

Attraction and Retention Research Programme

Synthesis Report

November 2023



About this document

The following document has been prepared for Food and Fibre Centre of Vocational Excellence (Food and Fibre CoVE) by Scarlatti as the final deliverable of the *Attraction and Retention Research Programme*. This report draws on and synthesises the content of the following four interim reports which were delivered to summarise the key findings and insights following each of the research programme's core activities:

- Interim report #1: Situational analysis – Desk research.
- Interim report #2: Situational analysis – Primary research.
- Interim report #3: Measuring the performance of attraction and retention initiatives.
- Interim report #4: Characterising reasons for leaving employment in the food and fibre sector.

These four interim reports are available on Food and Fibre CoVE [website](#).

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Executive summary

Introduction

This report synthesises the insights and findings reported in four interim reports previously delivered to Food and Fibre Centre of Vocational Excellence (Food and Fibre CoVE) as part of the Attraction and Retention Research Programme. The synthesised findings are used to identify opportunities for retention initiatives to be developed to reduce the sector's workforce shortages.

Findings

The findings of this report include:

- **Attraction initiatives have not been effective at addressing workforce shortages to date.** We identified a portfolio of 40 active and core attraction and retention initiatives at a combined cost of between \$6 and \$11 million being delivered in the food and fibre sector in 2022. An analysis of the attraction initiatives within this portfolio concluded they hadn't been designed appropriately to achieve meaningful change. Factors like sustainable funding, coordinated delivery, and intentional targeting would need to be better integrated into the design of attraction initiatives to improve their effectiveness.
- **Improving retention, particularly of first-year employees, is an underexploited opportunity to address workforce shortages.** Across New Zealand, employee retention rates are at their lowest during the first 12 months of employment with about 50 – 60,000 of the 75,000 people entering the workforce leaving annually. The exposure to the industry (hours) accrued by these industry leavers, exceeds the exposure generated by attraction initiatives by up to 100 times. The opportunity to support new entrants better during the first 12 months of their employment and reduce the number of people (with established experience) leaving the sector, is significant.
- **There are several reasons why people leave the sector, each with varying degrees of significance.** We developed a comprehensive framework of 20 reasons why someone might leave employment in the food and fibre sector, drawing on data collected from activities undertaken across the research programme. Modelling applied to the framework identified the top five most significant reasons that contribute to someone's departure from the workforce. In order, these are reasons related to seasonal work, the employee's family, their health, the hours and schedule of the job, and the type of work. A root cause analysis of these reasons identified several drivers in the domain of different industry stakeholders. The drivers were reviewed to identify opportunities to improve retention rates (see below).

Implications for the design of future retention initiatives

While none of the opportunities identified to improve retention are entirely novel, we think there are different initiatives worth testing in four areas:

1. **Build employer capability in developing and supporting employees.** Targeted capability building to manage staff with mental wellbeing challenges and / or addictions, as well as Generation Z (Gen Z) employees.
2. **Mentor new entrants to the workforce.** Mentorship focused on supporting new entrants with career opportunities and goals, general work and life skills, difficult personal or employment experiences, or transitioning to vetted employers.

3. **Provide tools and resources to improve recruitment.** Tools and resources to help employers advertise roles and businesses better, and to support them to develop more robust recruitment processes.
4. **Co-ordinate seasonal labour.** Testing the opportunity to create better matches between employers looking for seasonal workers, and people already in the seasonal workforce that are open to continuing once their current seasonal work has finished. Further research is required to understand the potential impact of this opportunity on reducing the workforce shortage.

Introduction

Context

For many years, the food and fibre sector has struggled to attract and retain people into its workforce and to attract students to food and fibre related studies. In response to this challenge, industry organisations, government agencies and employers have researched, trialled, and implemented a range of strategies and initiatives to address workforce shortages. These initiatives have focused on attracting people to the workforce and, to a lesser extent, retaining people in the workforce and improving productivity to reduce the workforce requirement.

Despite these efforts, businesses across the sector continue to struggle to find and keep the employees they require to operate. Workforce shortages have been exacerbated in recent years by the COVID-19 pandemic, and the closure of New Zealand's borders during this time. These challenges are not unique to the food and fibre sector – they are shared by many other industries also.

Attraction and Retention Research Programme

Food and Fibre CoVE contracted Scarlatti to undertake the Attraction and Retention Research Programme. The purpose of this project was to evaluate why workforce shortages have persisted in the food and fibre sector, and to consider what novel opportunities are available to address these challenges. The activities involved in this programme included:

1. Undertaking a **situational analysis** evaluating current and previous attraction and retention efforts across the food and fibre sector to understand why, despite lots of effort from across the sector, workforce shortages have persisted.
2. Developing a model to **evaluate performance measures and suitable metrics** against which the outcomes of current and future attraction and retention initiatives can be measured. The model was also used to test hypothetical attraction and retention initiatives to evaluate how current initiatives would need to change in order to meaningfully address workforce shortages.
3. **Characterising the reasons why people leave** food and fibre sector employment within 12 months and using an additional model to **prioritise the relative significance of each reason**.

The findings from each of these activities have been delivered as interim reports to Food and Fibre CoVE. The following report is a synthesis of insights and recommendations from the three interim reports.

Document structure

This report is split into the following three parts:

- **Part A: Synthesis of findings.** An overview of the findings from each of the three activities in this research programme.
- **Part B: Implications for the design and implementation of first-year retention initiatives.** Discussion on how the findings from this work could implicate the design and development of future retention initiatives.
- **Part C: Appendices.** Information supporting discussions elsewhere in the report.

A

Part A: Synthesis of findings



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The food and fibre sector has four levers available to address the persisting workforce shortages

Workforce shortages have persisted in the food and fibre sector for several years despite lots of effort from lots of people. Food and Fibre CoVE contracted Scarlatti to undertake the Attraction and Retention Research Programme to evaluate attraction and retention efforts in the sector to date and consider what novel opportunities there might be to address the sector's workforce challenges.

There are four levers available to the food and fibre sector to reduce workforce shortages:

- **Attracting** more people into the sector's workforce.
- **Retaining** more people in the sector's workforce once they're in it.
- **Growing productivity** of the sector's workforce either by integrating technology or improving the capability of the existing workforce.
- **Reducing the sector's output** and moving towards a new equilibrium where the available workforce is adequate for the level of output.

While all four are valid levers to consider moving forward, the focus of this project is on evaluating the historic efforts and future opportunities to best leverage the attraction and retention levers.

Attraction initiatives have not been an effective lever to address workforce shortages to date

There are several challenges associated with attracting people to the sector

There is an abundance of research that identifies issues that make it hard to attract and retain talent in the food and fibre sector. Most of the issues internal to the food and fibre industry will be familiar to industry stakeholders. These include poor public perception, low rates of pay and unappealing workplaces. Many of these internal issues are not new or unique to New Zealand – some predate the workforce shortages the industry is experiencing currently.

Less discussed in industry research, are the external factors that reduce the competitiveness of the food and fibre industry as a place to work. New jobs – think drone operators, social media influencers, cloud computing specialists etc – are being created in the wider economy. However, the overall New Zealand workforce is not growing. As the pool of talent is not expanding to cover the new jobs being created, the existing food and fibre workforce needs to either shrink or become much more competitive.

Current and previous attraction and retention initiatives have not been implemented effectively

We identify four possible reasons why workplace shortages have persisted in the food and fibre industry despite many years of investment in attraction and retention programmes:

- Strategies have not allocated investment to the right initiatives
- Initiatives have not been executed well
- Initiatives need more time to work
- Investment has not been at the scale needed to make a significant difference

All four of these reasons play at least some role.

For the most part the strategies that have guided investment in attraction and retention have been high-level and aspirational. They do not have the rigour or detail to meaningfully guide investment choices.

The initiatives that are undertaken are mostly uncoordinated, and lessons from the evaluations of past initiatives are not reflected in the activities that are occurring today. The initiatives are typically led by industry bodies and government agencies, but it is ultimately individual employers who hire and employ staff. This disconnect blunts the effectiveness of both attraction and retention initiatives. It is also noted that connections between the education and training system on one hand, and industry investment in talent attraction on the other, are weak.

Investment is typically made through projects, which means most initiatives have a finite life. This makes them costly to run and more difficult to integrate, and it reduces the opportunity to build enduring brands with key audiences.

In 2022, there were 40 active and core attraction and retention initiatives being delivered

We identify 184 initiatives of different sizes, modes of engagement, level of investment and primary focus which include attraction and/or retention as a feature. We estimate approximately 40 of these initiatives were active in 2022 and have either attraction and/or retention as their *primary* objective. These 40 are the core initiatives in the analysis of the current landscape. Between \$6 and \$11 million¹ was invested in these 40 initiatives in 2022; this has been broken down by primary focus in the following table.

Table 1: Breakdown of investment in core initiatives by primary focus

Primary focus	Initiative breakdown		Investment breakdown	
	#	%	Cost \$ million	%
Attraction only	26	65%	\$4 - \$8	71%
Retention only	5	13%	\$0.4 - \$0.7	7%
Combination of attraction and retention	9	23%	\$1 - \$2	23%
Total	40	100%	\$6 - \$11	100%

The current range of initiatives identified in our analysis suggests much of the direction provided by strategy documents are being neglected when designing attraction and/or retention initiatives. Observations of the current landscape include:

- A strong mechanism would be needed to co-ordinate investments which have been fragmented and disconnected across the industry to date²,
- Attraction and retention initiatives could be better targeted at people who are already close to being ready to work in the food and fibre sector, particularly career changers who have been the largest source of new entrants in the past, and
- More should be done to align industry investment with the education system given the better scale and leverage that connecting with the training sector offers.

To achieve a meaningful reduction in the sector’s workforce shortage, attraction initiatives would need to be fundamentally redesigned – and scaled up

In the absence of robust empirical data to measure the impact of different attraction and retention initiatives, it is difficult to be certain what impact initiatives generate for the sector. To address this gap, we built an ‘impact model’ to quantitatively estimate the impact of current attraction initiatives on the sector’s workforce shortage, and what changes would be required to achieve a meaningful reduction in the workforce shortages – refer to *Appendix 1: Introduction to the workforce impact model* (page 29) for more details on the approach taken to develop the impact model.

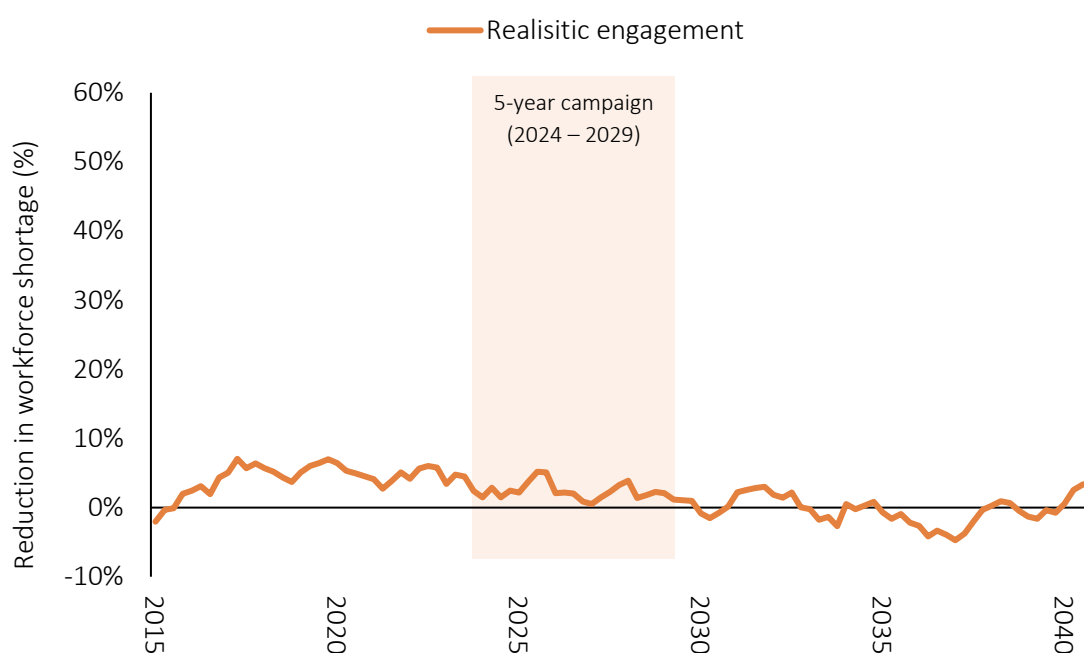
¹ An investment range has been used to acknowledge the uncertainty of the investment made in each of the core initiatives, and the uncertainty with which initiatives should be considered core or not. An investment range is more meaningful to the analysis than a precise estimate of the total investment.

² We note the Primary Industry Capability Alliance (PICA) – the most concerted effort made to co-ordinate activities - was not a strong enough mechanism.

The current level of investment is probably not enough to generate a meaningful reduction in workforce shortages

The model was used to evaluate a hypothetical five-year attraction initiative from 2024 – 2029 that generates 500,000 engagement hours annually (Figure 1). This number is roughly comparable to the total engagement hours of all industry and government initiatives running in 2022. The analysis suggests the impact of this campaign would be almost indistinguishable against the background of random variation. That is, the total effect of all current food and fibre sector talent attraction initiatives on the workforce shortage is probably unmeasurably small.

Figure 1: Reduction in the food and fibre workforce shortage – realistic engagement



Intentionally targeting specific population segments with attraction initiatives will be more efficient than running an untargeted programme

The impact model was also used to evaluate what two hypothetical attraction initiatives delivered between 2024 and 2029 with different approaches to targeting (e.g. random, targeted), would need to do – in terms of learning hours generated – to achieve a meaningful reduction in the sector’s workforce shortage. In this case, we consider a 50% reduction in the workforce shortage as being meaningful. The details of the initiatives and the required engagement hours are described below:

- 1. Initiative #1: Randomly targeted attraction initiative.** The first initiative, which randomly targets the working age population, would need to generate 50 million hours of engagement annually to reduce the workforce shortage by 50% (Figure 2 – Light grey line). This is the equivalent of reaching every person in New Zealand’s working-age population for an average of approximately 12 hours each per year. To put this in context, the government campaign to promote Covid-19 vaccinations in 2021 probably didn’t generate as much (albeit the wider media coverage and public discussion about the pandemic almost certainly would have).

At a cost of \$5 to \$10 required to generate each engagement hour (following a review of current initiative costs), this initiative would cost \$500 million to achieve a meaningful

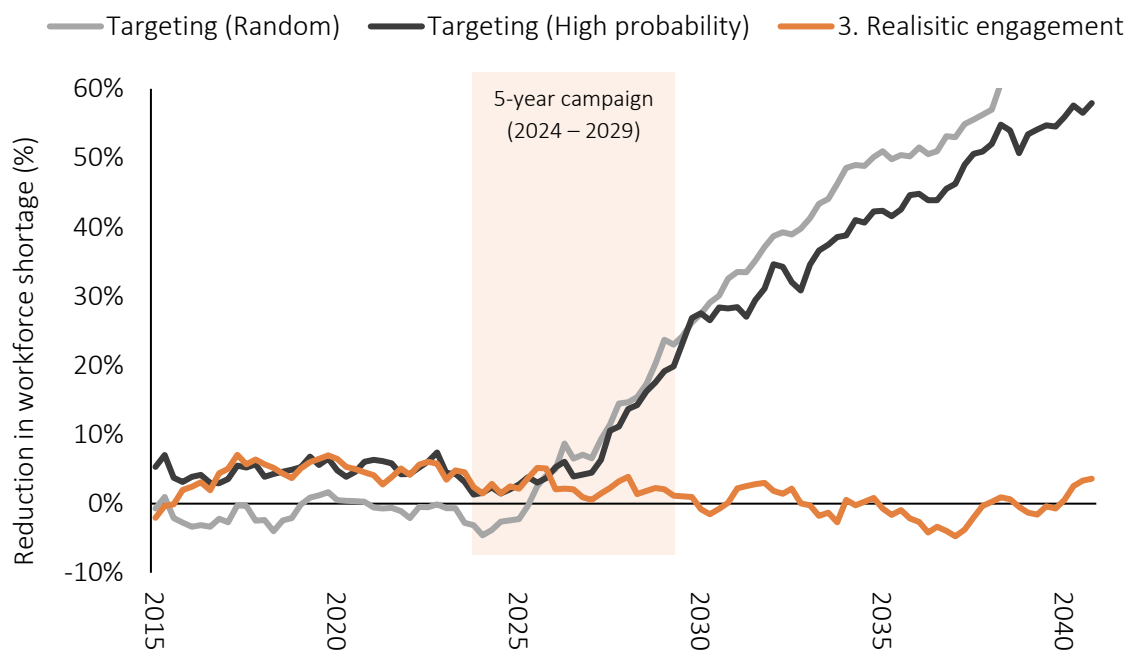
reduction in the workforce shortage – 65 times more than the realistic engagement scenario from Figure 1.

- Initiative #2: Targeted attraction initiative.** The second initiative, that intentionally targets people between 18 and 30 years of age who have a high probability to enter the food and fibre workforce, would need to generate 10 million engagement hours annually to reduce the workforce shortage by 50% (Figure 2 – black line). This is the equivalent of reaching every person in New Zealand’s working-age population for an average of approximately 2.5 hours each.

This initiative would cost \$50 million to achieve a meaningful reduction in the workforce shortages – 6.5x more than the realistic engagement scenario, and 10x less than the randomly targeted initiative for the same outcome (50% reduction in workforce shortage).

Figure 2 below shows how the workforce shortage would change over time in each of these two scenarios outlined above.

Figure 2: Reduction in the food and fibre workforce shortage – Hypothetical attraction initiatives achieving 50% reduction in workforce shortages



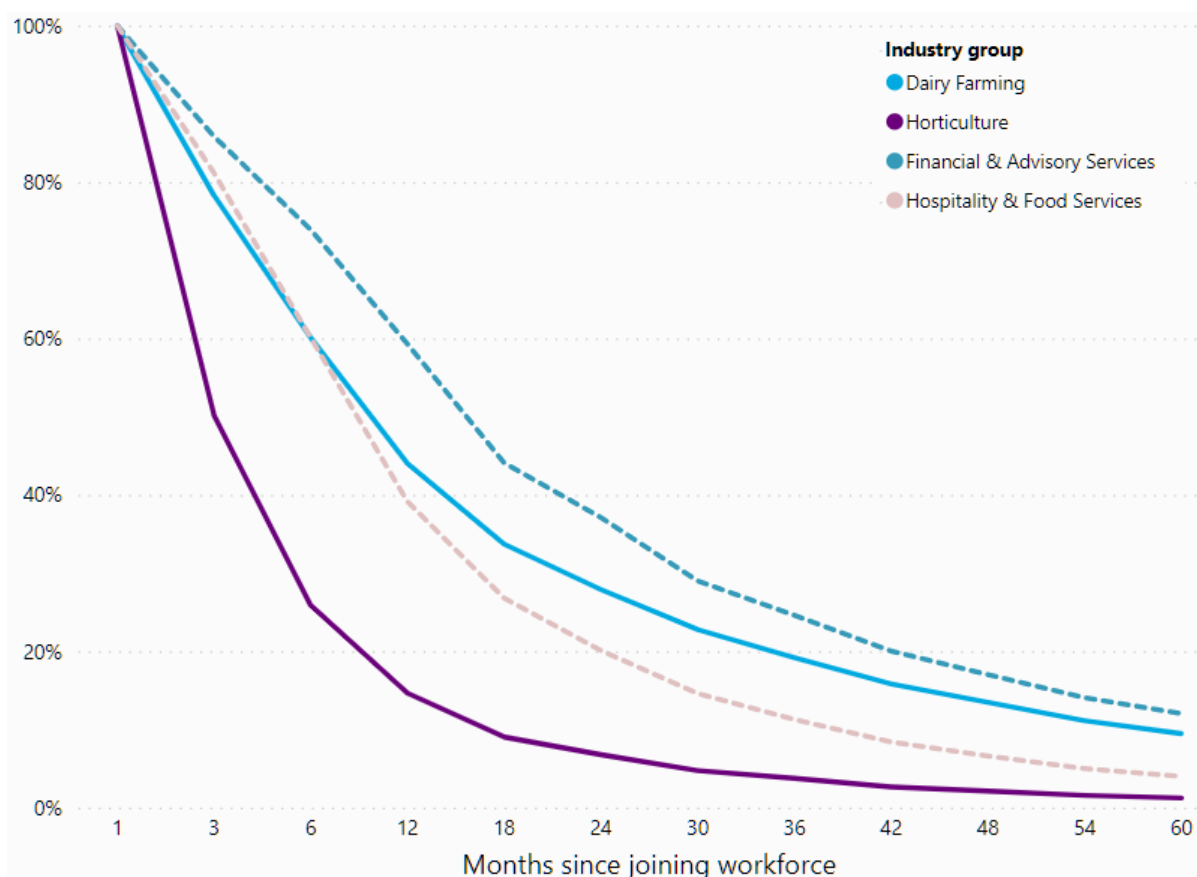
Improving retention, particularly of first-year employees, is an underexploited opportunity to address workforce shortages

Across New Zealand sectors, employee retention rates are at their lowest during the first 12 months of employment

The retention rates of employees are at their lowest during the first 12 months of employment. This is not only true for the food and fibre sector, but also for most New Zealand economic sectors. This insight is presented in Figure 3 with the retention profiles for dairy farming and horticulture (as the two extremes in the food and fibre sector), and financial and advisory services and hospitality and food services (as the two extremes for the available benchmark industries). Retention profiles for other sectors are available in the Attraction and Retention Dashboard.

The retention profiles for the four industries are not only at their lowest in the first 12 months, but also the most variable compared to each other. This initial variability in retention visually skews the retention trends over the longer term. To test how retention rates vary over time, the retention profiles in Figure 3 have been split into two time periods. The first being retention rates of those still in the industry after 12 months of employment, and the second for retention rates of those in the sector for less than 12 months.

Figure 3: Retention profiles (full five years) for the highest (dairy) and lowest (horticulture) food and fibre sectors compared to other New Zealand industries

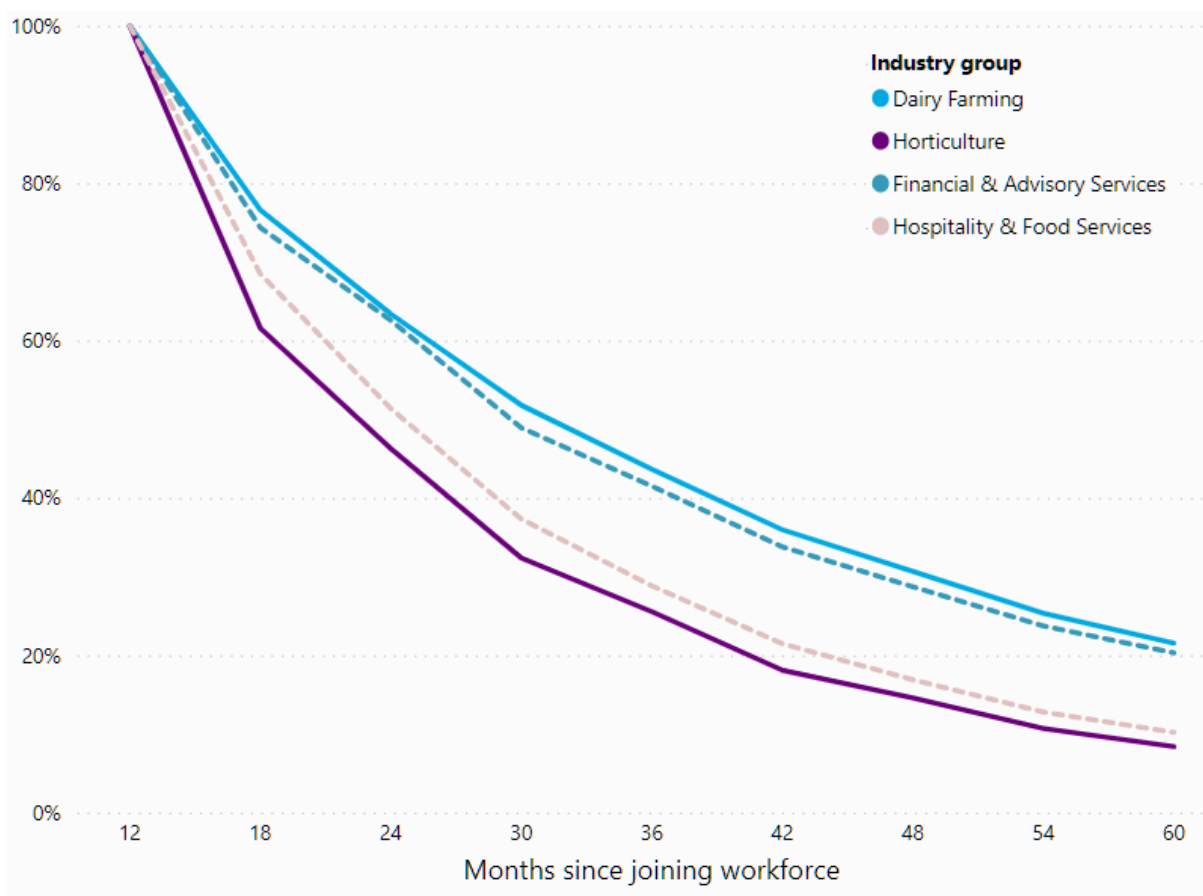


Source: Attraction and Retention Dashboard ([Click here](#)). Navigation: Industry retention > The full picture

Over the long term, retention rates in the food and fibre sector are broadly comparable to other New Zealand sectors

The retention rate profiles for people still in the sector following 12 months of employment are comparable between the different food and fibre industries and the benchmark sectors (Figure 4), they are also less variable than retention in the first 12 months of employment (Figure 3). Interestingly, dairy farming has slightly better retention of employees over the long term than the other industries considered in this analysis.

Figure 4: Retention profiles (from 12 months onwards) for the highest (dairy) and lowest (horticulture) food and fibre sectors compared to other New Zealand industries

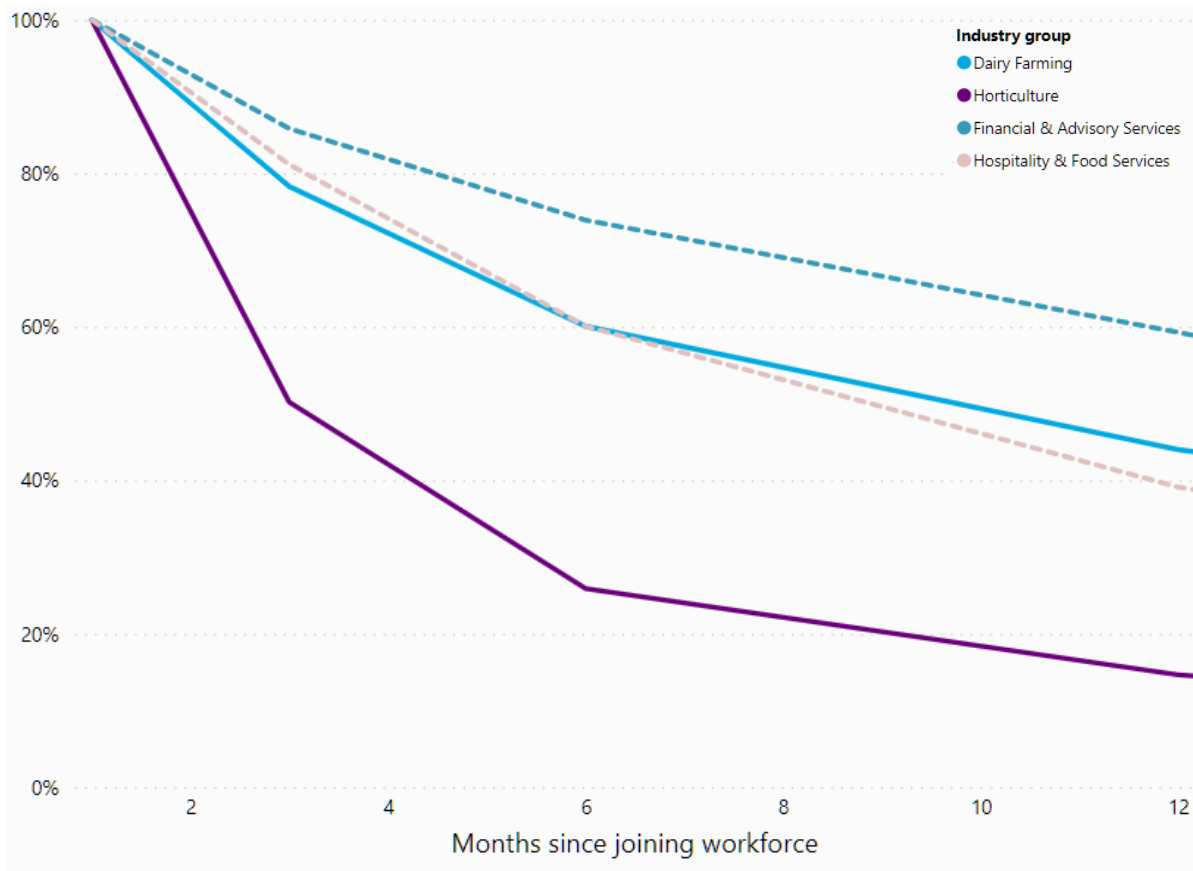


Source: Attraction and Retention Dashboard ([Click here](#)). Navigation: Industry retention > The post year view

In the short term, however, retention rates in the food and fibre sector are lower than other New Zealand sectors

The retention rate profiles for people in the first 12 months of their employment (Figure 5) present a different narrative to that from Figure 4 over the longer term. During the first 12 months of employment, retention rates in the food and fibre sector are considerably more variable between industries and tend to be lower than the benchmark industries.

Figure 5: Retention profiles (first 12 months) for the highest (dairy) and lowest (horticulture) food and fibre sectors compared to other New Zealand industries



Source: Attraction and Retention Dashboard ([Click here](#)). Navigation: Industry retention > The first-year view

There are several reasons why we believe employees are leaving the food and fibre sector – which are explored further below.

The rapid decrease in retention during the first 12 months could be considered either a problem or an opportunity:

- A *problem* in that the food and fibre sector is seeing a lot of people entering the workforce annually, either not liking it or had planned for short-term employment, and then leaving to find another job, or
- An *opportunity* in that the food and fibre sector is seeing a lot of people entering the workforce annually, *get varying levels of exposure to the industry*, and then leaving to find another job.

The exposure to the food and fibre sector for employees in the first 12 months greatly exceeds that from talent attraction initiatives

The average number of people entering the food and fibre sector in any given year is approximately 75,000 people. Over the course of 12 months, 50-60,000 of these people then leave the sector having accrued varying amounts of experience in it. We estimate that this first-year group of leavers collectively generate somewhere between 10 to 50 million hours of exposure to the food and fibre sector over a 12-month period.

By comparison, the talent attraction initiatives identified in the Situational Analysis Phase 1 Report³ (delivered to Food and Fibre CoVE in August) which are:

- Linked to the *education* system (e.g. Trade academies, Gateway, field trips) were estimated to generate between 1 to 5 million hours of exposure to the sector. That is, these provide an order of magnitude less exposure than what naturally occurs without any initiatives.
- *Industry and/or government-led* and not linked to the education system (e.g. industry-wide multi-media promotion) are estimated to generate between 100,000 to 500,000 hours of exposure to the sector. That is, the exposure that these initiatives generate are collectively a further order of magnitude lower than the exposure generated by education linked attraction initiatives.

This highlights the opportunity for retention initiatives to be more effective at addressing workforce shortages than historic attraction initiatives – particularly during the first year of employment.

Targeting an improvement in short-term retention is an untapped opportunity to address the sector's workforce shortages

There may be an opportunity to address the sector's workforce shortages by leveraging the naturally occurring exposure to the food and fibre sector, which is considerably larger than the exposure generated through talent attraction initiatives, and design retention initiatives to achieve better outcomes for employees during their first 12 months of employment. By comparison, the opportunity to address workforce shortages by improving long-term retention rates is expected to be limited given the challenges needing to be overcome are hard and slow to address as they rely on changing management practices on farms. While the Vocational Education and Training (VET) system can (and has) contributed by developing employment capability provision, the potential impact has been constrained by low employer demand. However, employer interviews undertaken to characterise the reasons people leave suggest there may be an opportunity to develop and promote courses in niche areas employers find problematic.

The impact model used to evaluate the effect of hypothetical attraction initiatives in the previous section was used again to characterise the relative size of the opportunity to meaningfully address the sector's workforce shortages by targeting retention rates of first-year employees as opposed to retention rates of the whole sector workforce.

Targeting an improvement in retention rates of first-year employees is more efficient at reducing workforce shortages than random targeting

To reduce the workforce shortage in the food and fibre sector by about 50%:

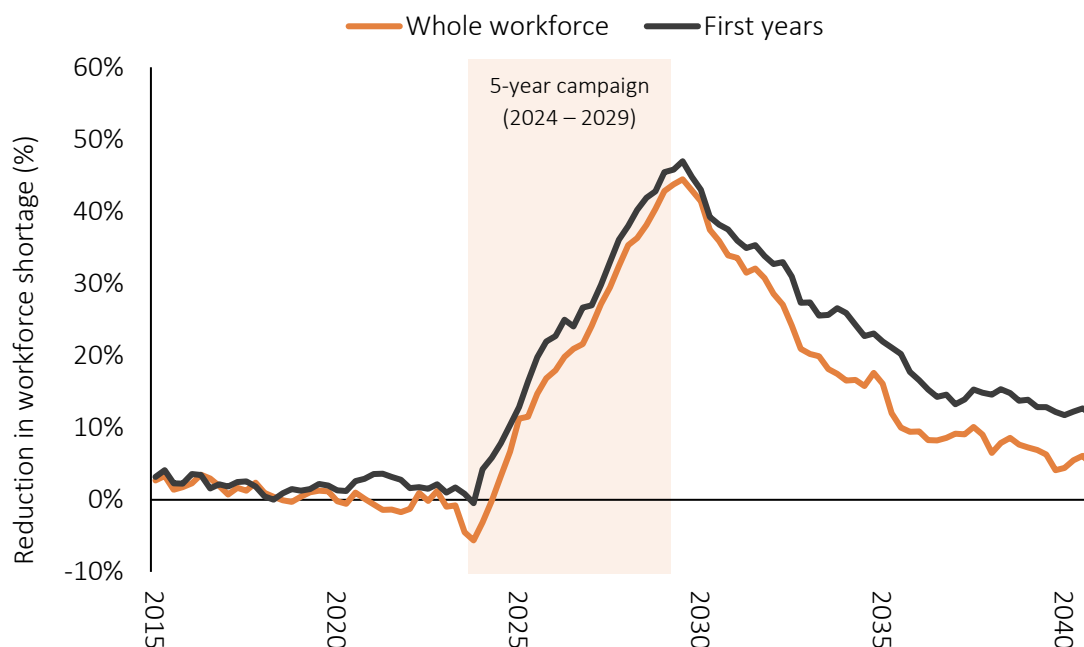
- **A randomly targeted** retention initiative delivered between 2024 and 2029 would need to increase the retention rate of at least ~60,000 employees from the whole food and fibre sector workforce by 25%, while a
- **A first-year targeted** retention initiative would only need to increase the retention rate of 12,000 employees in their first year by 25%.

Targeting a retention initiative at first-year employees, as opposed to randomly across the workforce, could be five times more efficient at reducing the workforce shortage in terms of the number of people

³ <https://foodandfibrecove.nz/wp-content/uploads/2022/09/FFCoVE-A-and-R-Stocktake-report-19-Sep-22-final.pdf>

needing to be engaged/reached by an initiative (Figure 6). An initiative targeting an improvement in retention rates has a relatively quick effect on reducing the workforce shortage compared to improving attraction but is less enduring shown by the sharp drop when the initiative ends – this emphasises the need for sustainable funding for positive outcomes to be enduring.

Figure 6: Reduction in the food and fibre workforce shortage by different retention initiatives



As highlighted earlier in this document, the most efficient attraction initiative at reducing the workforce shortage by 50%, an initiative targeting people in the population with the highest existing probability to enter the workforce, would need to reach the equivalent of New Zealand’s working age population (~4.2 million people) for approximately 2.5 hours each – a rather tall ask. A targeted retention initiative, by comparison, would only need to reach about 12,000 first-year employees to reduce the workforce shortage by the same amount (50%).

It is unclear at this stage what would be required to increase the retention rates of first-year employees

While it’s becoming clear that improving the retention rates of first-year employees by 25% is the most efficient way to address the sector’s workforce shortages, it is unclear at this stage what can be done to improve retention rates for this group of employees.

The following section summarises work undertaken to identify and characterise where the best opportunities are for the Vocational Education and Training (VET) System to improve retention rates of first-year employees.

People leave employment for a number of reasons, each with varying degrees of significance

Reasons for leaving framework

The following framework outlines reasons why someone might leave employment in the food and fibre sector. It has been constructed by drawing on several primary data collection methods undertaken throughout this research programme, including the ex-employee survey and IDI analysis undertaken during the situational analysis activity, and employer interviews undertaken while characterising the reasons people leave during the first 12 months. Many of the reasons contained in this framework will be well known to the industry already. Nevertheless, the framework creates a starting point to quantify the relative significance of each reason for leaving.

Table 2: Reasons for leaving employment - Framework

Category 1	Category 2	Category 3	Category 4 (Stated reason for leaving)		
Pre-planned departures			Seasonal work		
			Short term visa		
			Short term personal		
Unplanned departures	"Managed out"		Underperforming		
			Business restructure		
			Absenteeism/misconduct		
	Left of own accord	Job reasons (push)		Poor management/employment relationship	
				Hours and schedule	
				Poor compensation package	
				Location	
				Type of work/activities / physical environment	
				Career progression opportunities	
				Team conflict	
		Job reasons (pull)			Health and safety/drug testing
					Interested in trying something different
					Retirement
					Family
Life reasons			Financial		
			Health		
			Individual		

Prioritising the relative significance of reasons for leaving

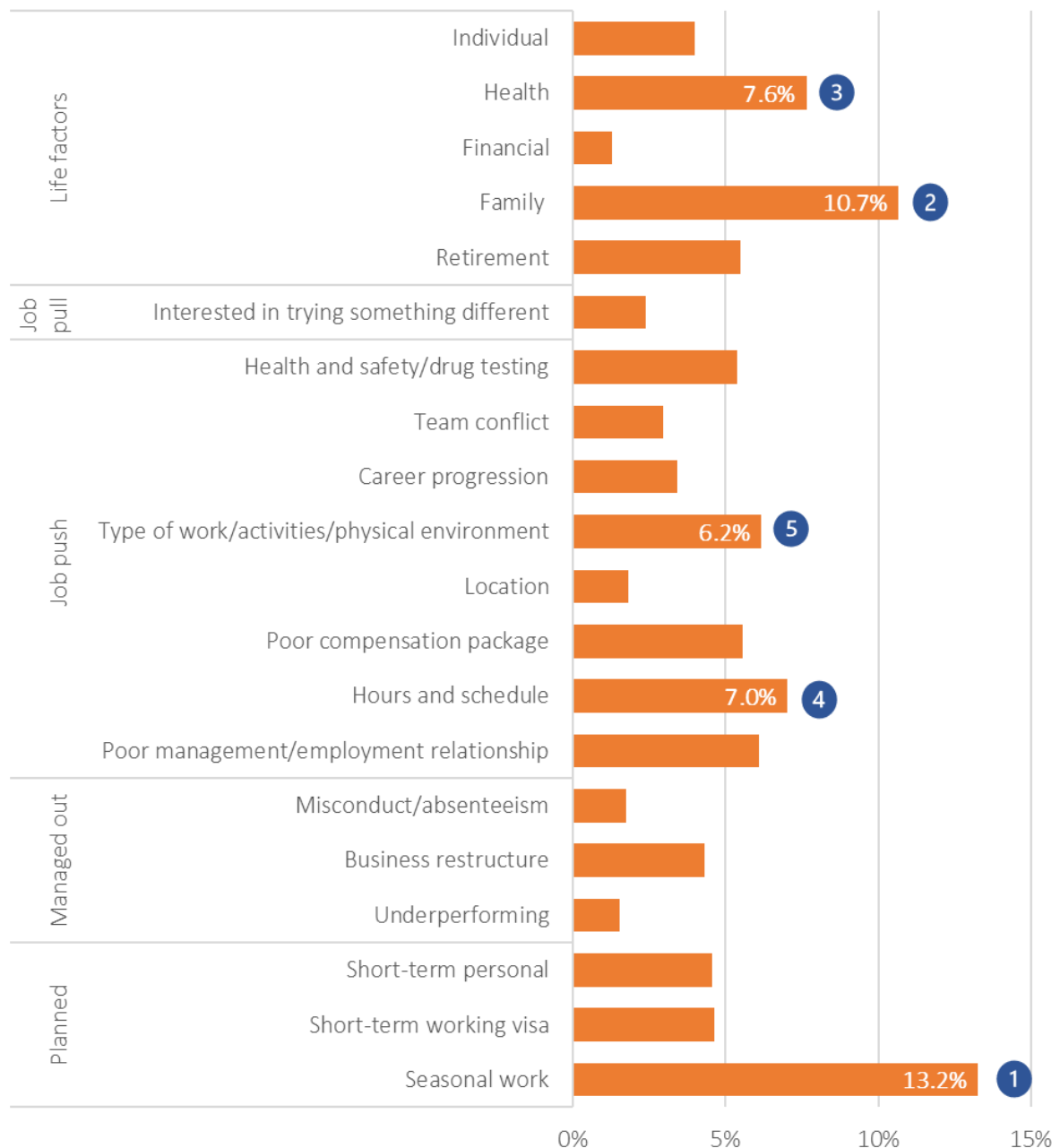
A model was developed to quantify the relative significance of the reasons for leaving from the above framework (Table 2) and to support the prioritisation of reasons to identify where the largest opportunities are for initiatives to improve workforce retention rates. The model uses the data collected from primary research undertaken across this research programme (e.g. ex-employee survey, employer interviews, and IDI analyses) as inputs to characterise the relative significance of each reason. Each data source is imperfect and incomplete individually (e.g. response biases and sample errors), however they each contribute complimentary perspectives to holistically estimate the relative significance of each reason for leaving. The weighting to which each data source contributes to the

holistic perspective varies by data sources depending on the extent of the imperfections and incompleteness.

Relative significance of reasons for leaving

Figure 7 below presents a detailed breakdown (category 4) of the relative significance of reasons for leaving from Table 2. The top five individual most significant reasons that contribute to the average person’s departure from the sector are tagged in Figure 7 accordingly.

Figure 7: Relative significance of reasons for leaving employment (category 4)



Observing the relative significance for the category 4 reasons for leaving in Figure 7 highlights there is no single reason that is notably more significant than another, particularly when excluding the top two reasons which will be challenging to intervene on. This suggests an absence of a silver bullet (i.e. a single initiative) to improve retention rates in the food and fibre sector. Given that this quantitative approach has not identified a strong path forward, there is value in characterising the top five reasons

qualitatively by considering the systemic drivers that contribute to the reasons and identifying opportunities for retention initiatives by addressing the contributing drivers.

Analysis of systemic drivers to identify retention opportunities

While an employee may leave for one of the reasons presented in the framework in Table 2, there are inevitably underlying drivers in the system that are creating the reasons and / or holding them in place. For each of the top five reasons for leaving identified in Figure 7, the drivers that contribute to them that are in the domain of the employee themselves, employers, the VET system, the industry, the government, and New Zealand and the wider economy were analysed. For each of the drivers sitting in the domain of these industry stakeholders, we consider how Food and Fibre CoVE will be able to act on, advocate for, or recognise when developing retention initiatives.

A detailed analysis of the drivers contributing to the top five reasons for leaving is included in *Appendix 2: Analysis of systemic drivers contributing to the reasons for leaving* on page 31. From this analysis, the following opportunities have been identified to improve retention rates in the food and fibre workforce. These areas have been identified based on the potential impact on new entrants, the relevance to a wide proportion of the sector's workforce, and how they align with the scope of Food and Fibre CoVE.

1. **Build employer capabilities in developing and supporting employees** in response to several of the drivers contributing to the family and health reasons for leaving where employees are identifying challenges with mental health, addictions and conflicting expectations as reasons for leaving.
2. **Mentor new entrants to the workforce** in response to the drivers contributing to the family reasons for leaving where employees – particularly young employees and new entrants to the sector – are identifying challenges with social disconnections, absence of career progression, and conflicting expectations as reasons for leaving.
3. **Provide tools and resources to improve recruitment** in response to the drivers contributing to people leaving – again, particularly new entrants – that are leaving the sector workforce because their prior expectations of working in the sector did not align with reality.
4. **Coordinate seasonal labour** in response to the drivers contributing to people leaving because they had been working in the sector to fulfil short term labour demand to undertake seasonal activities.

Additional detail of these opportunities along with a short analysis quantifying the opportunity is included in the final section of this report as the concluding discussion for this Attraction and Retention Research Programme.

B

Part B: Opportunities to improve retention rates for first-year employees



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Recommendations for the design of future retention initiatives

The analysis of drivers contributing to the top five reasons for leaving discussed in the previous section has been used to identify four areas where initiatives could be developed to improve retention rates in the food and fibre sector. None of the ideas are particularly novel, but the following opportunities have been identified as they might build on existing initiatives to try slightly different approaches. Details of each opportunity are presented below along with an estimate of the impact each opportunity could have on the workforce shortage of 17,000 (refer to *Appendix 1: Introduction to the workforce impact model*). The modelling for each opportunity considers:

- The number of new entrants the opportunity could conceivably impact (i.e. the addressable market)
- The number of people within the addressable market engaging with or influenced by the opportunity (i.e. reach of the opportunity)
- The improvement in one-year retention rates for those reached by the opportunity (i.e. efficacy of the opportunity).

Opportunity 1: Build employer capability in developing and supporting employees

There are several existing formal and non-formal training opportunities for employers in the food and fibre sector to improve their people and HR management capabilities. Historically, this is an area where employer demand, rather than the supply of good training courses or other capability-building initiatives, has been the constraint. However, findings from the employer interviews undertaken to characterise employee reasons for leaving, suggest there may be an opportunity to develop and promote courses in niche areas that employers find problematic.

There appears to be an opportunity for capability building approaches focused on (or covering):

- **Managing staff with mental wellbeing challenges and / or addictions** – Training that supports employers / managers to spot symptoms of these challenges, to understand and maintain the boundaries between personal and professional, to know how to approach such topics with employees, and what other services are available to refer employees to, would be valuable.
- **Managing Gen Z employees** – Training that supports employers / managers to understand and manage the values of Gen Z employees, to support them to develop basic work and life skills, and to manage their expectations of progression, pay and conditions, would be valuable.

Pilot initiatives with this focus could test:

- Whether aligning course content to the specific retention challenges identified by employers is effective at increasing employer engagement in HR-related training.
- Whether the training is effective at increasing employers' ability to manage challenging employees and retain them in their businesses.

Potential reduction in workforce shortage

We estimate – with reference to evidence collected from the employer interviews undertaken to characterise reasons for leaving – that the number of new entrants to the sector who could benefit from this opportunity (i.e. those entering with HR related challenges), to be roughly 20% of new

entrants (15,000). The two main determinants of the potential impact of this opportunity on reducing workforce shortages are:

1. The percentage of employees entering the workforce with employment challenges employed by employers who have engaged with the HR training as per this opportunity. As an example, we consider this number to be between 3% and 30% of the 15,000 new entrants who could conceivably benefit from this opportunity.
2. The improvement to one-year retention rates for this group of employees. As an example, we consider improvements between 3% and 25% from a nominal base retention rate of 25%.

A simple model of the above factors estimates the potential reduction in the workforce shortage from this opportunity could be up to 7% but is more likely to be in the range 0.1% to 1% (While this appears to be a smaller opportunity than the one, we discuss next, it would be easy to design and test new initiatives of this type, and relatively easy to find sustainable funding models for initiatives that are shown to be effective. This latter point means initiatives can be easily scaled, so the constraint becomes employer demand rather than availability of funding.

Table 3).

While this appears to be a smaller opportunity than the one, we discuss next, it would be easy to design and test new initiatives of this type, and relatively easy to find sustainable funding models for initiatives that are shown to be effective. This latter point means initiatives can be easily scaled, so the constraint becomes employer demand rather than availability of funding.

Table 3: Potential reduction in the workforce shortage by opportunity 1 to build employer capability in developing and supporting employees

		Improvement in retention rates			
		25% <i>No improvement</i>	28% <i>3% improvement</i>	35% <i>10% improvement</i>	50% <i>25% improvement</i>
New entrants employed by trained employers	3%	0%	0.1%	0.3%	0.7%
	10%	0%	0.3%	0.9%	2.2%
	30%	0%	0.8%	2.6%	6.6%

Opportunity 2: Mentor new entrants to the workforce

In many areas, the food and fibre industry is well-served with support networks. For example, there are a variety of wellbeing services available to both employees and employers in the food and fibre sector such as FirstMate, Rural Support Trust, Farmstrong and GoodYarn. And there are opportunities to engage with peers and colleagues in organised social settings (e.g. New Zealand Young Farmers).

However, this research suggests that employees, particularly new entrants to the sector with less than 12 – 18 months experience, could benefit from general support and mentorship in addition to supporting mental health challenges.

This kind of support could be delivered by a near-peer (i.e., someone a few years ahead in their food and fibre career) or a senior, more experienced mentor. In some cases, culturally appropriate mentorship programmes would likely be beneficial also.

Retention initiatives with a mentorship / pastoral care focus could relate to supporting employees with:

- **Making connections to existing organisations**, e.g., making referrals to local New Zealand Young Farmer clubs. People who are new to the industry may not have the networks, confidence or knowledge to reach out to the support networks that already exist, on their own.
- **Discussing career opportunities and goals**. Support to understand the career opportunities available to them, to set their goals (including in some cases, progression), and have a plan for how to achieve them in a realistic timeframe.
- **Building general work and life skills**. Support to develop general work skills for a successful career and life, such as financial literacy and communication skills.
- **Addressing difficult personal or employment experiences**. Support to overcome these situations, which may take the form of the mentor being available to listen, provide alternative perspectives, explain the reasonable expectations and realities of work, and / or refer them to appropriate professionals or organisations where more support is needed.
- **Transitioning to vetted employers**. Support to identify another appropriate employer, whether that be in the same industry or another part of the food and fibre sector, who is vetted to ensure the employee has a positive work experience.

In addition to supporting employees, providing a mentoring support network potentially also provides a ‘back-channel’ to support employers/mentors develop their people management and networking capabilities.

Pilot initiatives could test:

- Whether mentoring / pastoral care is effective at addressing one or more of the areas noted above.
- Whether mentoring / pastoral care can be provided in a sustainable way – ideally by leveraging existing networks and resources – see below.

Potential reduction in workforce shortage

We estimate the number of new entrants that could benefit from this opportunity annually to be 75,000 (i.e. all new entrants). The two main determinants of the potential impact of this opportunity on reducing the workforce shortage are:

1. The percentage of new entrants who receive mentorship. As an example, we consider this number to be between 3% and 30% of the 75,000 of new entrants who could conceivably benefit from this opportunity.
2. The improvement to the one-year retention rate of new entrants. As an example, we consider improvements between 3% and 25% from a nominal base retention rate of 25%.

A simple model with consideration to the above factors estimates the potential reduction in the workforce shortage from this opportunity could be up to 33%, but a more likely outcome is probably in the range 0.5% to 5% (While this appears a larger opportunity than the one to build capability discussed above, the pathway to a scalable model for full implementation is less straightforward. It would therefore be valuable to include as a part of any pilot projects, work to test the ability to attract funding e.g. from employers or levy-funded industry bodies.

Table 4).

While this appears a larger opportunity than the one to build capability discussed above, the pathway to a scalable model for full implementation is less straightforward. It would therefore be valuable to include as a part of any pilot projects, work to test the ability to attract funding e.g. from employers or levy-funded industry bodies.

Table 4: Potential reduction in the workforce shortage by opportunity 2 to mentor new entrants to the workforce

		Improvement in retention rates			
		25% <i>No improvement</i>	28% <i>3% improvement</i>	35% <i>10% improvement</i>	50% <i>25% improvement</i>
New entrants receiving mentorship	3%	0%	0.4%	1.3%	3.3%
	10%	0%	1.3%	4.4%	11.0%
	30%	0%	4.0%	13.2%	33.1%

Opportunity 3: Provide tools and resources to improve recruitment

Developing tools and resources to improve and support employers during the recruitment and onboarding process could improve the quality of employees that employers take on and increase their likelihood to then be retained in the food and fibre sector workforce. Employers highlighted that the pool of potential employees was limited, and new entrants were leaving the sector because the realities of working in the sector did not align with their expectations.

Opportunities for retention initiatives in this space could provide:

- **Support of employers to advertise roles and businesses better.** This could help employers to show the values of their business, as well as a reality check of what’s involved in the role to manage expectations. For example, this may be in the form of introductory videos shown at the time of job advertisement or during recruitment.
- **Support of employers to develop more robust recruitment processes.** Employers may benefit from support to know how to run interviews and reference checks effectively to identify the right fit for their business and for this type of work (e.g., types of questions to ask), as well as how to spot “red flags” in candidates.

Pilot initiatives could test:

- Whether new tools, resources and capabilities are effective at improving candidates’ decisions to start jobs that are right for them.
- Whether new tools, resources and capabilities are effective at improving employers’ ability to differentiate between weak candidates who they can support to become good employees and weak candidates they cannot.

Potential reduction in workforce shortage

We estimate the number of new entrants that could benefit from this opportunity annually to be approximately 10% of all new entrants (7,500) who may be managed out by their employer as they end up not being a good fit for the workforce. The two main determinants of the potential impact of this opportunity on reducing the workforce shortage are:

1. The percentage of the people employed by employers who have used the tools and resources to support their recruitment process. As an example, we consider this number to be between 3% and 30% of the 7,500 new entrants who could conceivably benefit from this opportunity.
2. The improvement to the one-year retention rate for this group of employees. As an example, we consider improvements between 3% and 25% from a nominal base retention rate of 25%.

A simple model with consideration to the above factors estimates that the potential reduction in the workforce shortage from this opportunity could be up to 3% but a more likely outcome is probably in the range 0.1% to 1% (Table 5).

Table 5: Potential reduction in the workforce shortage by opportunity 3 to provide tools and resources to improve recruitment

		Improvement in retention rates			
		25% <i>No improvement</i>	28% <i>3% improvement</i>	35% <i>10% improvement</i>	50% <i>25% improvement</i>
New entrants with employers using tools and resources	3%	0%	0.0%	0.1%	0.3%
	10%	0%	0.1%	0.4%	1.1%
	30%	0%	0.4%	1.3%	3.3%

Opportunity 4: Coordinate seasonal labour

A fourth opportunity for retention initiatives could be related to co-ordinating seasonal labour between different industries, employers and regions, as required. This would have particular impact for horticulture employers where they require a large number of people to meet short-term seasonal demand. The opportunity here could take the form of a service that maps seasons and connects industries and employers and acts as a broker for employees. However, this will likely only be useful where an employee is willing to move to follow seasonal work. For example, from kiwifruit in the Bay of Plenty, to citrus in Hawke’s Bay. It is apparent people are willing to move for work (e.g., RSE workers), but there is little known to the extent different employees would be willing to move.

As with the other ideas above, this idea is not entirely novel. Indeed, it was suggested by an employer who already does this for their own seasonal staff. Potential points of difference with similar initiatives include the degree of proactivity in approaching seasonal workers and matching them to further work opportunities, and co-ordinating at a national level rather than regionally. The latter is likely to be important to provide enough year-round work given many regions are dominated by a single type of produce with tight seasonal peaks, therefore don’t provide the ability to offer year-round work.

A further feasibility study is recommended prior to piloting any initiatives. This study could:

- Confirm the extent to which this work is already being undertaken elsewhere in the sector.

- Build an overall map of what work is available by sector, region and month (building from existing work that already exists in this area).
- Estimate the proportion of the seasonal workforce interested in moving to follow seasonal work.
- Identify what barriers there may be to these people moving (e.g., visas, accommodation, cost to move, family commitments).
- Assess how likely it is that these barriers can be overcome.
- Make a final recommendation on feasibility based on the above.

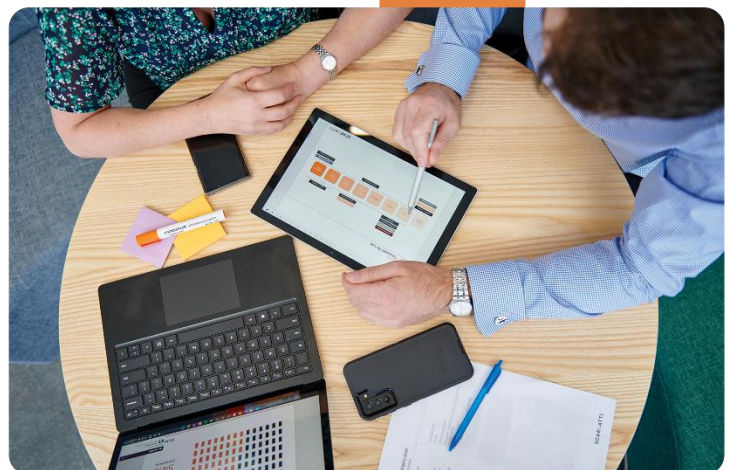
We have not modelled the potential impact of this opportunity on reducing the workforce shortage, as we have for the previous three, as additional information is required to make informed decisions on the addressable market, the reach and the efficacy of initiatives developed within this opportunity – we expect this would be collected within the proposed feasibility study.

C

Part C: Appendices



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Appendix 1: Introduction to the workforce impact model

The following content has been extracted from the Introduction section of the third interim report 'Measuring the performance of attraction and retention initiatives'⁴ to provide some additional detail on the approach taken to develop the impact model.

Evaluating performance measures

In the absence of robust empirical data to measure the impact of different attraction and retention initiatives, it is difficult to be certain of what impact initiatives could generate for the sector. Here, we refer to the impact of an initiative as being the influence it has on the workforce shortage or surplus.

To address this gap, we have built an 'impact model'. By considering the logical steps for how different initiatives influence the attraction and retention of employees in the food and fibre sector, and making quantitative estimates at each stage, it is possible to arrive at *indicative* estimates of how different initiatives could be expected to influence the sector's workforce.

As the impact model is not expected to be precise, we use the term 'semi-quantitative' to describe the model's outputs. However, we expect that the magnitude of the outputs will be sufficient to gain insights about what will and will not work, and what suitable performance measures may be.

Model logic

The impact model developed for this project is an agent-based model where all New Zealand's working-age population (aged 18 to 65) is modelled. The working-age population are employed across all of New Zealand's economic sectors, one of which is the food and fibre sector. The size of the food and fibre workforce changes over time as individuals enter (e.g. as school leavers, graduates, migrants, career changers, etc.) and leave (e.g. as career changers, emigrants, retirees, etc.).

Each individual in the New Zealand working-age population is modelled to have a likelihood of entering the food and fibre workforce in any given year. This likelihood changes as they engage with different experiences over their lifetime. Experiences can either have a positive or negative influence on an individual's likelihood to enter the food and fibre workforce. Some experiences are naturally occurring (e.g. having a rural upbringing, becoming older), while others are planned with the intent of attracting people to the sector. Examples of planned experiences could include listening to a farmer describe their work during a school visit, or viewing a website built as part of marketing campaigns promoting food and fibre careers. These planned experiences can be designed to either instigate a short-term change in those engaging with an experience, after which it reverts to the base case, or a long-term sustainable change.

The impact model also considers retention in the sector. The probability of an individual staying in the sector in any given time period is calibrated using data extracted from Statistics NZ's Integrated Data Infrastructure (IDI).

The impact model is designed to track the size of the food and fibre workforce as natural and planned experiences influence the number of people attracted to and retained by the workforce. The outputs of the model illustrate how the workforce shortage or surplus changes as a result.

⁴ <https://foodandfibrecove.nz/wp-content/uploads/2023/11/FFCoVE-A-and-R-performance-measurement-impact-model.pdf>

Measurement approach

The workforce impact model was developed to report on the extent to which previous, current and hypothetical attraction and retention initiatives could be expected to reduce the sector's workforce shortage.

The efficacy of initiatives is assumed to be closely related to the total time that individuals spend experiencing them. Therefore, initiatives that reach more people, and engage their audiences for longer, will be the most effective. A key performance measure of any given initiative is the total engagement hours that it generates. The cost of an initiative is also assumed to be closely linked to the total engagement hours generated.

Baseline workforce shortage

As of 2022, the workforce shortage across the food and fibre sector is estimated to be about 10%⁵ of the total food and fibre workforce size (roughly 17,000⁶). This work assumes that, in the absence of planned initiatives, the workforce shortage will remain constant from 2015 to 2040; the timeframe imposed on the impact model.

⁵ This is extrapolated from the workforce shortage estimated in previous work for the New Zealand dairy industry also at 10% of the total workforce size. Refer to page 5 in the following DairyNZ report:

https://www.dairynz.co.nz/media/ibxfd4ze/dnz_great_futures_in_dairying_a4-booklet_web_june2022.pdf

⁶ <https://foodandfibrecove.nz/wp-content/uploads/2023/11/FFCoVE-A-and-R-performance-measurement-impact-model.pdf>

Appendix 2: Analysis of systemic drivers contributing to the reasons for leaving

Group:	New entrants				
Drivers in the domain of:	1. Seasonal work <i>(leaving due to finishing a short-term seasonal contract)</i>	2. Family reasons <i>(away from family, change in relationship, caring for family, family dependent)</i>	3. Health reasons <i>(stress, mental health, social isolation, substance abuse)</i>	4. Hours and schedule <i>(too many / few hours, unpredictable or antisocial hours, or rosters)</i>	5. Type of work and activities <i>(too repetitive / laborious, physical environment)</i>
The employee		<ul style="list-style-type: none"> • Being disconnected from previous social life • Absence of social skills for networking & relationship building • Being of a younger age means they have different priorities (i.e., social > work) • Access to transport, being dependent on family 	<ul style="list-style-type: none"> • Prejudiced view on mental health not being a legitimate illness and not seeking help • Underplaying the significance of mental health issues • Coming from troubled life circumstances without an effective support system 	<ul style="list-style-type: none"> • Unaware of industry expectations prior to entry • Disparity in expectations / priorities of the employment relationship (esp. with older generations) 	<ul style="list-style-type: none"> • Unaware of industry expectations prior to entry

Act on

The employer			<ul style="list-style-type: none"> • Employers did not necessarily enter industry to be an employer, creating strain on employment relationship • Prejudiced view on mental health not being a legitimate illness 	<ul style="list-style-type: none"> • Disparity in expectations / priorities of the employment relationship (esp. with younger generations) • Fixed term contracts may be common in some industries, creating instability for employees 	<ul style="list-style-type: none"> • Perspective of employees as labour units
The VET system		<ul style="list-style-type: none"> • Funding systems haven't always prioritised pastoral care as part of VET provision 	<ul style="list-style-type: none"> • Funding systems haven't always prioritised pastoral care as part of VET provision • A lack of employer training on mental health 	<ul style="list-style-type: none"> • A lack of training on expectations of work, resulting in disparity in expectations 	<ul style="list-style-type: none"> • A lack of training on expectations of work, resulting in disparity in expectations

Advocate for

The industry	<ul style="list-style-type: none"> • Extreme peak seasonal labour requirements (esp. in horticulture. Peak timing and volume vary for different crops) • Lack of coordination between industry bodies. Operating in silos 	<ul style="list-style-type: none"> • Employer reasons 4 & 5 (see last two columns) that are inherent to the job, contribute to family issues 	<ul style="list-style-type: none"> • Location of work can require people to live in isolation. • Employer reasons 4 & 5 (see last two columns) that are inherent to the job contribute to health issues • Small production teams, particularly in pastoral farming can lead to feelings of isolation from established social networks. 	<ul style="list-style-type: none"> • New contracts start ahead of the busiest season. • Short term contracts create uncertainty and instability • New entrants start right before busy season 	
The government	<ul style="list-style-type: none"> • Immigration settings impact how long migrants stay in seasonal jobs – at times, this does not cover the entire season 				



<p>New Zealand history and wider economy/society</p>		<ul style="list-style-type: none"> • Covid-19 lockdowns affected social skills of youth • Changes in expectations from younger generations (e.g., values, work / life balance) • Transport to rural locations harder to acquire (obtaining drivers' licences) • Shortage of accommodation near place of work 	<ul style="list-style-type: none"> • Increasing awareness of mental health as a legitimate illness. • Increased digital connection resulting in heightened awareness of global affairs and other's lifestyles (e.g., social influencers) • Colonisation and intergenerational traumas 	<ul style="list-style-type: none"> • Changes in expectations from younger generations (e.g., values, work / life balance) 	<ul style="list-style-type: none"> • Changes in expectations from younger generations (e.g., values, work / life balance)
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