Food and Fibre Workforce Data 2022 Spotlight

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The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

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<u>Executive</u> summary

Executive summary

This presentation provides an analysis of the food and fibre workforce for the year ended 31 March 2022 (period 1 April 2021 – 31 March 2022). This was the second year the borders were closed because of COVID-19. It presents a picture of what the workforce looked like in that year, comparing it to the 2020 and 2021 years.

Although the overall workforce number was similar to previous years, there was variation across the year for some sectors, especially at peak times.

The numbers of people on working holiday scheme visas continued to decline.

Self-employment numbers continued to decline across all sectors and was particularly pronounced in sheep and beef farming.

Food and Fibre Workforce Data 2022

Context

- The 2022 data covers the period from 1 April 2021 to 31 March 2022
- New Zealand went into nationwide lockdown (alert level 4) on 25 March 2020 and the borders were closed until 14 March 2022.
- Many of our food and fibre businesses were considered essential services (only limited number of forestry and wood processing firms were considered essential services).
- We have continued to define and classify the workforce as set out on our website (<u>https://www.workforceinsights.govt.nz/about-this-data/how-we-organise-the-sectors/</u>)

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Overview of the whole food and fibre workforce

- At a very high level, the overall 2022 workforce number represents a **slight change (+0.1%)**.
- The trajectory from previous years had been a period of continued employment growth (2013-2020). This has flattened in 2021 and 2022.
- The changes are most pronounced in the horticulture and forestry & wood processing sectors.
- However, average annual counts are unlikely to fully demonstrate the changes over the year

	Ye	ar	Change			
Sector	2021	2022	Numerical	Percentage		
Arable	23,388	23,963	575	2.5%		
Cross sector	66,319	66,990	671	1.0%		
Dairy	55,233	55,208	-25	0.0%		
Forestry and wood processing	41,632	42,880	1,248	3.0%		
Horticulture	65,954	64,815	-1,139	-1.7%		
Pork, poultry, bees and other	26,642	26,542	-100	-0.4%		
Red meat and wool	76,753	75,996	-757	-1.0%		
Seafood	12,080	11,908	-172	-1.4%		
Food & Fibre Sector	358,935	359,327	392	0.1%		



Overview of the whole food

and fibre workforce by visa type/resident status

- The number of New Zealanders employed in the food and fibre sectors increased in 2022.
- There were only small numbers of working holiday visa holders employed during the year.
- Many Recognised Seasonal Employer (RSE) visa holders had their visas extended in 2021. This was due to COVID and meant that there were more RSE workers than normal over the winter months in 2021. This was not as pronounced in 2022 which means the average annual RSE count is lower in 2022 than 2021.

Annual average employment



Approach to the analysis

To better understand any changes in the number of people employed we have broken the data down by:

- Position in the value chain Core Production, Core Processing, Strongly Connected, Relevant and Other
- Employment status self employed, employed
- New Zealand citizens and residents vs migrants to better understand the impact of border closures
- We have also analysed the monthly employment counts

Sector/Designation changes

- To further understand the changes, the average annual counts have been disaggregated across the value chain.
- For a description of these value chain categories use this link... (https://www.workforceinsights. govt.nz/about-this-data/howwe-organise-the-sectors/)

Note: Workforce counts for each designation and sector won't necessarily sum to the total - some people may work in more than one sector and designation. The total indicates the overall unique numbers of people.

Sector	March tax year	Core production	Core processing/ manufacturing	Strongly connected	Relevant	Other	Total
Arable	2022	4,975	2,033		280		23,963
	2021	4,900	1,983	16,242	280		23,388
	Change	75	50	433	0		575
Dairy	2022	39,783	14,400	1,108			55,208
	2021	39,567	14,500	1,225			55,233
	Change	216	-100	-117			-25
Forestry and wood processing	2022	12,783	11,442	18,500	196		42,880
	2021	12,700	11,317	17,533	190		41,632
	Change	83	125	967	6		1,248
Horticulture	2022	35,075	26,192	4,117	256		64,815
	2021	37,025	25,325	4,125	229		65,954
	Change	-1,950	867	-8	27		-1,139
Pork, poultry, bees and other	2022	9,167	3,458	13,975			26,542
	2021	9,550	3,575	13,583			26,642
	Change	-383	-117	392			-100
Red meat and wool	2022	46,183	24,375	5,292	396		75,996
	2021	47,442	23,983	5,208	370		76,753
	Change	-1,259	392	84	26		-757
Seafood	2022	6,017	4,450	1,022	541		11,908
	2021	6,133	4,508	1,083	514		12,080
	Change	-116	-58	-61	27		-172
Cross sector	2022	26,800		11,900	22,580	5,769	66,990
	2021	27,775		11,317	21,499	5,804	66,319
	Change	-975		583	1,081	-35	671
Indicative	2022	49%	24%	20%	7%	2%	359,327
	2021	50%	24%	20%	6%	2%	358,935
	Change	-1%	0.3%	0.6%	0.3%	-0.01%	392

Self-employment analysis

	Red Meat &	Wool	Arab	le	Dairy		Forestry & Wood	d Processing	Horticult	ure	РРВО		Seafoo	d	Cross se	ctor
Year Designation	Self-employed E	mployee	Self-employed	Employee	Self-employed I	mployee	Self-employed	Employee	Self-employed	Employee	Self-employed	Employee	Self-employed	Employee	Self-employed	Employee
2021 Core production	30,300	17,058	2,700	2,217	16,100	23,458	5,400	7,350	7,900	29,050	4,000	5,533	2,600	3,533	8,800	18,983
2021 Core processing/mfg	420	23,575	100	1,875	150	14,333	430	10,900	1,100	24,225	20	3,550	800	3,708		
2021 Strongly connected	350	4,883	2,300	14,000	140	1,092	3,400	14,117	180	3,942	1,400	12,208	220	849	1,200	10,125
2021 Total	31,070	45,516	5,100	18,092	16,390	38,883	9,230	32,367	9,180	57,217	5,420	21,291	3,620	8,090	10,000	29,108
2022 Core production	28,800	17,417	2,600	2,383	16,200	23,508	5,300	7,458	7,800	27,308	3,700	5,500	2,600	3,400	8,600	18,225
2022 Core processing/mfg	420	23,958	110	1,925	140	14,250	440	11,025	970	25,208	20	3,442	720	3,758		
2022 Strongly connected	310	4,975	2,300	14,408	140	970	3,400	15,167	190	3,917	1,400	12,600	170	850	1,200	10,717
2022 Total	29,530	46,350	5,010	18,716	16,480	38,728	9,140	33,650	8,960	56,433	5,120	21,542	3,490	8,008	9,800	28,942
Self-employment changes 2021-2022	-1,540		-90		90		-90		-220		-300		-130		-200)

Self-employment numbers continued to decline across all sectors. This was particularly pronounced in sheep and beef farming. *PPBO = Pork, poultry, bees & other Cross sector includes activities/services that are not attributable to a single sector, rather they span multiple sectors and include veterinarian services, fertiliser & pesticide manufacturing, aerial topdressing, road transport, agritech and contracting firms (especially horticulture)

Working holiday visa analysis food and fibre sector



Significant change in Working Holiday Scheme (WHS) visa holders

The second half of the 2021 tax year shows a reduction in WHS visa holders. The borders remained closed for WHS visa holders until 22 March 2022. As people on these visas left, they were not replaced by new WHS visa holders. Some people already on WHS visas transferred to other visa types such as the Supplementary Seasonal Employment visa (SSE) in order to get expiry date extensions, so there was a small offsetting rise in people in the "Other visas" type.

Note: Workforce counts in graphs are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.

Key characteristics of the arable sector

- The arable sector includes grain and seed production along with a diverse range of downstream industries such as flour milling, bread, bakery, cake, beer and spirit manufacturing
- Most of the arable seed production is from the Canterbury region (around 75%)
- The Foundation for Arable Research (FAR) advises that approximately 800 of their levy payers are dairy farmers growing 30 40 hectares of maize

<u>Arable</u>

Changes in arable employment counts

- Overall annual average counts in 2022 were slightly higher (575) than 2021 levels, predominately in Strongly connected.
- By industry type, the main driver of the increase was due to an increase in the annual average count of bakery product and beer manufacturing
- For analysis purposes in the arable sector, the designation settings of "Core processing/manufacturing" and "Strongly connected" have been combined.



The arable sector workforce depicts slightly increased workforce levels across the 2022 and 2021 years.





Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.



Overall, the arable core production workforce was relatively stable between the 2021 and 2022 tax years.

The seasonal pattern in the 2022 tax year was similar to that of the 2021 tax year (exception being the first two months which had higher levels of employment).



At the beginning of the 2022 tax year, more New Zealanders were employed in core production compared with the preceding two years. For the last half of the 2022 tax year, the number of New Zealanders in core production was almost the same as the 2021 tax year, except for December 2021 and January 2022, where more New Zealanders were employed over that period.

In core production, migrant numbers were aligned with the 2021 tax year, though both of those years were slightly lower in the 2nd half of the tax year than the pre-covid levels (as depicted for the tax year ending March 2020).



Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.

Key characteristics of dairy sector

- Large workforce (annual average 55,000)
- 72% of workforce is in core production
- Between the 2021 and 2022 both the dairy farming and the dairy core processing average employment levels were static
- The migrant workforce varies throughout a year, essential skill visa holders are around 8% of the production workforce at an annual average of 2,900 people
- People on working holiday visas are a small but important part of the calving workforce, from July to October each year

Changes in dairy employment counts

- Overall annual average counts in 2022 were static
- By visa type, in core production there was a slight decrease in essential skill visa holders which was offset by an increase in New Zealanders.
- Following on from a period of sustained growth between 2012 to 2021, the core processing/manufacturing workforce was static in 2022



The dairy farming workforce is smallest in June. There has been a minor increase in the earlier months of 2022 compared to the same period in 2021.

The core processing/manufacturing workforce has remained static in 2022 after a period of growth from 2012-2021.

Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.





Dairy - Core production Tax Year ending March 42,000 41,000 Count 40,000 39,000 Wouthly 38,000 37,000 36,000 35,000 Apr Mav Nov Dec Jan Feb Mar Oct 2022 2020 -2021

Dairy

Overall, the dairy core production workforce remained relatively stable during the 2022 tax year. The number of people working in the earlier months of 2022 was slightly higher than in the two preceding years.

Migrant numbers (mostly essential skills visa holders) were at similar levels initially compared to previous years then tracked downward for the last 10 months. This may have been due to some essential workers becoming NZ residents in 2022 (see core production graph on next slide). The numbers of working holiday visa holders was low across the whole year (see next slide).



Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.



Whilst dairy core production appeared to be fairly stable overall during the 2022 tax year there were changes within the migrant categories of essential skills visas and working holiday visas. Some essential skill visa holders may have switched to NZ resident visas. https://www.beehive.govt.nz/release/one-residence-pathway-provides-certainty-migrants-and-business

Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.



Key characteristics of the Forestry and Wood Processing sector

- Over 70% of the workforce is in core processing/manufacturing and strongly connected
- More than 50% of forestry exports go to China
- Only some parts of the Forestry and wood processing sector were considered as an **essential service** during the level 4 lockdown:
 - * Some pulp and paper mills operated;
 - * Secondary wood processors who produced shipping pallets, packing cases and other packaging requirements for supporting food, beverage and pharmaceutical supplies;
 - * Chip and pellet production for supply of essential domestic and industrial heating (such as for hospitals and food processors);
 - * Dispatch operators involved in moving sawmill stocks;
 - * Nurseries were able to carry out maintenance on capital stock and plants to keep them alive.

Non-essential services included:

- * Logging harvesters;
- * Sawmills and all other producers of wood products including but not limited to Particleboard, plywood, MDF & LVL; and
- * All secondary processors of wood products except those explicitly listed above.

Changes in forestry and wood processing employment counts

- Overall annual average count went up by 1,248 (3.0%)
- The increase mostly happened in the strongly connected part of the value chain, within two industries namely: the Wooden structural fittings & components manufacturing industry; and the Wooden furniture & upholstered seat manufacturing industry
- For analysis purposes in the forestry and wood processing sector, first and second stage processing industries have been combined as the designation settings of "Core processing/manufacturing" and "Strongly connected".

Annual average employment by visa type/resident status



In 2022, the forestry core production workforce maintained similar levels to that of the two previous years except for the period of March/April/May 2020 (when the COVID-19 lockdowns occurred).

The core processing/manufacturing and strongly connected workforce was slightly higher than the two previous years, driven by increases in the strongly connected part of the value chain. This was largely driven by an increase in wooden structural fittings & components manufacturing and wooden furniture & upholstered seat manufacturing.

			Annual chan
Industry	2021	2022	2022 vs 202
Wooden furniture and upholstered seat mfg	5,108	5,400	292
Wooden structural fittings and components mfg	6,983	7,375	392

Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.





Overall, the forestry core production workforce in 2022 was similar to the 2 previous years with the exception of the period of April/May 2020 when COVID-19 lockdowns occurred.



Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.



Overall, the forestry core processing/manufacturing and strongly connected workforce was higher in 2022 with similar seasonal patterns. The additional workers in 2022 were New Zealand citizens and residents.



Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.

Key characteristics of the horticulture sector

- Horticulture covers a diverse range of subsectors (including vegetable growing, kiwifruit, viticulture), with large variations in demand for labour. Migrants (especially Recognised Seasonal Employer [RSE] and Working Holiday Scheme [WHS] are an important source of labour at critical times
- Many RSE workers had their visas extended during Covid. This meant that there were higher numbers over the winter period in 2021. This was not as prominent in 2022.
- Horticulture is more difficult to analyse than other food and fibre sectors, because of the wide usage of contractors across the sector (see Horticulture spotlight)
- The main additional ANZSIC06 classes identified are Other Agriculture and Fishing Support Services (seasonal contractors) and Labour Supply Services, which are located in Cross Sector

Changes in horticulture employment counts

- Overall average annual numbers down by 1,140 (1.7%)
- The number of people involved in core production activities decreased, with the number of people involved in core processing activities increasing by a lesser amount
- RSE numbers returned to a more pre-COVID pattern. However, the average annual Working holiday visa (WHS) numbers were down by 1,645 people compared to 2021 and even more so compared to 2020
- Average annual numbers of people involved in Other agriculture and fishing support services (A052900), which includes fruit and vegetable picking activities were also down due to lower numbers of working holiday visa holders
- Annual averages don't tell the full story. One needs to sight the monthly changes to fully understand the drivers causing the movements in the workforce figures. Note the seasonal drop in numbers in February and March 2022 compared to the year before







Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.



There was a similar seasonal pattern when comparing the 2022 tax year against the past two years.



 In the 2022 tax year, for core production the number of New Zealanders was slightly higher in the first half of the year and slightly lower in the second half of the year compared to previous years.

 In core production, the number of migrants is lower than the previous year, particularly with regards to RSE workers, RSE workers' visas had been extended in the 2021 tax year. The number of working holiday visa holders is lower across the whole of the year.

The Horticulture core production sector had an overall annual average decrease of 1,950 people





- There was a decrease in the number of RSE workers across all months as RSE numbers reverted to prior year levels (the 2021 tax year was an exception, as many RSE visa holders had their visa expiry dates extended).
- Working holiday visa holders dropped to extremely low levels in 2022 (as the NZ border did not re-open for new working holiday visa holders until 15 March 2022).

Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.
Horticulture



There was a similar seasonal pattern when comparing the 2022 tax year against the past two years. However numbers across the 3 years were spread slightly more widely in the April and May months.



 In the 2022 tax year, the number of New Zealanders in core processing/manufactu ring matched the pre COVID 2020 tax year.

• In the 2022 tax year, the number of migrant workers in core processing/ manufacturing fell during the months of April/May/June 2021. For the remainder of the year, the number of migrants mirrored the trend of the 2020 & 2021 tax years but at slightly lower levels. This would have been due to the reduction of working holiday visa holders.

Horticulture

The Horticulture core processing/manufacturing sector had an annual average increase of 867 people





- There was a decrease in the number of RSE workers across all months as RSE numbers fell back to prior year levels (the 2021 tax year was an exception, as many RSE visa holders had their visa expiry dates extended.
- Working holiday visa holders were at low levels in 2022.

Key characteristics of the pork, poultry, bees and other sector

- The sector is made up of a diverse range of activities including: pig farming; poultry farming and processing; beekeeping; horse farming; hunting and trapping; and other livestock farming such as goats and alpacas
- Less than 35% of the workforce is in of core production
- Overall annual average count went down by 100 (0.4%)
- For analysis purposes in the pork, poultry, bees and other sector, the designations Core processing/ manufacturing and Strongly connected have been combined.



This view of the Pork, poultry, bees & other core production sector workforce depicts a slight reduction across all months in 2022.

The processing and strongly connected workforce increased by around 400 during the second half of the 2022 tax year.









Mar

Pork, poultry, bees and other - Core production

-2020 -2021 -2022



Overall, the pork, poultry, bees and other core processing workforce numbers were slightly higher than previous years, however migrant numbers declined in the latter part of the year due to fewer people on working holiday visas and other visas.



Key characteristics of Red meat & wool sector

- Over 60% of workforce in core production (i.e. Sheep and beef farming)
- High level of self employment in sheep and beef farming (1.8:1 self-employed:employee, compared to 0.7:1 self-employed:employee for dairy farming)
- 97% of workers in this sector are New Zealanders
- Reasonably stable workforce throughout the year

Changes in employment count

- Most of the change shown in the data was in core production
- Core processing was stable
- Most of the reduction in the numbers is in self-employed workers
- The reduction in self-employed numbers are seen across all sectors (see page 10), but is most pronounced in sheep and beef farming because of the high numbers of self-employed relative to total employment in sheep and beef farming
- It is unclear why self-employed numbers are down. This may, in part, be due to a delay in filing tax returns for the self employed and/or possibly the aging workforce are retiring. Our demographic data, which is due to be uploaded by 30 June 2024 to the website supports this aging analysis









In the 2022 tax year, the reduction in the number of workers in core production was mainly due to a fall in the number of self-employed people. The 2022 migrant numbers mirrored the previous year.







Key characteristics of seafood sector

- Smaller workforce (annual average 12,000) than other sectors (therefore small changes in numbers can be significant in terms of percentages)
- 50% of workforce is in core production
- Many firms are involved in both seafood processing and wholesaling, and so we often consider these workforces together
- The migrant workforce varies throughout a year
- People on working holiday visas are a small but important part of the processing workforce

Changes in employment count

- Most of the changes were in core production workforce numbers
- This change was primarily due to a drop in New Zealanders (142) and Working holiday visa holders (163)
- The number of working holiday visa holders decreased as the year progressed. The reduction in numbers from the closed borders increased as the year progressed and people returned to their home countries. This can be seen both in the seafood figures and WHS figures more generally











In the 2022 tax year, the overall seafood core production workforce was lower in the first half of the tax year by around 300-400 people. It then recovered to mirror the prior 2020 and 2021 tax years. This recovery has been driven by increased levels of New Zealanders.





The seafood core processing workforce was smaller throughout the latter part of the 2022 tax year compared to previous years. The reduction in numbers was predominately due to fewer New Zealanders, although the smaller number of working holiday visa holders throughout the year also had an impact.



Key characteristics of the Cross sector

- Cross sector includes activities/services that are not attributable to a single sector, rather they span multiple sectors/industries and include "other agriculture and fishing support services (including fruit picking), veterinarian services, fertiliser and pesticide manufacturing, aerial topdressing, road transport and some agritech and contracting firms (especially in horticulture)
- Over 40% of the cross sector workforce are in core production
- Over 40% of the cross sector workforce are in the relevant and/or other designation
- The majority of people (75%) in this sector are employees

<u>Cross</u> <u>Sector</u>

Changes in Cross sector employment counts

- Overall the annual average count went up by 671 (1.0%)
- There was an increase in the number of New Zealanders (790) in this sector
- There was a decrease in the annual average count of working holiday visa holders (933)
- In addition to those designations above, the 'Relevant' designation had an increase of 1,081 people. This was spread across a number of industries in this designation (see <u>Cross sector relevant industries</u>)
- Potentially the change in the relevant industry numbers may reflect economic factors relating to the wider economy, as our calculations are determined using a subset (15%) of a larger cohort
- For this sector, the graphs contain the core production and strongly connected designations

information.



Core Production consists solely of the ANZSIC class Other agriculture and fishing support services







Note: Workforce counts in each graph above are depicted using various numerical scales via the "y axis", therefore a measure of caution should be exercised when interpreting this information.

2,000

2020 2021 2022

Feb

_____2020 _____2021 _____2022

Mar

