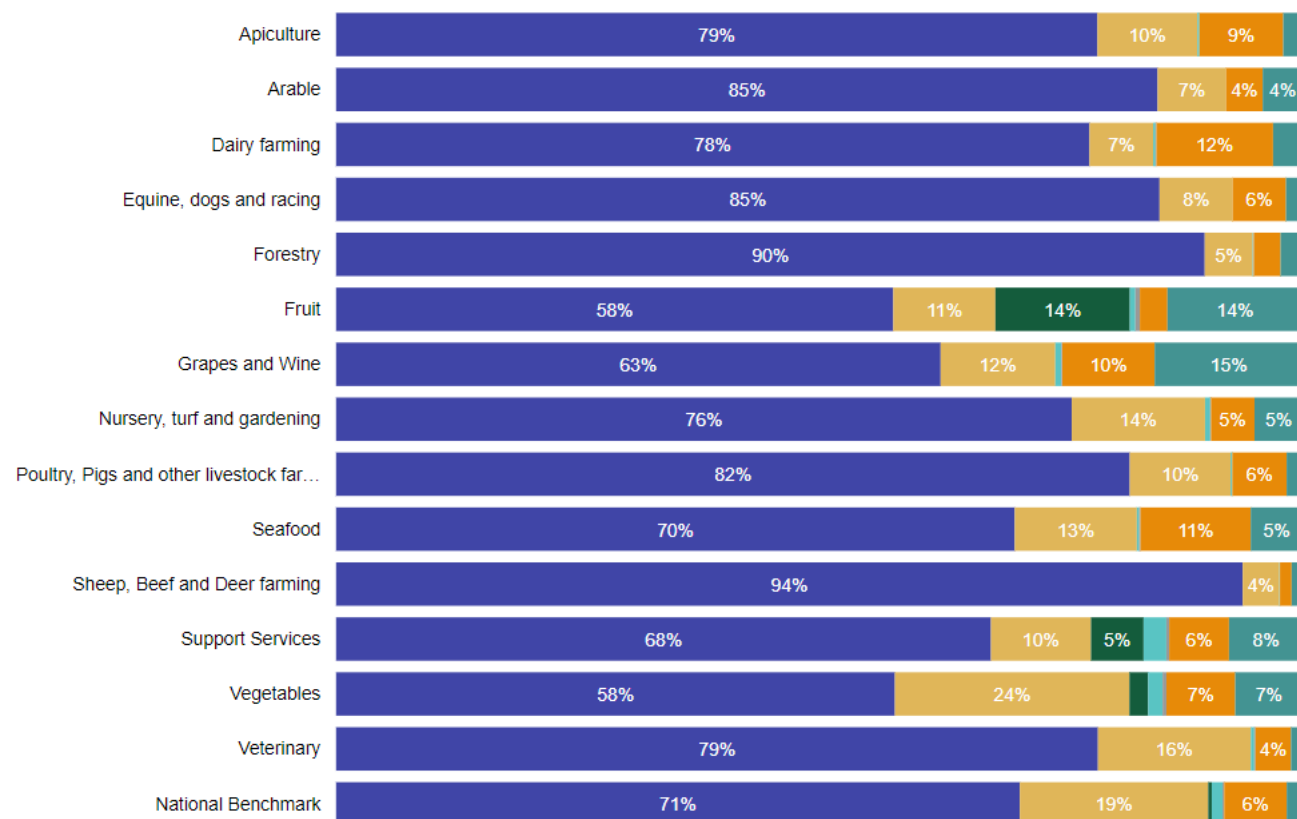
Filters

Year
2020

Industry group
All

Industry
All

Employment status
All

Workforce definition
Inclusive workforce

Figure 58 - Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

115

Seafood workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 59 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

Figure 60 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
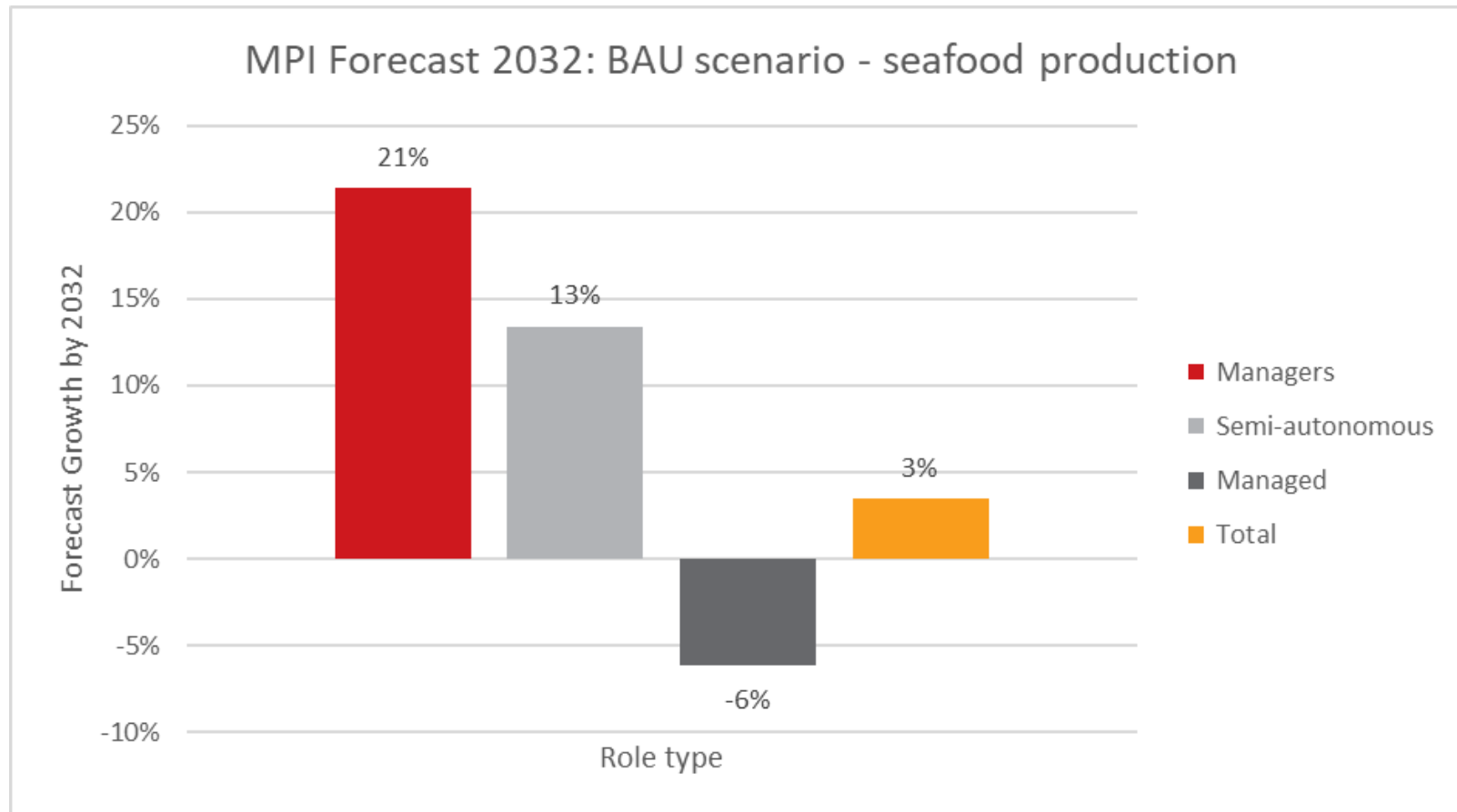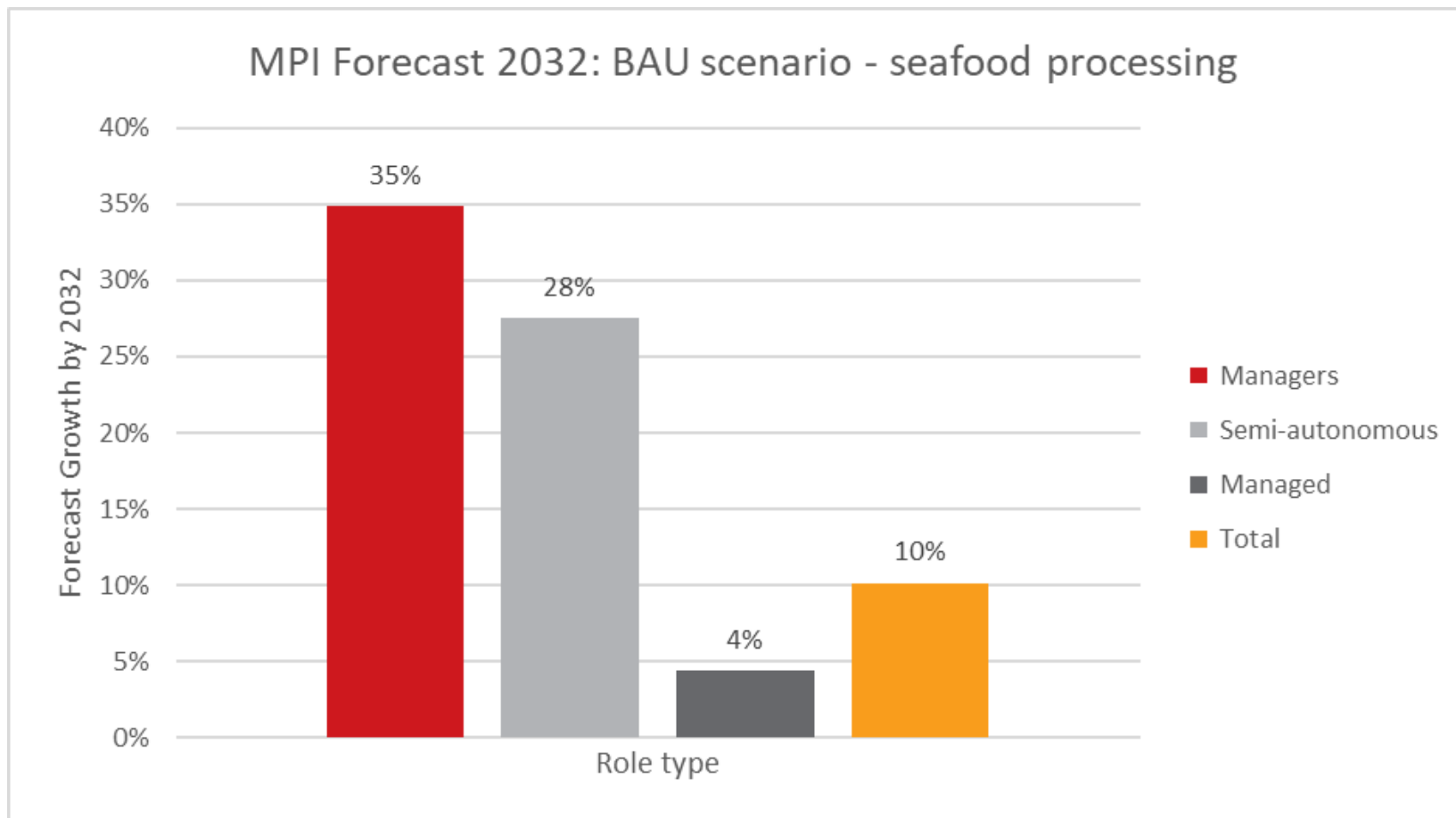
Seafood workforce retention and tenure

The Seafood workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry

Filters

Starting cohort
2015

Industry group
Seafood

Industry
All

Workforce definition
Inclusive workforce

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

| Seafood | 31% | 15% | 11% | 8% | 5% | 30% |

Filters

Year

2020 ▾

Industry group

Seafood ▾

Industry

All ▾

Workforce definition

Inclusive workforce ▾

We are reviewing the seafood qualification suite. Our expectation is that new qualifications will be available in 2024. Learner numbers have plummeted over the last decade and the current qualifications are in general not well supported through enrolments. Until the new qualifications and new programmes are available, however, we welcome any increase in enrolments in the existing qualification set. Except for a few qualifications set out below, we are not in a position to determine the quantum of any increases for most of the existing qualifications. But, by way of comparison, in 2011 there were close to 2,500 learners, whereas in 2022 there were only approximately 500.

Below we set out the one qualification that has had sufficient enrolments to establish a trend. We list the other qualifications below that.

We note that aquaculture has been identified as a growing area (as also noted by Marlborough and Bay of Plenty RSLGs) See also the Government's Aquaculture Strategy (The Government's Aquaculture Strategy to 2025 (mpi.govt.nz)).

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Seafood Processing (Level 3): Fish and Fish Products, Live Holding, Cleaning and Sanitation, and Seafood Logistics [3130]		All regions – but note RSLG specifics: West Coast (they consider offers a career pathway for learners, particularly for female and Māori learners); Nelson Tasman.	10-15%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. MPI workforce forecasts have identified that the seafood processing industry needs to hire more people to keep up with the demand for seafood processing that stems from the growth in seafood production.	The New Zealand Certificate in Seafood Processing (Level 3) provides the seafood processing sector with people who are able to work as operators carrying out routine operations involving either seafood processing, live holding, cleaning and sanitation, or logistics in a seafood processing operation on land or at sea.	High Priority

Other qualification in the seafood suite where there are no or low enrolment numbers or where any increase would be very small. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:	
• New Zealand Certificate in Aquaculture (Level 3): Hatchery, Fish, and Shellfish [3135]	Medium Priority
• New Zealand Certificate in Seafood Processing (Level 4) [3131]	Medium Priority
• New Zealand Certificate in Commercial Fishing (Level 3): Shellfish, Wet Fish, and Frozen Fish [3133]	Medium Priority
• New Zealand Certificate in Commercial Fishing (Level 4) [3132]	Medium Priority
• New Zealand Certificate in Aquaculture (Level 4): Hatchery, Fish, Shellfish, and Aquaculture Diving [3134]	Medium Priority
• New Zealand Certificate in Seafood (Level 5): Aquaculture, Seafood Processing, and Commercial Fishing [3129]	Medium Priority

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Are there qualifications or credentials that you are developing or plan to develop that will be available in 2025?

Area of provision and/or qualification/ credential name (if known)	Level	Mode (if specific)	Qualification or micro-credential	Estimated date it will be available	Description of content (10–20 words)	Name of qualification or micro-credential this will replace (if relevant)
Seafood Qualification Suite Review: including stackable MCs				Should be available in 2024	A comprehensive review of all the seafood qualifications – including incorporate te ao Māori and mātaraunga Māori into the qualifications, is currently underway.	
Other Seafood MCs also under development as part of the Seafood Qualifications Suite Review:						
Seafood – Intro to Aquaculture MC L2	Level 2			Should be available in 2024		
Seafood – Intro to Commercial Fishing MC L2	Level 2			Should be available in 2024		
Seafood – Intro to Seafood Processing MC L2	Level 2			Should be available in 2024		
Seafood – L3 2x MC processing skills - Commercial Fishing/Seafood Processing – factory vs deepsea (working with Hanga Aro Rau)	Level 2			Should be available in 2024		

Forestry qualifications advice

Our Forestry Workforce Development Plan contains further analysis of Industry, Workforce and Learner data trends.

Forestry industry trends

The industry is has seen challenging conditions with COVID-19 and recent weather disruption but has stabilised and increasingly adopting new technologies which is driving new skill requirements.

Forestry is the country's largest renewable biomass resource.[48] Today, forests cover 38% of the land – that's 10.1 million hectares of forests, of which 2.1 million hectares are plantation forests. Ninety percent of the plantation forests are planted in radiata pine, and most of these forests are privately owned for commercial timber production.[49] More than 30% of the land that is under plantation forestry is Māori owned, in addition to large areas of indigenous forest. It is estimated that 18% of businesses in Forestry are Māori owned, with Māori trusts and incorporations owning $4.3 billion of assets in the industry.[50] Despite decreasing by 20% in 2020, export revenue for Forestry has bounced back and remains stable. Export revenue in June 2020 was $6.58 billion, constituting 12% of the total export revenue for the food and fibre sector. While the impact of Cyclone Gabrielle on the Forestry industry remains unclear, export revenue for the June 2023 financial year was forecasted to increase slightly $6.6 billion and remain stable, with a slight forecasted drop in 2024.[51] The Industry has been increasing investment in automation and new technologies which will impact on the labour requirements.[52]

Forestry workforce trends

The workforce has been increasing over time but has high levels of seasonal variation (which affect how forecasts should be treated). The Forestry production workforce as a whole is forecast to increase by at least 12% by 2032 with increases concentrated in higher skill role types that will require increased levels of training. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity (see Appendix C for more detail on the methodology).

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[48] mpi.govt.nz/dmsdocument/54517-Situation-and-Outlook-for-Primary-Industries-SOPI-December-2022
[49] About New Zealand's forests | NZ Government (mpi.govt.nz)
[50] Forestry and Wood Processing Industry Transformation Plan | NZ Government (mpi.govt.nz)
[51] Forestry » Muka Tangata Workforce Development Council (workforceskills.nz)
[52] IBISWorld

Forestry workforce overview and highlighted demographics

In 2020, 16,710 people worked in Forestry, but in 2021 there were only 6,095 Forestry learners. This might indicate that a significant number of people are entering the workforce through other pathways. The number of Forestry learners who identified as Māori in 2021 is 37%, which is higher than the amount of people in the workforce who identified as Māori in 2020, which is 32%. However, 22% of the workforce identify as female, whereas only 6% of Forestry learners identify as female. This is more than double the amount of people in all Muka Tangata industries in 2020 who identified as Māori (16%), but lower than the percentage of the workforce who identified as female in 2020 across all Muka Tangata industries (34%).

Figure 63 - https://mukatangata.workforceskills.nz/explore-industries/forest-industry/workforce-4/
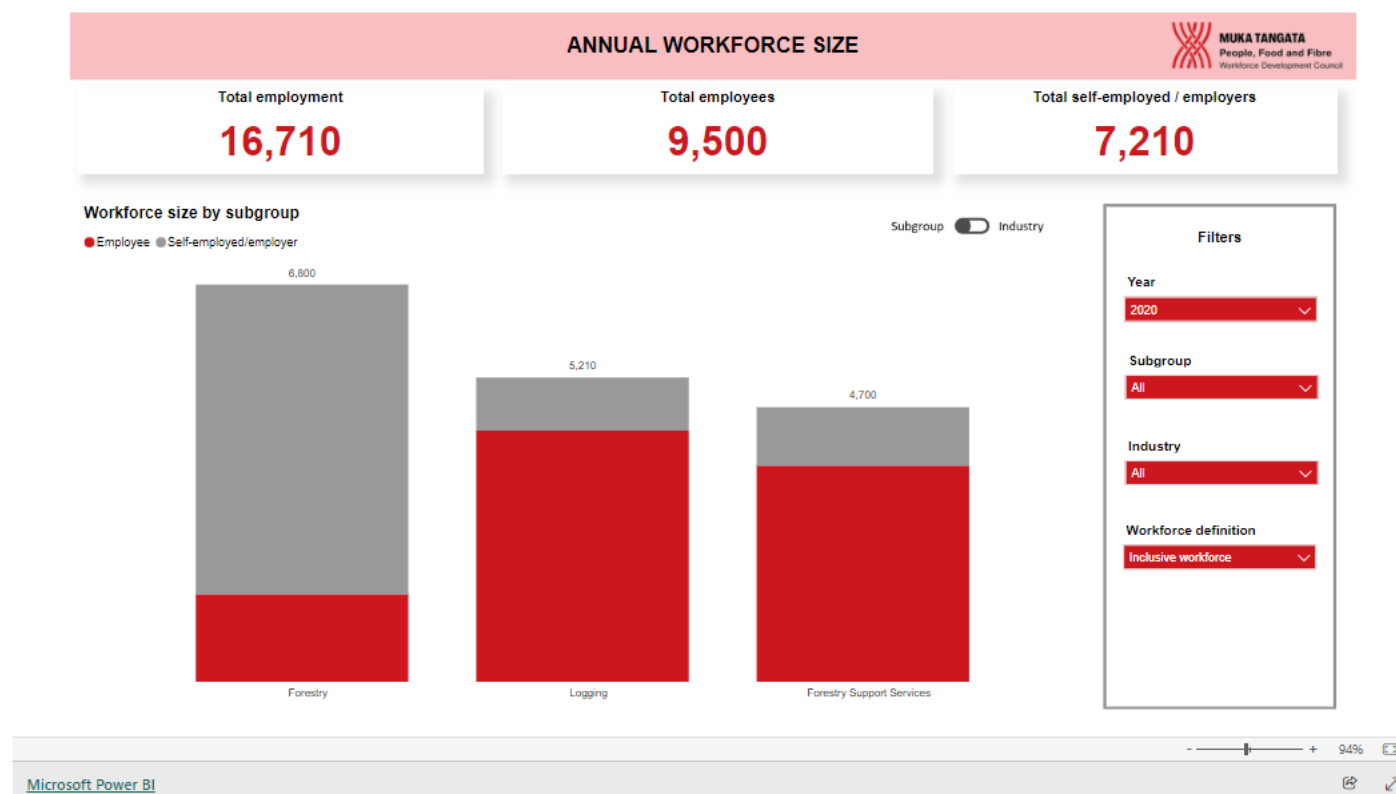
Forestry workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario', are for an increase in worker numbers – particularly in higher skill level roles. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Figure 64 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
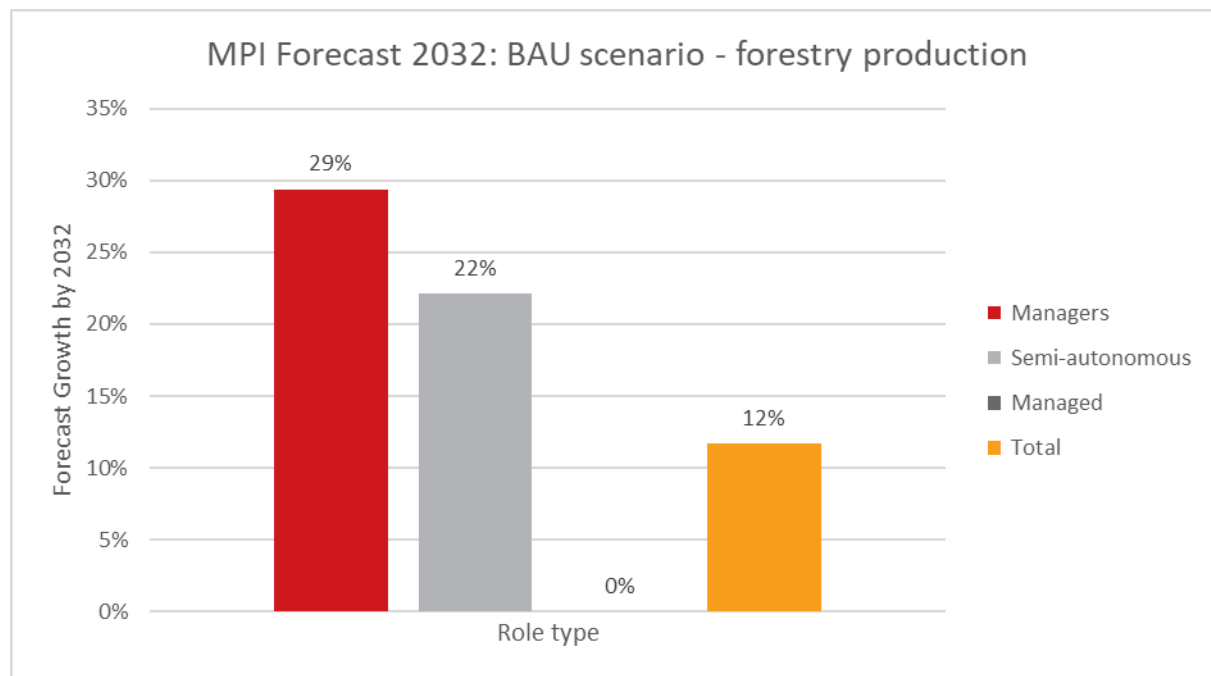
We are currently reviewing all the forestry qualifications, and these will be available for 2025 (in fact we expect the new qualifications to be in place in 2024). In the meantime, we are still recommending increases in learner numbers across the full suite of qualifications (see below) so that you can see the relative size of required learners and to ensure that learners will continue to be funded to meet the workforce skills needs of industry.

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Forest Industry Foundation Skills (Level 2) [2325]			10-15%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. While the industry will see increasing need for more managers and semi-autonomous workers as the skills needs in forestry change, the current workforce has relatively lower skills levels, and with no qualifications at all, that will need to change. Industry has indicated that training on health and safety in particular are critical and this applies in particular for new entrants.	The New Zealand Certificate in Forest Industry Foundation Skills (Level 2) is designed to provide the forest industry with individuals who have skills and knowledge relevant to entry level roles in a forestry operation, with an emphasis on applying basic risk management, emergency procedures, and communication systems, when carrying out work within a forestry operation, as well as, working safely and effectively as part of a team to meet quality requirements within a forestry operation.	High Priority

New Zealand Certificate in Forest Harvesting Operations (Level 3): Basic Machine Operation, Breaking Out - Cable, Landing Operations, and Tree Felling [2326]			5-10%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology, but the industry needs to change its existing worker skills profile in order to achieve this. In particular, the Forestry industry has indicated that it needs employees who are skilled in machinery operation and health and safety generally, but also specifically to the areas they are working in.	The New Zealand Certificate in Forest Harvesting Operations (Level 3) builds the skills of health and safety responsibilities, risk management, emergency procedures, and communication systems to maintain safety during forest operations. It also provides the skills to protect personal wellbeing and team relationships, as well as, the skills of standard operating procedures and apply good work practices to operate equipment accordingly to carry out tasks specific to forestry operations, both generally and in the areas of the specific qualification strands.	High Priority
New Zealand Certificate in Forestry Operations (Level 3): Basic Machine Operations, Mensuration, Production Thinning,			5-10%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of	The New Zealand Certificate in Forestry Operations (Level 3) builds the skills of health and safety responsibilities, risk management,	High Priority

Planting, Pruning, and Thin to Waste [2334]				technology, but the industry needs to change its existing worker skills profile in order to achieve this. In particular, the Forestry industry has indicated that it needs employees who are skilled in machinery operation and health and safety generally, but also specifically to the areas they are working in.	emergency procedures, and communication systems to maintain safety during forest operations. It also provides the skills to protect personal wellbeing and team relationships, as well as, the skills of standard operating procedures and apply good work practices to operate equipment accordingly to carry out tasks specific to forestry operations, both generally and in the areas of the specific qualification strands.	
New Zealand Certificate in Tree Felling and Clearing (Non-Production) (Level 3): Optional strand in Hazardous Tree Felling [2336]			10%	Increasingly workers outside of the forestry industry are needing forestry skills to fell and clear trees – as evidenced in the recent Cyclone Gabrielle. These workers generally lie outside Muka Tangata's industries (ANZSIC codes), but we hold the qualifications. As such, we have not engaged with the relevant industries on these skills, but understand that there is an increasing demand for them.	The New Zealand Certificate in Tree Felling and Clearing (Non-Production) (Level 3) is intended for people who are in the Department of Conservation, the Army, rural fire fighting, forestry (supervisors or security), road construction and maintenance, and	Medium Priority

					track construction and maintenance. It provides the skills to operate safely and effectively in roles outside of the forest industry (non-production) that involve the felling and clearing of trees.	
New Zealand Certificate in Forest Harvesting Operations (Level 4): Cable Extraction, Ground Based Extraction, Mobile Cable Yarder, Head Breaker Out, Loading, Log Making, Mechanised Felling, Mechanised Processing, Spotting, Swing Yarder Extraction, and Tree Felling [2327]			5%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology. The Forestry industry has indicated it needs employees who are skilled in machinery operation and health and safety.	The New Zealand Certificate in Forest Harvesting Operations (Level 4) provides the forest industry with individuals who have the skills and knowledge required to be employed in a production role in a harvesting operation. They will hold a senior position within the crew and will be able to contribute to the planning of a harvesting operation. They will be able to make decisions regarding their area of specialisation. Graduates will be responsible for the safe and efficient operation of forest harvesting plant and equipment without	High Priority

					supervision. Graduates will also be responsible for the maintenance of plant and equipment and will be capable of maintaining productivity within the operation.	
New Zealand Certificate in Forest Industry Operations (Planning and Monitoring) (Level 4): Harvesting, and Silviculture [2330]			10-15%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology. Health and safety are an important skill need identified by the Forestry industry.	The New Zealand Certificate in Forest Industry Operations (Planning and Monitoring) (Level 4) provides graduates of this qualification will be able to: • Plan, communicate and supervise work within a forestry or harvesting operational team. • Manage health and safety systems within a forestry or harvesting operational team. • Carry out safe behavioural audits within a	High Priority

						forest operation.	
New Zealand Certificate in Forest Operations (Level 4): Mechanised Land Preparation, and Mechanised Thinning [4174]			15-20 learners	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology. Machinery operation is an important skill need identified by the industry.	The New Zealand Certificate in Forest Operations (Level 4): Mechanised Land Preparation, and Mechanised Thinning enables graduates to operate mechanised plant and equipment safely and efficiently without supervision and maintain plant equipment while retaining productivity within the operation.	High Priority
New Zealand Certificate in Forest Harvesting Operations (Level 4) [4175]			25-30%	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology.	The New Zealand Certificate in Forest Harvesting Operations (Level 4) targets the skill development of the workforce in the semi-autonomous worker space, enabling workers to: • apply and coordinate workplace health and safety, risk management, emergency procedures, and communication within a team,	High Priority

| | | | | | while ensuring risks to the physical environment, areas of cultural and/or historical significance value are identified and protected in forest harvesting operations
• apply technical skills and knowledge of a wide range of heavy equipment to carry out tasks specific to forest harvesting operations
• apply technical skills and knowledge of systems and processes to achieve and maintain production levels in an operational role in a forest harvesting operation. | |

					• contribute to the planning and monitoring of a harvesting operation.	
New Zealand Diploma in Forest Management (Level 6) [2329]			20 learners	MPI workforce forecasts note strong increased international demand for forestry and wood processing, with a flow on effect across the value chain for more workers. This workforce demand will focus on managers and semi-autonomous workers as the skills needs in forestry change, particularly in response to increasing use of technology. In addition to health and safety, leadership and people management have also been identified as skills needs by the Forestry industry.	The New Zealand Diploma in Forest Management (Level 6) provides the forest industry with individuals who have the skills and knowledge required to carry out a technical or management role within the forest growing and harvesting sectors. The forest industry will benefit from having people who can apply a blend of management skills and forest knowledge to enable them to contribute to the medium and long-term planning and management of forest operations. They will have developed a broad range of skills including the use of a wide range of industry specific software, forest planning,	High Priority

					harvesting, supply chain management, log product logistics, commercial and financial analysis and contract management.	
We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications are still important for our industries, but we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:						
• New Zealand Certificate in Log Stock Management (Level 3): Log Marshalling, and Log Scaling [4173]				Medium Priority		

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Are there qualifications or credentials that you are developing or plan to develop that will be available in 2025?

Area of provision and/or qualification/ credential name (if known)	Level	Mode (if specific)	Qualification or micro-credential	Estimated date it will be available	Description of content (10–20 words)	Name of qualification or micro-credential this will replace (if relevant)
Forestry Qualification Suite Review: including stackable MCs				Should be available in 2024	A comprehensive review of all the forestry qualifications – including incorporate te ao Māori and mātaraunga Māori into the qualifications, is currently underway.	
Other Forestry MCs also under development as part of the Forestry Qualifications Suite Review:						
Forestry – Earthworks MC (working with Waihanga Ara Rau)				Should be available in 2024		
Forestry - Log Scaling MC				Should be available in 2024		
Forestry L5 Qual – Leadership	Level 5			Should be available in 2024	Targets an industry-identified gap in skills and career progression. The qualification is aimed at people who have industry experience and wish to develop their leadership knowledge and skills.	

Support Services qualifications advice

Our [Support Services Workforce Development Plan](#) contains further analysis of [Industry](#), [Workforce](#) and [Learner](#) data trends.

Support Services industry trends

This is a complex collection of industries which play a critical role in conjunction with many of our other industry groups. Industry forecasts show continuing growth.

Support Services is a complex industry grouping of people in the workforce who support the outputs of the food and fibre sector. This includes four ANZSIC class codes: Hunting and Trapping; Landscape and Construction Services; Other Agricultural Product Wholesaling; Other Agriculture and Fishing Support Services. These various industries that sit within Support Services can overlap with multiple parts of the food and fibre sector, with the most common industries being Nursery, Turf and Gardening; Arable; Sheep, Beef and Deer; Fruit; and Vegetables. Industry and workforce growth is forecast across 'Livestock and Other Agricultural Supplies Wholesaling'[53], ' Landscaping Services'[54] and ' Shearing, Cropping and Agricultural Support Services'.[55]

Approximately 752 (or 11%) of businesses in Support Services were Māori owned in 2020. This is one of the largest representations of Māori owned businesses across Muka Tangata industries, with only Sheep, Beef, Deer and Wool (approximately 1,526 businesses) and Dairy (approximately 942 businesses), having more than this.[56]

Support Services workforce trends

The workforce has been increasing over time but has high levels of seasonal variation (which affect how forecasts should be treated). The 'cross-sector production' workforce as a whole is forecast to slightly decrease by 2032 but shows substantial increases in higher skill role types (13%-20%) that will require increased levels of training. Other forecasts covering other segments of the sector show workforce growth. The workforce currently has low levels of formal qualifications and would need a substantially higher than requested level of investment to reach industry benchmark parity. The workforce has low new entrant retention rates and very low levels of industry tenure which drive a need for training of replacements. The sector has very strong reliance on those on RSE, temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

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[53]IBSWorld Livestock and Other Agricultural Supplies Wholesaling in New Zealand (October 2023)
[54] IBISWorld Landscaping Services in New Zealand (October 2023)
[55] IBISWorld Shearing, Cropping and Agricultural Support Services in New Zealand (May 2023)
[56] [Support Services » Muka Tangata Workforce Development Council (workforceskills.nz)](#)

Support Services workforce overview and highlighted demographics

63,460 individuals worked in Support Services across 2020 making it the largest of our industry groupings, and 68% of the workforce identified as European, 16% as Māori, 14% as Asian and 9% as Pacific peoples, with 29% of the workforce identifying as female. The sector has very strong reliance on those on RSE, temporary and work visas making the industry vulnerable to changes in immigration trends and policy shifts.

The count of individuals working in the Support Services industries in 2020, by employment type
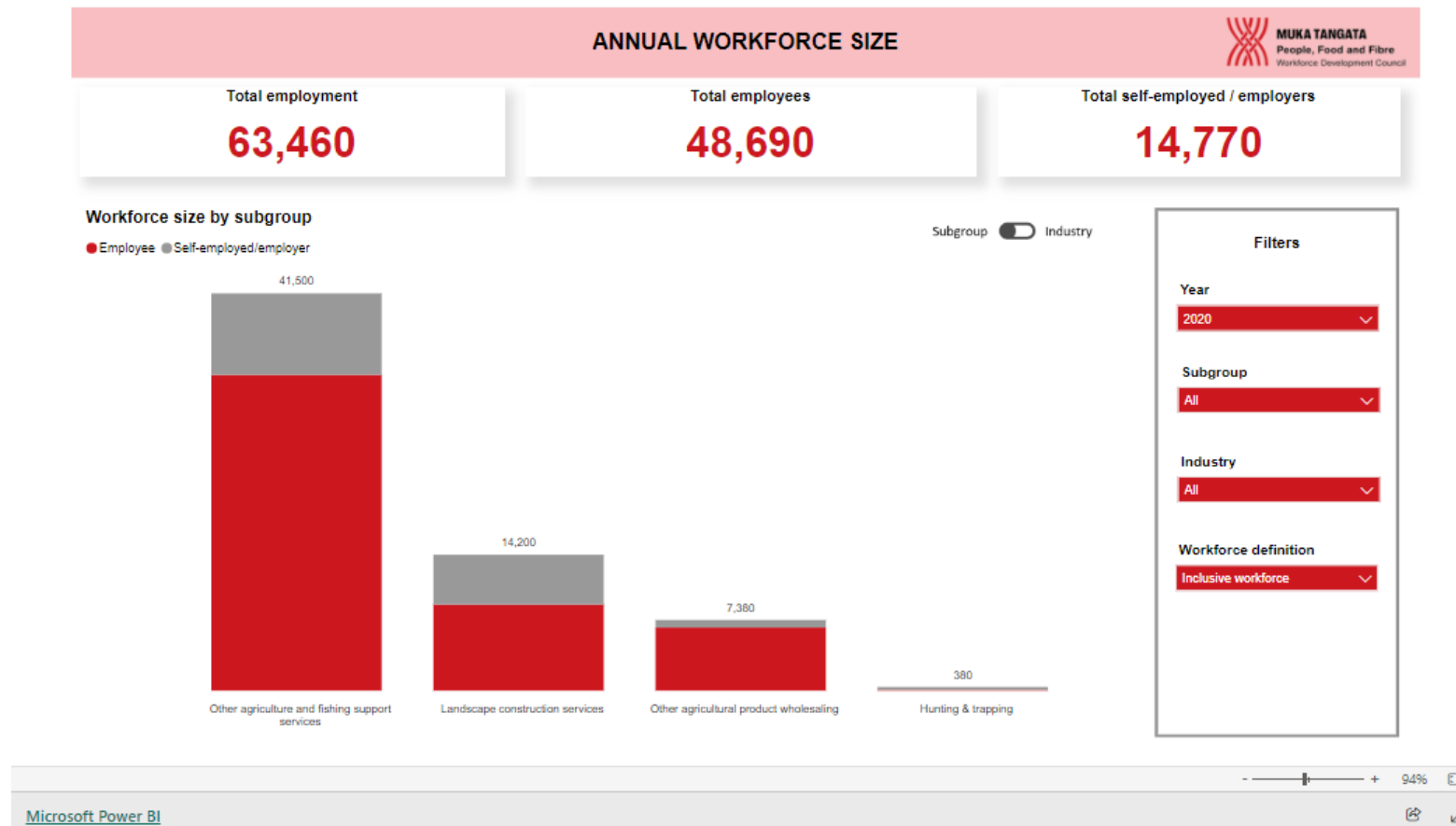
Figure 65 - https://mukatangata.workforceskills.nz/explore-industries/support-services/workforce-10/

Visa status

● NZ citizen ● Resident visa ● RSE ● Student visa ● Visitor visa ● Work visa ● Working holiday visa

Industry	NZ citizen	Resident visa	RSE	Student visa	Visitor visa	Work visa	Working holiday visa
Apiculture	79%	10%				9%	
Arable	85%	7%				4%	4%
Dairy farming	78%	7%				12%	
Equine, dogs and racing	85%	8%				6%	
Forestry	90%	5%					
Fruit	58%	11%	14%				14%
Grapes and Wine	63%	12%				10%	15%
Nursery, turf and gardening	76%	14%				5%	5%
Poultry, Pigs and other livestock far…	82%	10%				6%	
Seafood	70%	13%				11%	5%
Sheep, Beef and Deer farming	94%					4%	
Support Services	68%	10%	5%			6%	8%
Vegetables	58%	24%				7%	7%
Veterinary	79%	16%				4%	
National Benchmark	71%	19%				6%	
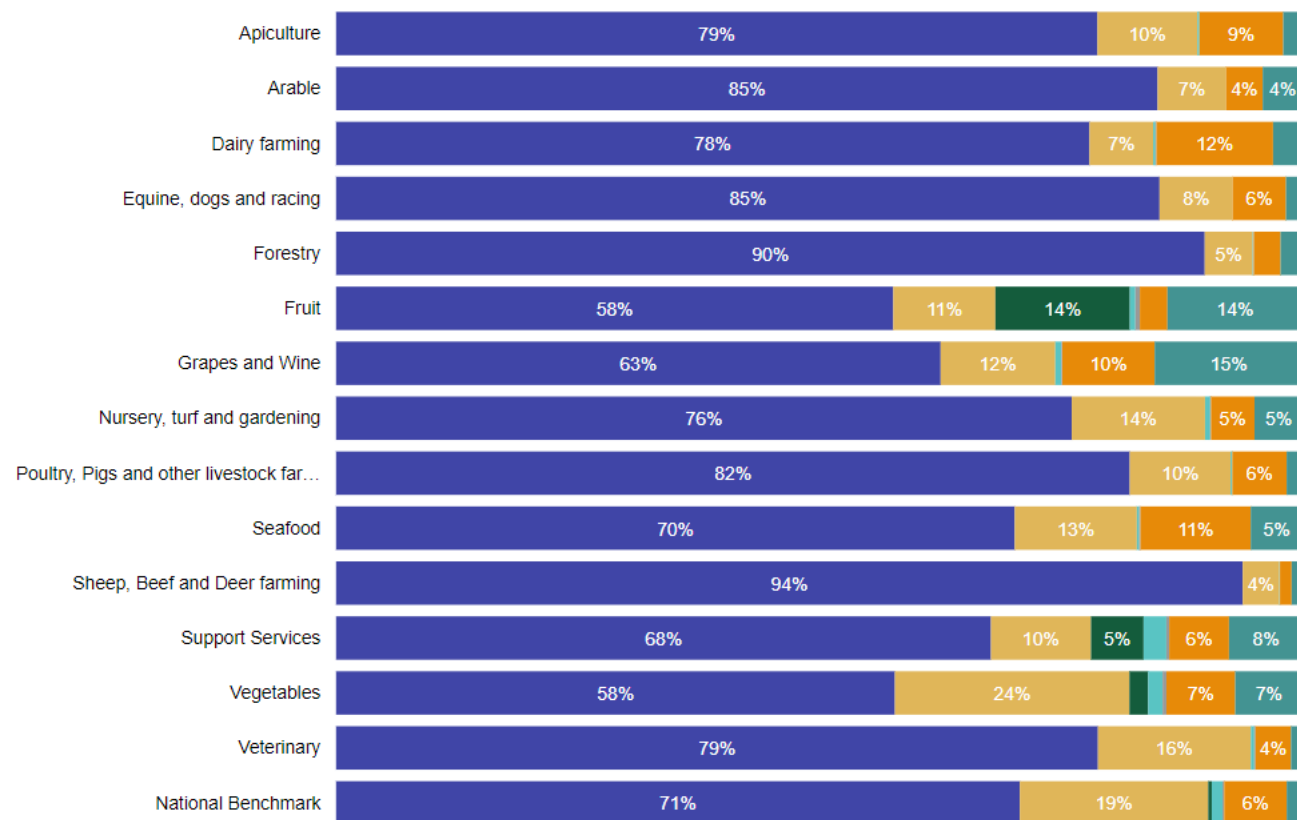
Filters

Year
2020 ⌄

Industry group
All ⌄

Industry
All ⌄

Employment status
All ⌄

Workforce definition
Inclusive workforce ⌄

Figure 66 - Source Stats NZ Census 2018 skill and workforce analysis 2023 (forthcoming)

Support Services workforce forecasts

MPI forecasts, using the conservative 'BAU Scenario' for the 'cross-sector production' workforce as a whole is for a slight decrease by 2032 but shows substantial increases in higher skill role types (13%-20%) that will require increased levels of training. We have mapped these forecasts to the roles and related qualifications for each of our industries and used them as an input to the level of increase requested for each qualification. See Appendix A: Translating MPI workforce forecasts to learner enrolment numbers for more details.

Other forecasts covering other segments of the sector show workforce growth. ('Livestock and Other Agricultural Supplies Wholesaling'[57], ' Landscaping Services'[58] and ' Shearing, Cropping and Agricultural Support Services'[59])

Figure 67 Data from https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf
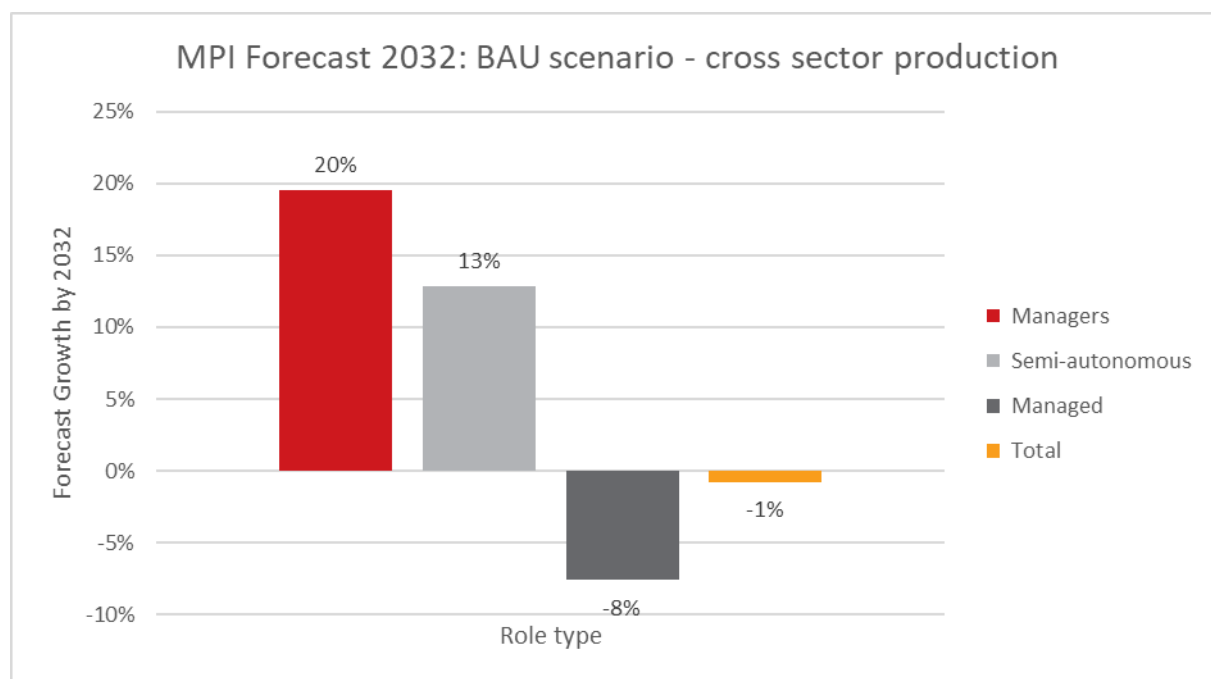
[57]IBSWorld Livestock and Other Agricultural Supplies Wholesaling in New Zealand (October 2023)
[58] IBISWorld Landscaping Services in New Zealand (October 2023)
[59] IBISWorld Shearing, Cropping and Agricultural Support Services in New Zealand (May 2023)

Support Services workforce retention and tenure

The Support Services workforce has a low level of new entrant retention and a low level of industry tenure. This replacement demand also is a driver of training requirements in this industry. This training is not lost to the sector – over a third of new entrants to Muka Tangata industries come from another Food and fibre industry and our qualifications are increasingly focused on transferable skills. Specialised education and retention are associated with retention – so increased training is expected to support retention within the industry and broader sector.

New entrants retention by industry
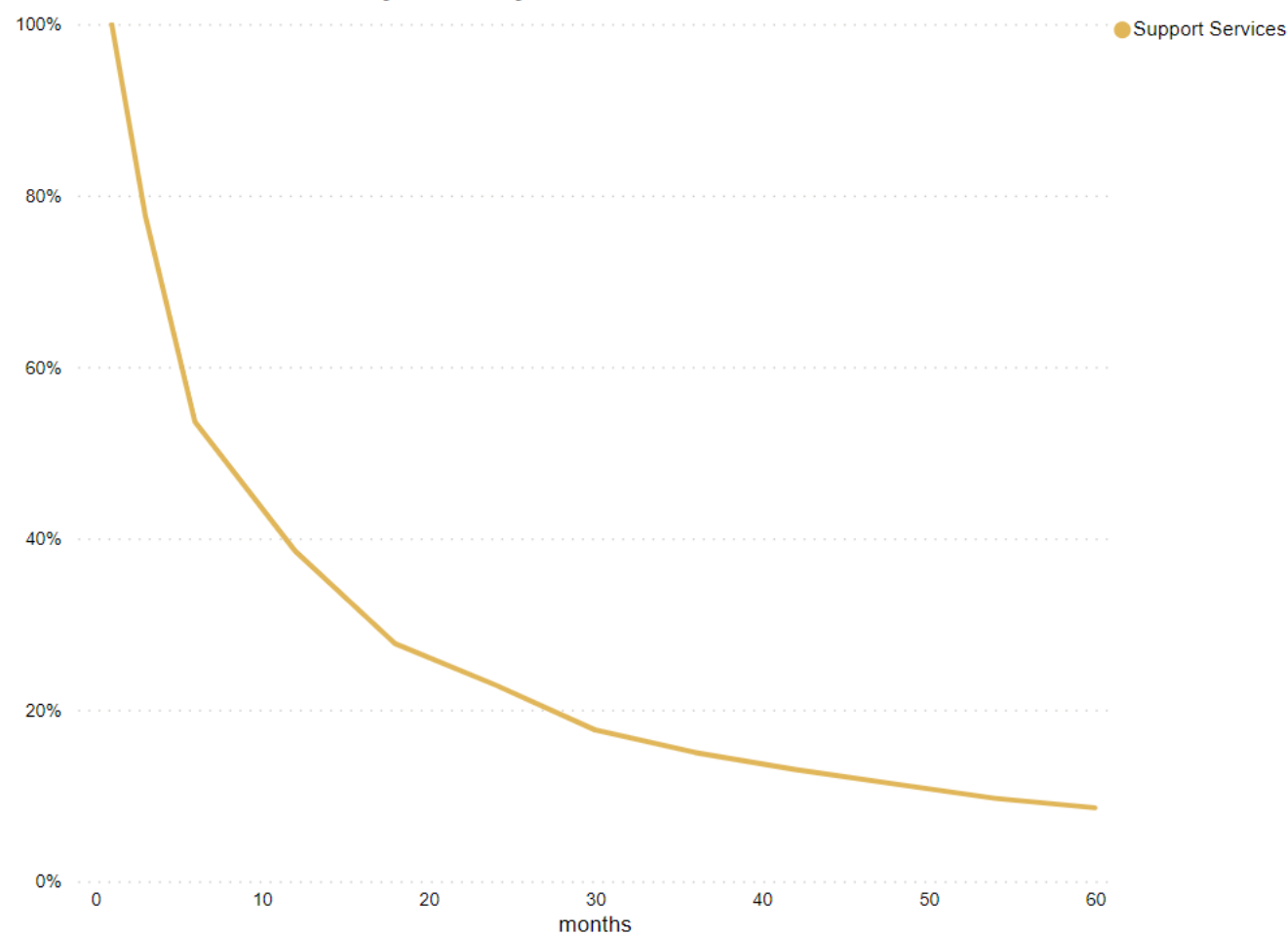
● Support Services

Filters

Starting cohort
2015

Industry group
Support Services

Industry
All

Workforce definition
Inclusive workforce

Figure 68 - Stats NZ IDI analysis 2023

Industry tenure

● 1 to 11 months ● 12 to 23 months ● 24 to 35 months ● 36 to 47 months ● 48 to 59 months ● more than 60 months

| Support Services | 42% | 17% | 11% | 7% | 5% | 18% |
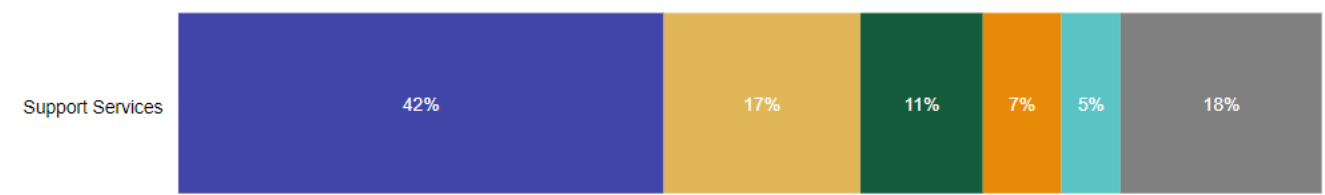
Filters

Year

2020

Industry group

Support Services

Industry

All

Workforce definition

Inclusive workforce

Figure 69 - Stats NZ IDI analysis 2023

Which specific qualifications and credentials do you want to see growth in (that can be supported by TEC investment in 2025)?

Qualification or credential	Mode	Specific regions?	Scale of change you are seeking for 2025	Evidence of workforce need – include as text below the table or an attachment	Evidence that this provision will meet the workforce need	WDC-assigned priority level (for this advice)
New Zealand Certificate in Pest Operations (Level 3): Rural Pest Control, Rural Pest Monitoring, and Urban Pest Control [2443]		All regions – but note RSLG specifics: West Coast have indicated that there is a widespread local demand for pest control in the region.	10-15%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. Pest control is an area that overlaps with other Workforce Development Councils. We are working with Toitū te Waiora and Toi Mai. Our engagement with industry and intelligence from RSLGs (particularly the West Coast) has signaled an increased need for workers as pest populations increase (for example, mice rising relative to rats and rising populations as a result of recent natural disasters and changing environments and climate). New skills may also be necessary as pest control methods change to meet new threats (for example, increasing use of chemical controls). We note that Toitū te Wairora has raised changing skills as an emerging need.	The New Zealand Certificate in Pest Operations (Level 3) is intended for individuals who have recently begun working in the pest operations industry or who wish to enter the pest operations industry. It recognises the skills and knowledge of individuals who can carry out pest control operations safely, under limited supervision, and in different environments for the purposes of biosecurity, conservation, and public health and enjoyment.	Priority

| New Zealand Certificate in Pest Management (Level 4): Pest Animal, and Pest Plant [2444] | | All regions – but note RSLG specifics: Tairawhiti. | 15 learners | There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates new workers constantly needing to be brought into the industries and upskilled.

Pest control is an area that overlaps with other Workforce Development Councils. We are working with Toitū te Waiora and Toi Mai.

Our engagement with industry has signaled an increased need for workers as pest populations increase (for example, mice rising relative to rats and rising populations as a result of recent natural disasters and changing environments and climate).

New skills may also be necessary as pest control methods change to meet new threats (for example, increasing use of chemical controls).

Tairawhiti has advised that in consultation with Iwi and due to a change in land use and Taiao interests, there is a need for provision in this qualification. (particularly the West Coast)

We note that Toitū te Wairora has raised changing skills as an emerging need. | The New Zealand Certificate in Pest Management (Level 4) is intended for people who have some experience as pest control operators who wish to develop their skills and knowledge in pest management. | Priority |
| New Zealand Certificate in Rural Servicing (Level 4) [3520] | | | 20 learners | There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. | The New Zealand Certificate in Rural Servicing (Level 4) provides graduates with the skills to:

• analyse a client's production | Priority |

143

				As farming systems have diversified and become more complex, external technical expertise to assist producers has become more important. The rural servicing industry is small but performs a vital role for industries. We are looking to ensure that there is sufficient technical expertise available.	system(s) to determine business needs • investigate and apply technical knowledge of a range of rural products and services to provide a client with appropriate solutions • recommend technical solutions and monitor their implementation. • analyse and evaluate the outcome of implemented technical solutions and make recommendations for improvement.	
New Zealand Certificate in Agrichemical Application (Level 4) with strands in Aquatic, Broadacre, Tree and Vine Horticultural, Targeted Weed Control, and Total Vegetation Control [3984]		All regions – but note RSLG specifics: Taitokerau .	15-20%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. Industries across both horticulture and agriculture has identified the need for skills to apply agrichemicals safely to control pests in	The New Zealand Certificate in Agrichemical Application (Level 4) meets the need of industries by providing people who have the technical skills and knowledge to apply agrichemicals and work unsupervised in the	Priority

				crops or pastures; and on tree and vine crops; and to control weeds and vegetation.	agrichemical application industry.	
New Zealand Certificate in Artificial Insemination of Livestock (Level 4) [2467]		All regions – but note RSLG specifics: Taitokerau .	10-15%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates new workers constantly needing to be brought into the industries and upskilled. Artificial Insemination provides an economic benefit to individual farmers and the national economy from increased livestock production as a result of faster genetic gain through selectively using superior sires. The use of semen selected on the basis of sex of offspring can also reduce the number of unwanted bobby calves. Farmers also benefit by having a closed herd, reducing the incidence of disease transfer.	The New Zealand Certificate in Artificial Insemination of Livestock (Level 4) provides the agriculture industry with individuals who have the skills and knowledge to successfully artificially inseminate livestock.	Priority
New Zealand Certificate in Arboriculture (Level 5): Supervisory Operations, and Technical Operations [2670]		All regions – but note RSLG specifics: Taitokerau.	20 learners	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. The arboriculture industry is looking to build the skills of its workforce and provide better career pathways. It has also identified the need for leadership and self-management.	The New Zealand Diploma in Arboriculture (Level 5) is for experienced workers to develop their technical skills and knowledge to be able to manage arboriculture operations. Graduates will also be able to apply knowledge of leadership, and conflict and relationship management to engage with team members and clients using a range of	Priority

					effective interpersonal skills relevant to arboriculture.	
New Zealand Diploma in Landscape (Level 5) with strands in Construction, and Design [2888]			20%	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. The Landscape construction industry has seen a continuous increase in its workforce since 2015. It also has a high and rising proportion of the self-employed. There is a need for more autonomous and managerial skills.	The New Zealand Diploma in Landscape (Level 5) recognises the technical skills and knowledge to either produce high quality landscape drawings or project manage landscape construction, working autonomously within established parameters of a landscape business.	High Priority
New Zealand Diploma in Horticulture Production (Level 6): Process Improvement, and Product Development [2667]		All regions – but note RSLG specifics: Taitokerau.	30 learners	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers constantly needing to be brought into the industries and upskilled. MPI workforce forecasts predict significant growth in the horticulture sector, particularly the fruit industry (kiwifruit, apples, and pears). The forecasts call for more managers and semi-autonomous workers to improve productivity and business performance.	The New Zealand Diploma in Horticulture Production (Level 6) recognises the skills and knowledge of individuals who can apply in-depth technical horticulture production skills and knowledge to inform strategic business decisions. The qualification supports the skills needed by semi-autonomous and managerial workers.	High Priority
New Zealand Diploma in Arboriculture (Level 6) [2669]		All regions – but note RSLG	20 learners	There is demand from industry driven by forecast industry and workforce growth across the related industries, significant gaps in the qualification level of the workforces and demand driven by high rates of new workers	The New Zealand Diploma in Arboriculture (Level 6) is intended for experienced individuals who have advanced	Priority

		specifics: Taitokerau.		constantly needing to be brought into the industries and upskilled. As part of building the skills of its workforce, including better career pathways, the arboriculture industry is looking to develop greater leadership, mentoring, and role models.	technical skills and knowledge in arboriculture operations to operate as a technical specialist at an advanced level with an emphasis on tree risk assessment and contract management. These skills contribute to the development of leadership, mentoring and role models.	

We have several qualifications with either low enrolment numbers or where any increase would be very small. These qualifications generally provide specific technical skills required by our industries. Due to the low numbers, we are not in a position to give a specific increase. We do not expect there to be large demand for these qualifications, but want to ensure that any extra enrolments are funded. We welcome discussion on any proposed delivery numbers that seem excessive. The qualifications are:

• New Zealand Certificate in Tuberculosis (TB) Testing of Livestock (Level 3): Cattle [2369]	Medium Priority
• New Zealand Certificate in Fencing (Level 3): Rural strand, and Industrial strand [2699]	Medium Priority - All regions – but note RSLG specifics: Wellington has indicated that there is ongoing demand for fencing specialists in the Wairarapa, with particularly high demand following Cyclone Gabrielle
• New Zealand Certificate in Fencing (Level 4) [4356]	Medium Priority - All regions – but note RSLG specifics: Wellington has indicated that there is ongoing demand for fencing specialists in the Wairarapa, with particularly high demand following Cyclone Gabrielle
• New Zealand Certificate in Fencing (Level 5) [2700]	Medium Priority
• New Zealand Certificate in Agrichemical Supply (Level 4) [2497]	Medium Priority
• New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [2555]	Medium Priority

• New Zealand Certificate in Irrigation System Management (Level 4) [2556]	Medium Priority
• New Zealand Diploma in Field Hydrology (Level 5) [2344]	Medium Priority
• New Zealand Certificate in Tuberculosis (TB) Testing of Livestock (Level 3): Cattle [2369]	Medium Priority
• New Zealand Certificate in Fencing (Level 3): Rural strand, and Industrial strand [2699]	Medium Priority - All regions – but note RSLG specifics: Wellington has indicated that there is ongoing demand for fencing specialists in the Wairarapa, with particularly high demand following Cyclone Gabrielle

Which specific qualifications and credentials do you want to see changes in?

As we note in our overarching advice, we have not been specific about mode at a qualification level. However, in general, we recommend a preference for workplace training as part of the mix of the provision across all of our industries. This could include both work-based training and campus-based learning that include a strong component of practical 'on job' experience in a workplace setting.

Appendix A: Translating MPI workforce forecasts to learner enrolment numbers

The aim of this analysis was to use the existing workforce and skill forecasts completed by MPI and NZIER, to estimate what learner numbers might be required in 2025 for different levels of qualification.

This was a first run through of the model and was completed with a tight time-frame and limited resources. While there are improvements that can be made, this forms the foundation of a methodology to translate workforce estimates into learner enrolment estimates.

Summarising the workforce forecasts:

The workforce forecasts developed by MPI and NZIER[60] apply three scenarios to predict the workforce of different food and fibre industries in 2032 – 1)Business as usual, 2) Increased use of technology, and 3)transformed sector. They present workforce forecasts for the industry as a whole, and also by MPI designation 'core production', 'core processing/manufacturing', 'strongly connected' and 'relevant.[61]' In most instances for the industries covered by MPI we are specifically interested in the production workforce, with seafood processing being an exception.

These forecasts further provide information on the extent of change expected in the number of people within each industry covered by MPI (which is a subset of the 14 Muka Tangata industry groups) by 'skill mix' which was classified into three categories – 1) Managed – people who are entry level/semi-skilled and are supervised daily, 2) semi-autonomous – people who can work independently, typically not actively managed, and 3) managers.

In MPI's report of the food and fibre workforce[62] they do extensive mapping of these 'skill' titles to roles/occupations in specific industries – which was based on interviews with industry representatives. In this workforce report industries are split in a finer detailed way than in the forecast report – e.g. instead of 'horticulture' which is used for the forecasting – skill mix to role/occupation is provided for specific horticulture industries like 'Apples and Pears'

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[60] For more information on the MPI and NZIER workforce forecasts see this document: https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZIER-MPI-workforce-forecasts-for-2032-FINAL.pdf

[61] For more information on how MPI define their workforce and designations: How have we organised the sectors? » Food and fibre workforce insights

[62] https://www.workforceinsights.govt.nz/assets/Documents-and-reports/NZ-food-fibre-sector-workforce-NZIER-MPI-June-2022.pdf

Methodology for mapping occupation to qualification (level)

We collated information from the 'employment pathway' of every single qualification under Muka Tangata's remit (over 100 qualifications) to provide a list of qualifications and associated pathway occupations. We then attempted to match this to the roles/occupations provided by MPI for each category of skill (managed, semi-autonomous, manager). This was straightforward for some occupations and very hard for others, as detail on occupations varied.

We worked with the qualifications team to map all qualifications (and complex apprenticeships) to our 14 industry groups (which at the time of analysis was still a work in progress). Some qualifications sat across multiple industries and some were industry specific. Given our inability to see what specific strands provider-based learners are undertaking, with differing impact per qualification, for this first run we counted all those enrolled in a qualification.

Given time constraints, for this first run we used this qualification to occupation mapping as a way to gauge the relationship between the NZQF level of a qualification and associated skill category (managed, semi-autonomous, manager) for each industry. Once we incorporated enrolment counts for each qualification, this provided us with a count of enrolments by industry group, at specific NZQF levels, with skill mix titles.

Methodology for calculating required number of learners

Now that we had a table that provided estimates of the number of learners enrolled at different skill mix levels for each industry group, we could apply the percentage change expected in that workforce by 2032 to the learner count to estimate the change in learners required if the training rate were to continue at status quo (which is not ideal as it is below desired rates). Then we could estimate the annual change required to reach that target by 2032 – which could be used to inform estimates required by 2025.

To provide the functionality to enable us to do more detailed analysis once we had finalised information on the extent to which we wish to upskill different parts of the current workforce, we also set up a model that estimated change in learner numbers required if the industry was 10% more skilled overall. Our engagement information currently suggests this would differ by industry and by level of qualification – and in most instances the stated desire would equate to a higher number than this.

Opportunities for improving and refining this approach going forward

Time and resource constraints mean this analysis represents a minimum viable product with room for improvement.

- The mapping of qualifications (and complex apprenticeships and micro credentials) to industry group has now been finalised after thorough review and there have been some changes in assignment. Future iterations of this model should use the most up to date mapping.

- Currently the workforce forecasts use the category horticulture.

    - The qualifications taken as a whole also better match the broader title of horticulture and are copied across all horticulture relates industry groups. Therefore, the information for vegetables, fruit and nursery, turf and gardening is near identical (with the exception of enrolment changes based on complex apprenticeship mappings). Grapes and wine also has very similar information but cellar operations qualifications are also included in this grouping (though enrolment numbers are not large). The recommendation here is to just refer to horticulture as a whole and to assign learners based on proportion of the workforce.

    - This could be improved by using strand information where available (ITR learners), although this requires us to do a strand to industry group mapping which is a work in progress and still leaves some issues. The absolute best-case scenario would be to source course information for students which we do not have available to us currently.

- Until strand or industry can be sourced for all learners, thought needs to go into how to account for learners in multiple industry qualifications. The model perhaps could be improved by weighting these counts based on workforce and skill category size – i.e if there are lots of 'managed' staff in one industry then we might assume qualification 2218 would have more learners from that industry.

- The model would be improved through industry consultation to ensure the mapping of NZQF level of qualification to skill category was sensible.

- The model could be improved by working with industry and using our evidence base to identify the % change in upskilling of our current workforce required.

- Differential completion rates and retention rates could be incorporated into the model.

Appendix B: Industry engagement and identification of industry skills needs/shortages/gaps

In addition to the extensive engagement process we undertook with industry for the development of our workforce development plans (see Workforce Development Plans), we have continued to engage with industries to identify their skills needs/shortages/gaps. This includes: the key peak bodies for all of our industry groupings, supplemented with engagement with key industry organisations, businesses, and individual producers. We have also talked with training providers, local government and central government agencies (including RSLGs), and others who have an interest in the food and fibre sector.

The table below sets out the peak industry bodies we have engaged with on skills needs/shortages/gaps. This is arranged by the qualification group in the template. We have not listed the others we have engaged with.

Agriculture Qualifications
Beef + Lamb New Zealand
Campaign for Wool
Dairy NZ
Deer Industry New Zealand
Federated Farmers of New Zealand
Future Farmers NZ
Growing Future Farmers
New Zealand Shearing Contractors Association
New Zealand Wool Classers Association (NZWCA)
New Zealand Young Farmers
Retail Meat NZ

Agritech New Zealand

Rural Women New Zealand

Apiculture qualifications

Apiculture New Zealand

Equine, Greyhounds and Racing qualifications

Greyhound Racing New Zealand

New Zealand Equine Education Trust

New Zealand Thoroughbred Racing Inc

New Zealand Thoroughbred Trainers Association

Forestry qualifications

Central North Island Wood Council

FMAG Forestry Ministerial Advisory Group

Forest Industry Contractors Association (FICA)

Nga Pou a Tane

Southern Wood Council

Te Uru Rākau (Forestry New Zealand)

Horticulture qualifications

Horticulture New Zealand

Nelson Winegrowers Association

New Zealand Cemeteries and Crematoria Collective

New Zealand Kiwifruit Growers Incorporated (NZKGI)

New Zealand Plant Producers Incorporated (NZPPI)

New Zealand Sports Turf Institute Limited

New Zealand Winegrowers

NZ Golf Course Superintendents Association

Potatoes NZ

Summerfruit NZ

Vegetables New Zealand

Wine Marlborough

Pork, Poultry and other livestock qualifications

New Zealand Pork

PIANZ - The Poultry Industry Association of New Zealand

Seafood qualifications

Aotearoa NZ Seaweed Association

Aquaculture New Zealand

Marine Farming Association

Seafood New Zealand
Support Services qualifications
FCANZ - Fencing Contractors NZ
Fertiliser Association
Groundspread NZ
Irrigation NZ
New Zealand Game Animal Council
New Zealand Arboriculture Association (NZARB)
Pest Management Association of NZ
Predator Free New Zealand
Rural Contractors NZ
Veterinary Services and Animal Care qualifications
Allied Veterinary Professional Regulatory Council of New Zealand

Engagement is captured and tagged in our client relationship management system (Aka Korero). This includes information on the skills needs/shortages/gaps that industry has identified.

In addition to analysing the tagged content, we have also checked all engagement content to ensure we have captured all relevant information on skills needs/shortages/gaps.

We have then verified this analysis with the individual Engagement Managers to ensure it represents what they heard from industry. Where required that has also been cross-checked with industry.

We have then mapped the skills needs identified to the relevant qualifications, where qualifications exist that deliver those skills.

In addition, we have drawn on other industry intelligence, including forecasts for exports, GDP contributions as well as trends on business consolidation, disruptions (using general forecasters like IBISWorld and industry-specific reports) and reports and strategies on industry, including workforce needs. We have tested this information and trend analysis within our industry-focused rourou within Muka Tangata – bringing in perspectives from our Skills Leadership and Advice, Qualifications, Quality Assurance, Māori Leads and Engagement teams who act as our in-house focal points for bringing together our insights and knowledge of our individual industries.

Appendix C: Benchmarking methodology

We set out to investigate the extent to which our workforce would need upskilling to match the qualification profile of the construction sector – a sector that currently has more regulation.

Broad sectors

We started by comparing the highest qualification profile of those in Agriculture, Forestry and Fishing industries (Division A[1] on the ANZSIC classification system) in the 2018 census with those in the Construction industries (Division E[2]).

Comparison of highest qualification profile -
Agriculture, Forestry and Fishing vs Construction
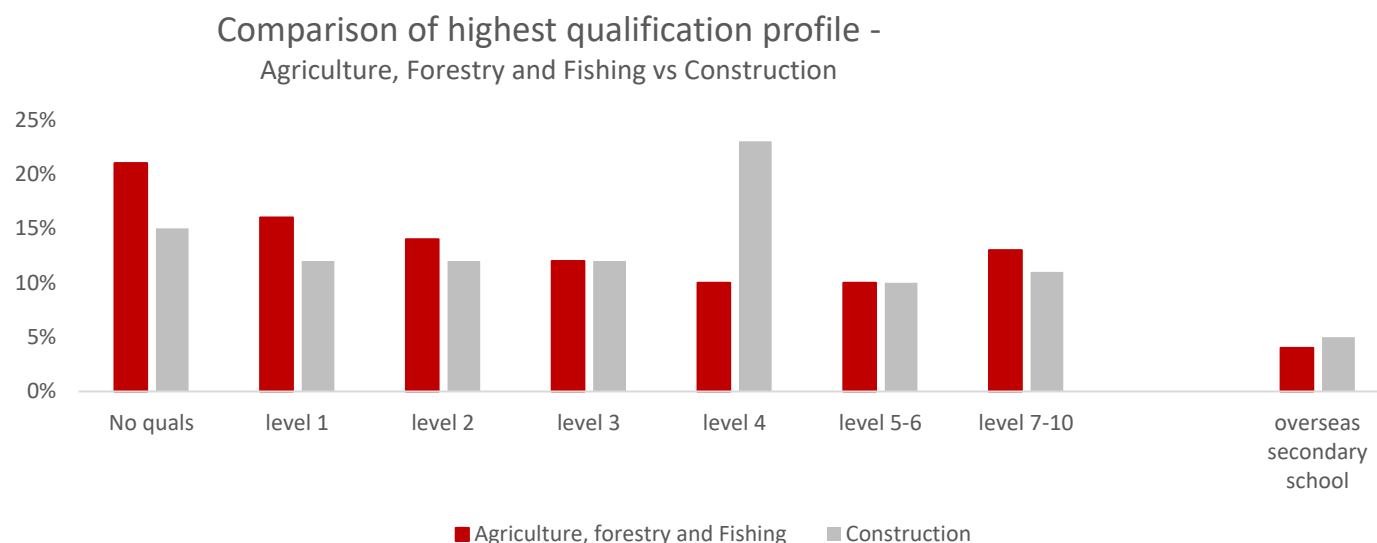
Note: 7% of those working in Agriculture, Forestry and fishing and 6% of those working in Construction did not provide qualification information – the estimates here are for those who provided a response. Research evidence consistently shows that those who do not respond are likely to have lower levels of qualification on average. All estimates and calculations provided here are based on the count of those who responded.

Based on this comparison it was evident that workers in Agriculture, Forestry and Fishing had a lower qualification profile on average, and were more likely to have no qualification (21% vs 15%) or level 1 qualifications (16% vs 12%) and were far less likely to have level 4 qualifications (10% vs 23%) than those working in Construction.

Based on 2018 census workforce estimates, we calculated that in order to double the percentage of people working in the Agriculture, Forestry and Fishing that held level 4 qualifications from the reported 10% to 20%, to bring the estimates closer to Construction – we would need 26,621 of the workers to report

having a level 4 qual. With a qualification completion rate of ~65% on average (our analysis suggests this sits between 60-65%) across all subjects this would mean an enrolment of 39,931 people on level 4.

This is a simplified and conservative estimate because 1) the completion rate is lower in Agriculture, Environment and Related studies on average (in 2022 qualification completion rate at level 4 was 47% and programme completion rate at level 4 was 53%) and 2) this estimate does not take into account retention and replacement rates where you might actually need a higher number to account for expected churn in the workforce.

Muka Tangata workforce

We applied the same methodology to those classified as working in the Muka Tangata workforce in the 2018 census. This includes all those whose main job at the time of the census was in one of the ANZSIC codes (industries) assigned to Muka Tangata. The Muka Tangata workforce is a larger group than Agriculture, Forestry and Fishing and the workforce size is larger (187,728 compared to 133,104), nevertheless the qualification profile on average is similar.

Comparison of highest qualification profile - Muka Tangata vs Construction
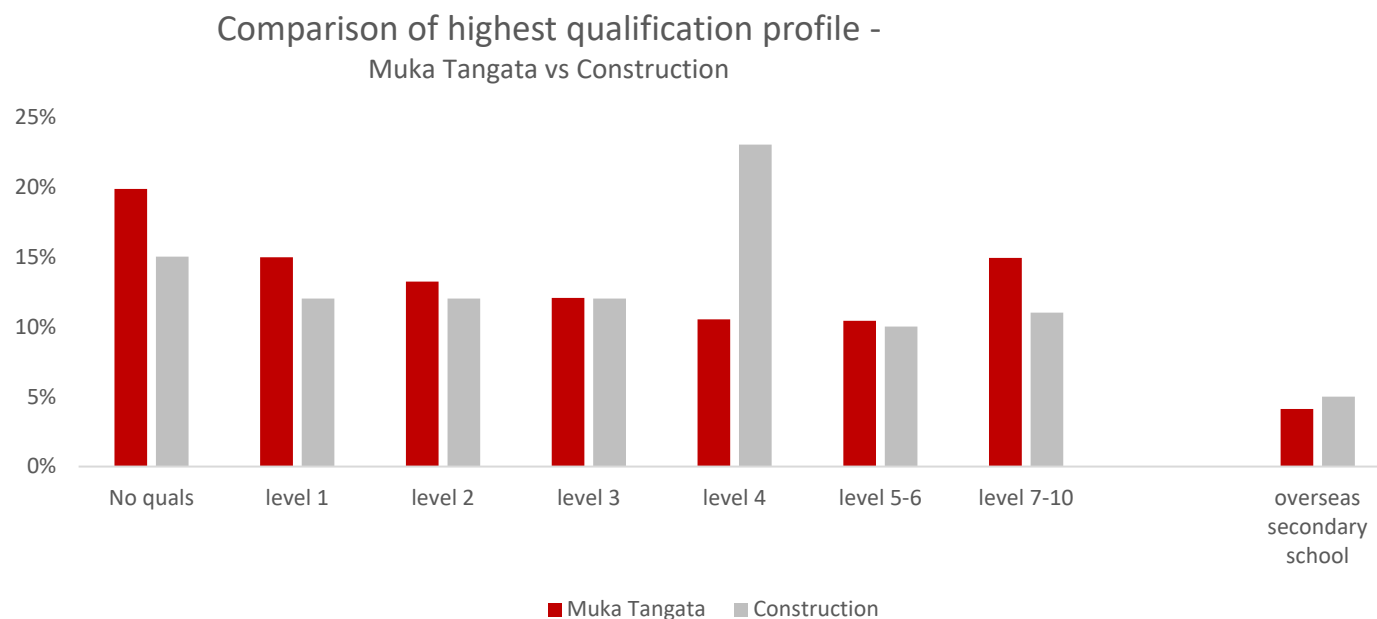
Note: 7% of those working in Muka Tangata industries and 6% of those working in Construction did not provide qualification information – the estimates here are for those who provided a response. Research evidence consistently shows that those who do not respond are likely to have lower levels of qualification on average. All estimates and calculations provided here are based on the count of those who responded.
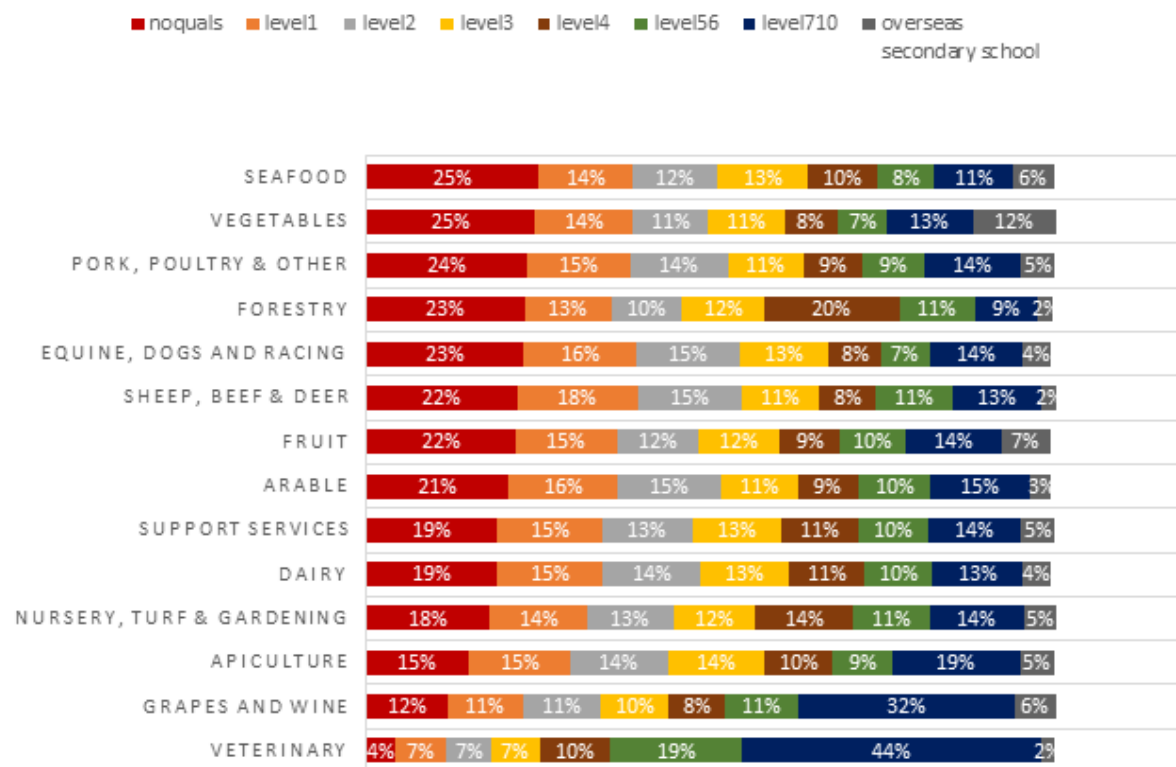
Based on 2018 census workforce estimates, we calculated that in order to change the composition of the Muka Tangata workforce to have the same rate of level 4 qualification as the Construction workforce – we would need 20,795 of the workers to report having a level 4 qualification. Again, applying a completion rate of 65% would mean an enrolment of 32,025 people at level 4.

We also estimated that to reduce the percentage of the Muka Tangata workforce with no qualifications from 20% to 15%, we would need an additional 8938 people to report having at least a level 1 qualification, which would mean 13,751 enrolments.

Individual industry groups

We wanted to see what this looked like for our individual industry groups.

Highest qualification profile across industires

Legend: noquals, level1, level2, level3, level4, level56, level710, overseas secondary school

Industry	noquals	level1	level2	level3	level4	level56	level710	overseas secondary school
SEAFOOD	25%	14%	12%	13%	10%	8%	11%	6%
VEGETABLES	25%	14%	11%	11%	8%	7%	13%	12%
PORK, POULTRY & OTHER	24%	15%	14%	11%	9%	9%	14%	5%
FORESTRY	23%	13%	10%	12%	20%		11%	9% 2%
EQUINE, DOGS AND RACING	23%	16%	15%	13%	8%	7%	14%	4%
SHEEP, BEEF & DEER	22%	18%	15%	11%	8%	11%	13%	2%
FRUIT	22%	15%	12%	12%	9%	10%	14%	7%
ARABLE	21%	16%	15%	11%	9%	10%	15%	3%
SUPPORT SERVICES	19%	15%	13%	13%	11%	10%	14%	5%
DAIRY	19%	15%	14%	13%	11%	10%	13%	4%
NURSERY, TURF & GARDENING	18%	14%	13%	12%	14%	11%	14%	5%
APICULTURE	15%	15%	14%	14%	10%	9%	19%	5%
GRAPES AND WINE	12%	11%	11%	10%	8%	11%	32%	6%
VETERINARY	4%	7%	7%	7%	10%	19%	44%	2%

Note: the percentage not providing highest qualification information ranged from 3% in Veterinary to 14% in Fruit. These percentage estimates are based on those with highest qualification information available. Research evidence consistently shows that those who do not respond are likely to have lower levels of qualification on average.

We calculated how many learners would be required in order to change the percentage of workers with level 4 qualifications in each of our industry groups to be the same as the Construction benchmark (23%). We noted that some of our industry groups had a high qualification profile overall than construction – most notable veterinary and Grapes and wine. Across all other industries there is a higher percentage with level 1 or below qualifications than construction, even where there are higher percentages of graduates. Forestry is interesting in that it does have a higher percentage of level 4 qualified people than any other Muka Tangata industry – but still a very high percentage of workers with no qualification.

Excluding Veterinary and Grapes and Wine, the table below represents the shift in worker numbers and learner numbers required with a level 4 qualification to obtain a 23% share of the workforce in each industry group, using the same methodology described above and the same assumed completion rate of 65%.

Table 1.

The estimated change in the number of workers and learners with level 4 required to match Construction benchmark.

Industry groups	Workforce number changes	Enrolments required
Apiculture	317	488
Arable	330	508
Dairy	4555	7008
Equine, Greyhounds, and Racing	547	841
Forestry	268	413
Fruit	1680	2585
Nursery, Turf, and Gardening	1299	1999

Poultry, Pigs, and other livestock farming	602	927
Seafood	990	1523
Sheep, Beef, Deer, and Wool	5111	7863
Support Services	3550	5462
Vegetables	838	1289

We ran a similar exercise to ascertain changes required to reduce the number of workers with no qualifications to be in line with the Construction estimate of 15%.

Table 2.

The estimated change in the number of workers and learners with at least level 1 qualification required to match Construction benchmark.

Industry groups	Workforce number changes	Enrolments required
Apiculture	0	0
Arable	137	210
Dairy	1575	2424
Equine, Greyhounds, and Racing	285	439
Forestry	659	1014
Fruit	794	1221

Nursery, Turf, and Gardening	452	696
Poultry, Pigs, and other livestock farming	357	550
Seafood	795	1223
Sheep, Beef, Deer, and Wool	2449	3768
Support Services	1260	1938
Vegetables	529	813