NEW ZEALAND SURVEY OF CEREAL AREAS AND VOLUMES: APRIL 1, 2024

The objectives of this AIMI survey of New Zealand (NZ) cereal growers were to determine, as at April 1, 2024:

- *The size of the 2024 NZ harvest of wheat, barley and oats (divided into milling/malting and feed crops)*
- *The sales channels, storage status and unsold amount of the 2024 NZ harvest*
- *The tonnages of carry-over stocks on farms from the 2023 NZ harvest*
- *NZ sowings and sowing intentions of wheat, barley and oats (both milling/malting and feed) for the autumn and winter of 2024*

Survey details

Data from 116 NZ survey farms who completed three of the last four cereal surveys (April 2023, October 2023 and April 2024) were scaled up to the national level using the most recent (Final 2023) NZ Agricultural Production Statistics. As with all surveys, there is a margin of error which needs to be considered in relation to this report.

These figures reflect the position as at the 1st April 2024 and there will have been changes since this time.

Key Points as at 1 April 2024 (figures have been rounded to nearest 100)**:**

- Overall, harvest yields were up 4% compared to last season (averaged over all six crops). A similar number of hectares was harvested as compared to last season (0.4% down), and the net result was that total tonnage was up 3% compared to last season.
- On the survey farms, the 2024 harvest of milling wheat was 100% completed by 1 April, with feed wheat harvest 99.7% complete, malting barley 99%, feed barley 93%, milling oats 89% and feed oats 78% complete by 1 April.
- Carry-over stocks (both sold and unsold) of feed wheat and feed barley were higher on 1 April than in the previous three years. Unsold stocks on hand of last year's feed wheat and feed barley crops were 2.1% and 2.5% of the 2023 harvest tonnages, respectively.
- Stocks of unsold feed wheat from the current harvest are up 46% on unsold stocks at this time last year. Unsold stocks of feed barley are up 6% as compared to this time last year, unsold stocks of milling wheat are up 7%, and unsold stocks of malting barley are down 11%.
- Autumn/winter sowings of feed wheat are predicted to be down 1,900 hectares on predicted sowings a year ago, while feed barley autumn/winter sowings are predicted to be down by 2,700 ha. Milling wheat autumn/winter sowings are predicted to be down by 1,000 ha, malting barley up by 200 ha, milling oats down by 170 ha, and feed oats up by 540 ha. However, these predictions are based mostly on intentions as over all six crops, only 1.2% (all feed wheat) had been sown by 1 April 2024.

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Summary

Weather: The 2023/24 season was generally dry although some regions experienced above average rainfall events which resulted in redrilling some autumn and spring crops, with those later spring crops producing lower yields. Despite the dry, many crops yielded better than expected and harvest conditions were excellent across many regions. The exception was parts of Southland where frequent rainfall has prolonged harvest. A few hail events damaged crops near the foothills in Mid Canterbury. Growers sowing in Autumn and winter have reported good conditions, although there have been delays due to the dry conditions in South Canterbury and wet conditions in parts of Southland.

Milling wheat: Estimated total tonnage (110,100 t) was similar to last year's harvest (110,100 t). Of this total, 70% has been sold (77,500 t) as at 1 April, 2024, although much of the sold grain is still stored on farm (85%). The amount of unsold grain is 32,600 tonnes (30%). Unsold grain carried over from the 2023 harvest was 4,000 tonnes, so the estimate of unsold grain in the market is 36,600 tonnes.

Feed wheat: Estimated total tonnage (299,000 t) was up 6% compared to last year's harvest (281,500 t). Of this total, 64% has been sold (191,800 t), with 75% of the sold grain still stored on farm. The amount of unsold grain is 107,200 tonnes (36%). Unsold stock carried over from last season was 6,000 tonnes, so the estimate of total unsold grain in the market is 113,200 tonnes.

Feed barley: Estimated total tonnage (261,600 t) was down 8% compared to last year (284,100 t). Of this total tonnage, 58% has been sold (150,800 t), with 55% of the sold grain still stored on farm. About 42% (110,800 t) remains unsold. Carryover of unsold grain was 7,000 tonnes, taking the estimate of total unsold grain in the market to 117,800 tonnes.

For other cereals: Compared to last year, estimated total tonnage for malting barley (104,000 t) was up by 41%, milling oats (19,600 t) was down by 9%, and feed oats (11,700 t) was up by 34%. For malting barley, 5% of the total harvest was unsold, while milling oats had 8% unsold and feed oats had 17% unsold as at 1 April, 2024. There were no unsold stocks carried over from last season for malting barley, milling oats and feed oats.

Sowing intentions: Only a few autumn/winter cereal crops had been sown by 1 April 2024. For feed wheat, 2% of the planned area had been sown, while no other crops had been sown.

For autumn/winter wheat and barley overall, the total area sown or intending to be sown as at 1 April 2024, was down 11% (or, down by 5,400 hectares) on sowings plus intentions as at 1 April 2023.

In more detail, feed wheat area sown or intending to be sown in the autumn/winter was down 7% (down 1,900 hectares) as compared to last year. Autumn/winter feed barley was down 22% (down 2,700 hectares), and milling wheat was down 14% (down 1,000 hectares). Conversely, autumn/winter malting barley was predicted to be up 10% (up 200 hectares) on last year.

Milling oats area sown or intending to be sown in the autumn/winter was down by 170 hectares, and feed oats area was up by 540 hectares.

Milling Wheat (tonnes)

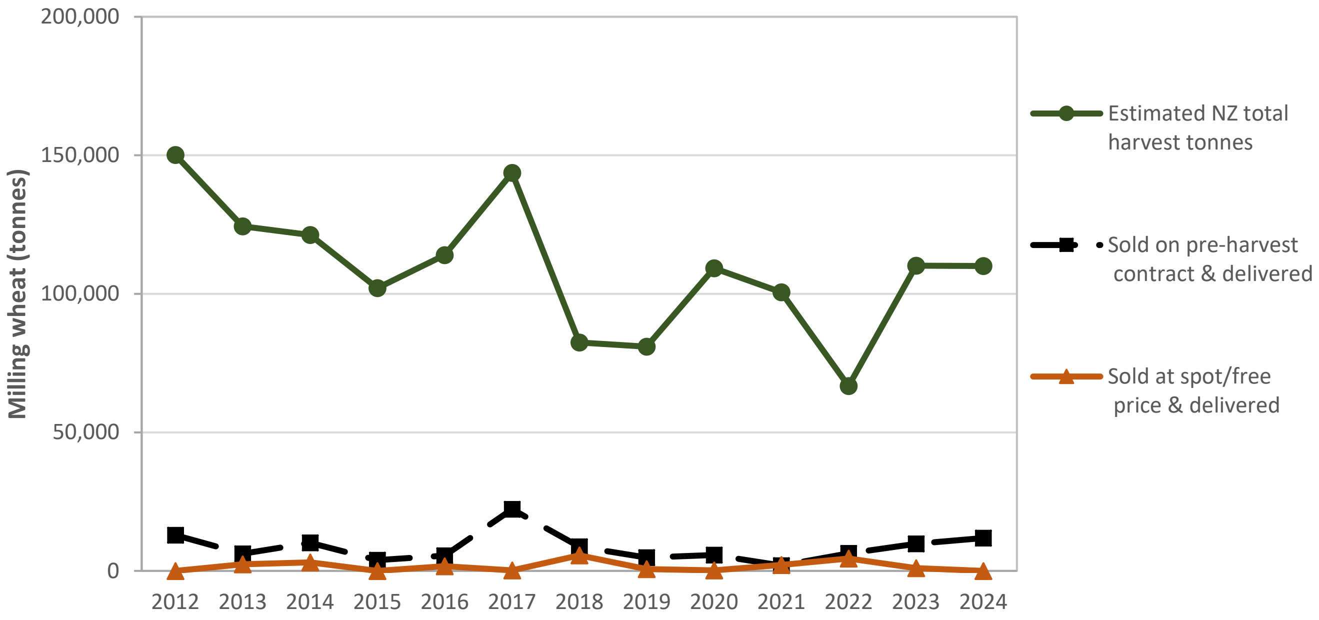

Figure 1a. NZ harvest tonnage and sales channels for milling wheat as estimated on 1 April each year. Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. "Total harvest tonnes" includes harvested and unharvested grain for that season's harvest. "Sold at spot/free price & delivered" includes grain sold for feed.

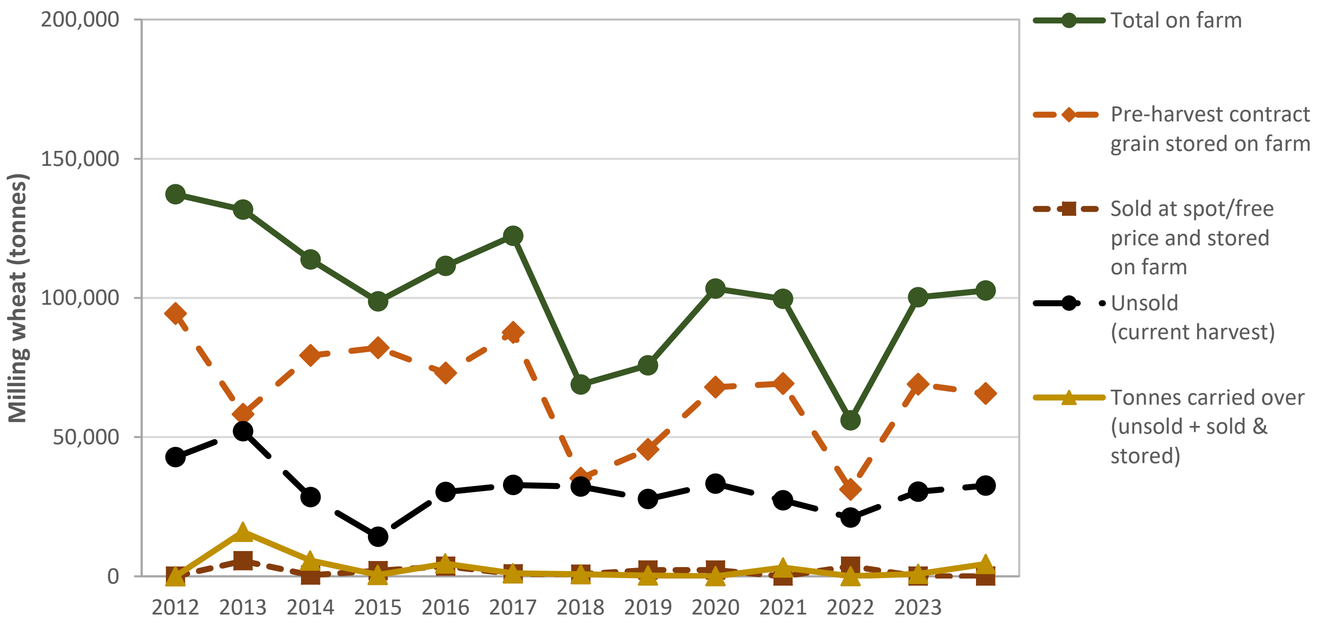

Figure 1b. NZ stock on farms for milling wheat as estimated on 1 April each year.
Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time, the sales status of the unharvested grain was determined and has been apportioned between "Pre-harvest contract grain stored on farm" and "Unsold". "Tonnes carried over" is the sum of sold and unsold stock carried over (still on farm) from the previous season.

Feed Wheat (Tonnes)

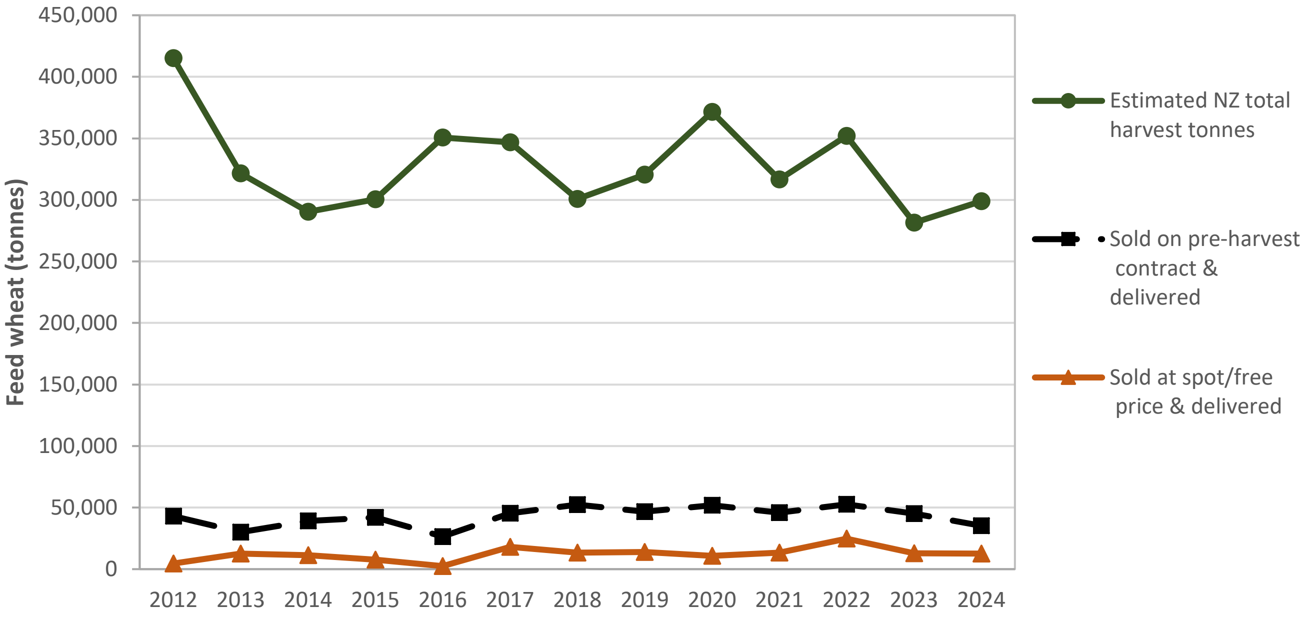

Figure 2a. NZ harvest tonnage and sales channels for feed wheat as estimated on 1 April each year.
Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. "Total harvest tonnes" includes harvested and unharvested grain for that season's harvest. "Sold at spot/free price & delivered" includes grain used on own farm.

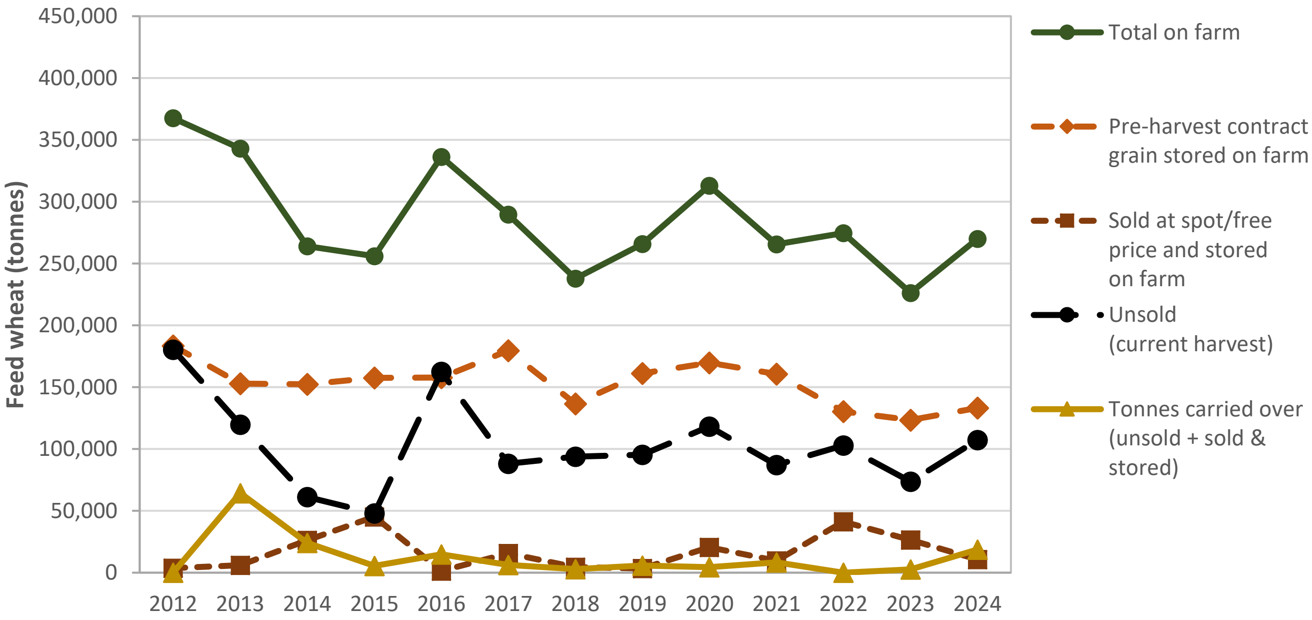

Figure 2b. NZ stock on farms for feed wheat as estimated on 1 April each year.
Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time the sales status of the unharvested grain was determined and has been apportioned between "Pre-harvest contract grain stored on farm" and "Unsold". "Tonnes carried over" is the sum of sold and unsold stock carried over (still on farm) from the previous season.

Feed Barley (Tonnes)

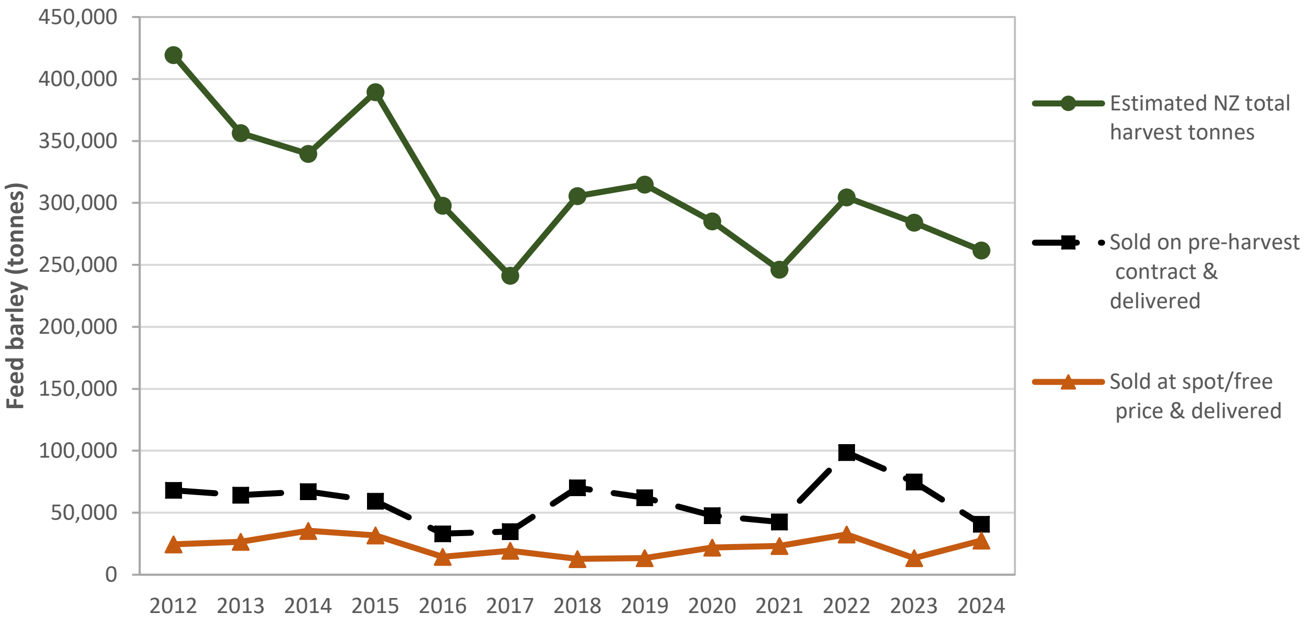

Figure 3a. NZ harvest tonnage and sales channels for feed barley as estimated on 1 April each year.
Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. "Total harvest tonnes" includes harvested and unharvested grain for that season's harvest. "Sold at spot/free price & delivered" includes grain used on own farm.

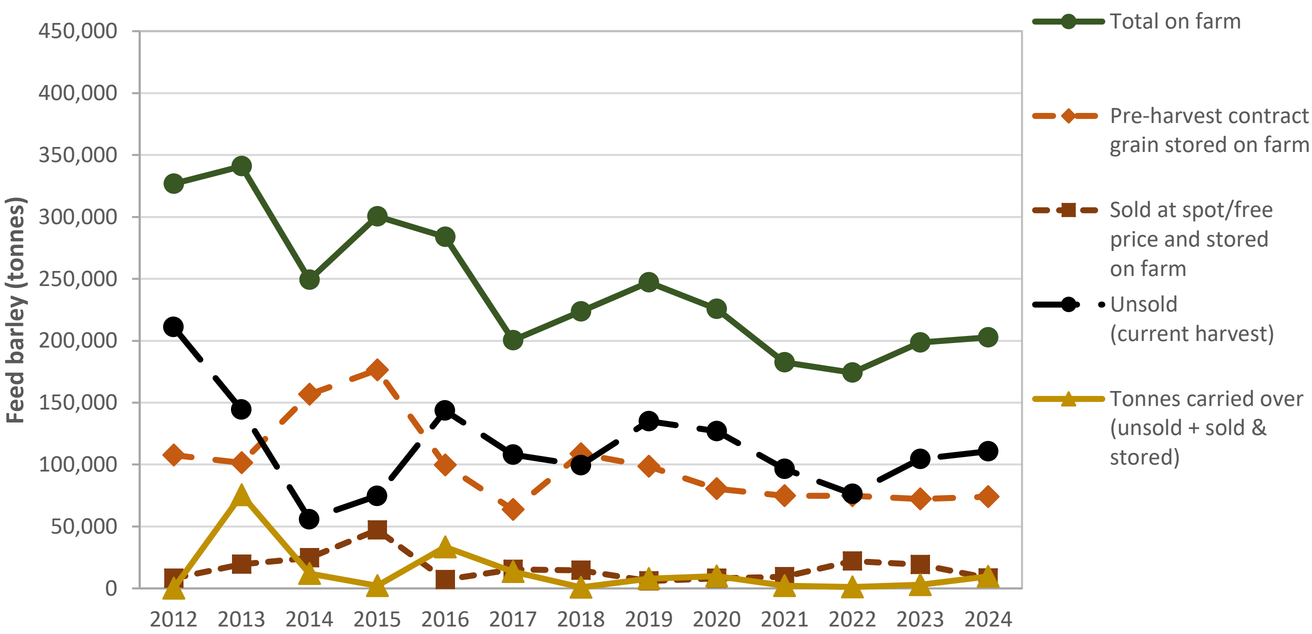

Figure 3b. NZ stock on farms for feed barley as estimated on 1 April each year.
Note: Historical data for 2012 to 2022 are from April AIMI Reports for 2022 and earlier, while data for 2023 and 2024 are matched from the current report. Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time, the sales status of the unharvested grain was determined and has been apportioned between "Pre-harvest contract grain stored on farm" and "Unsold". "Tonnes carried over" is the sum of sold and unsold stock carried over (still on farm) from the previous season.

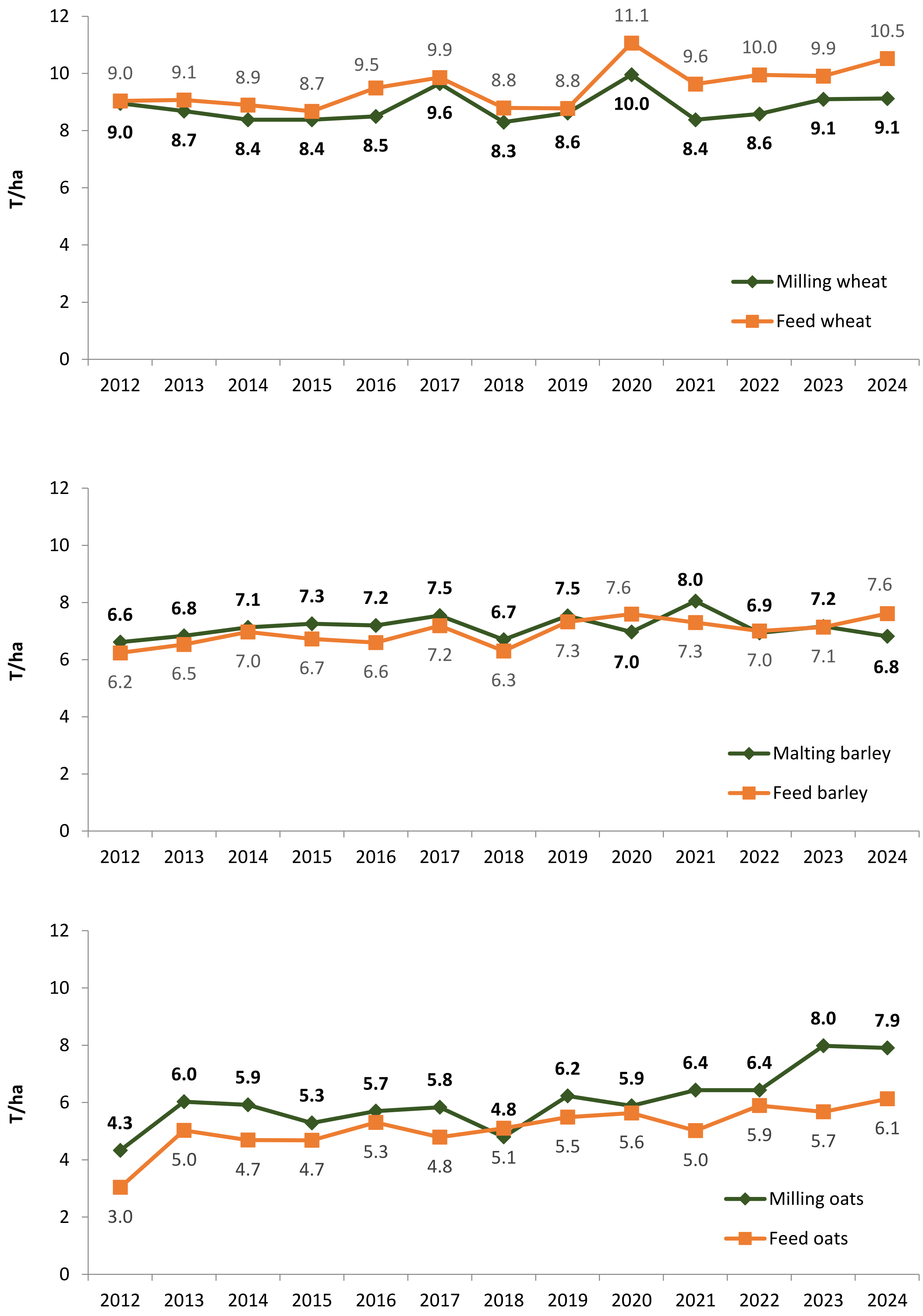

Figure 4. Comparison of yields between the 2012 to 2024 harvests for the six cereal crops.
Data for 2012 to 2022 are from previous April 1 AIMI reports, while data for 2023 and 2024 are matched data from current report. Note: Estimates from the unharvested crop are included. Milling wheat includes biscuit and gristing varieties.

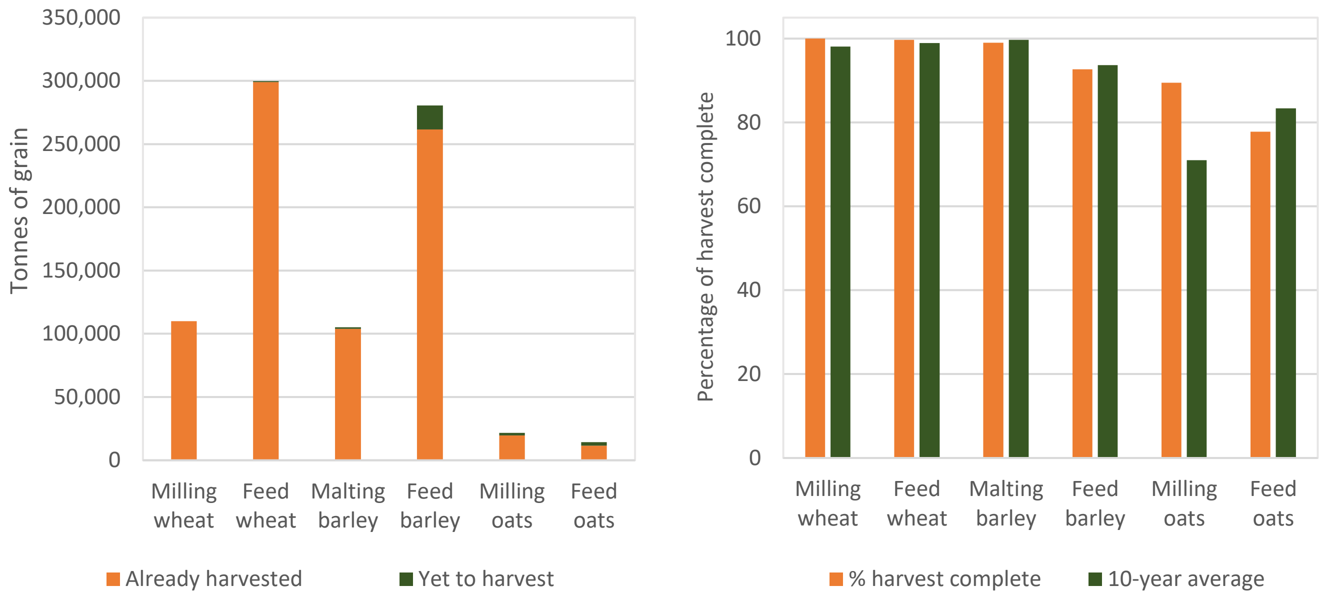

Figure 5. Estimated NZ tonnes for 2024 harvested before 1 April, and yet to harvest as at 1 April, along with percentage harvest complete compared to the 10-year average.

Autumn/winter sowings and sowing intentions as at 1 April each year (spring sowings not included).

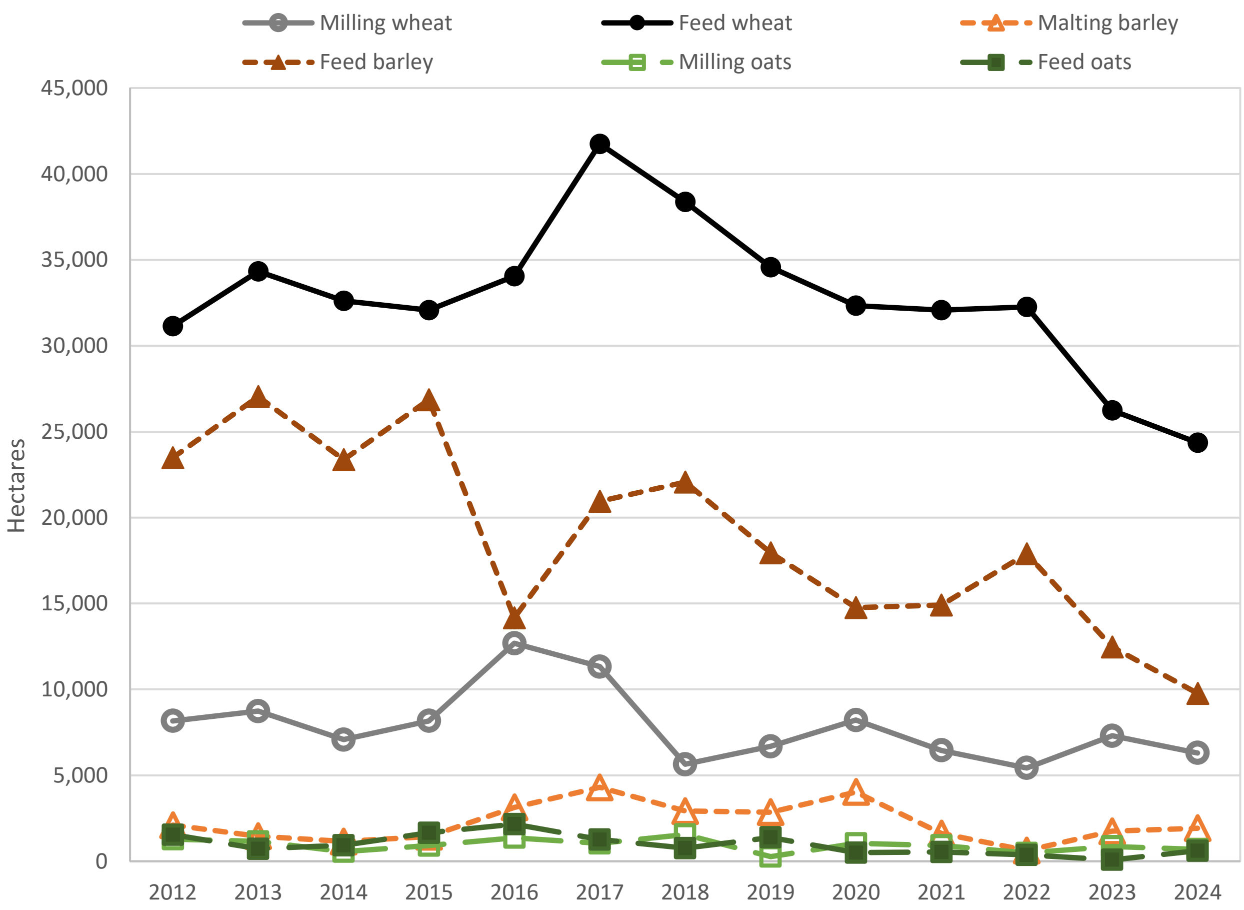

Figure 6. Estimated NZ total hectares sown or intended to be sown in autumn/winter 2024 (spring hectares not included), along with the corresponding estimates from the eleven previous 1 April AIMI survey reports. Figures for 2023 and 2024 are matched from the current report, while other figures are from previous April AIMI reports for 2012 – 2022. Note: Data are mostly intentions (see Fig. 7). This information is also presented in Table 3 below.

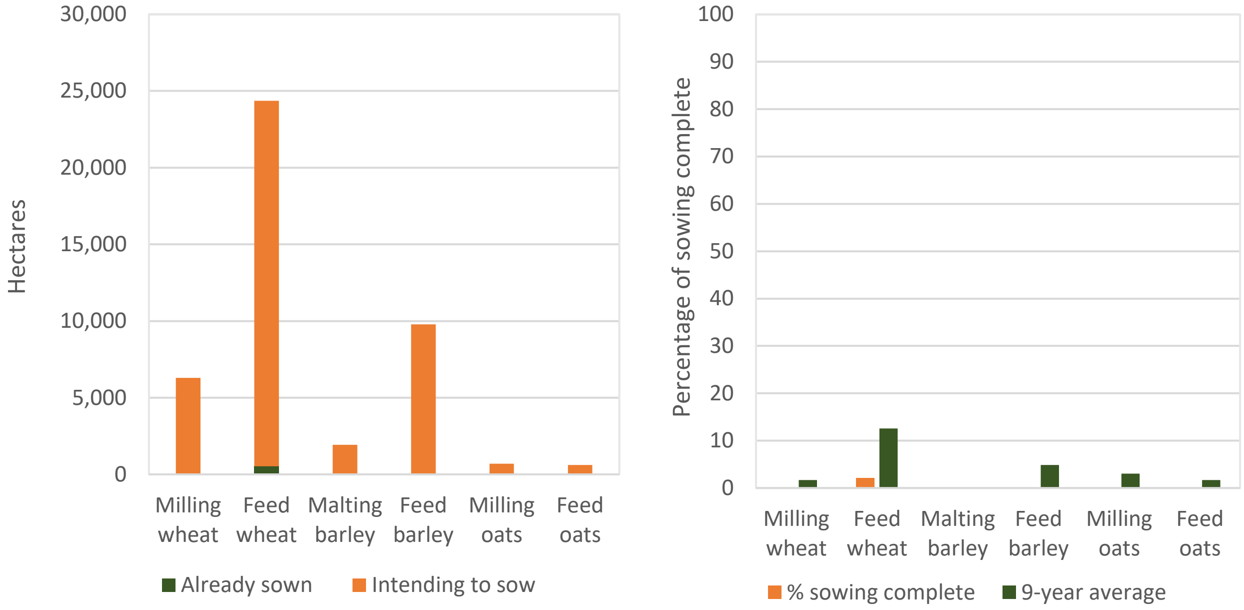

Figure 7. Estimated NZ sowings and sowing intentions for autumn/winter 2024 as at 1 April, 2024, along with percentage sowing complete compared to the 9-year average. Note: Missing bars in the graphs correspond to zero values. Spring intentions are not included.

Table 1. Estimated national figures for the 2024 harvest, plus sold and delivered tonnages, for six cereal crops as at April 1, 2024.

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Number of farmers in the survey who harvested or will harvest this crop in 2024		38	78	29	75	9	12	116
2023 harvest								
Estimated NZ total hectares, 2023 harvest	ha	12,105	28,395	10,304	39,796	2,701	1,534	94,835
Estimated NZ total tonnes, 2023 harvest	tonnes	110,145	281,455	73,813	284,087	21,548	8,711	779,759
2024 harvest								
Estimated NZ total hectares, 2024 harvest	ha	12,057	28,406	15,255	34,374	2,484	1,906	94,483
Estimated NZ total tonnes, 2024 harvest	tonnes	110,059	298,987	104,024	261,594	19,628	11,674	805,967
Estimated NZ total hectares already harvested by 1 April, 2024	ha	12,057	28,321	15,091	31,709	2,193	1,563	90,934
Estimated NZ total tonnes already harvested by 1 April, 2024	tonnes	110,059	298,122	102,989	242,538	17,557	9,080	780,345
Estimated NZ total hectares yet to harvest as at 1 April, 2024	ha	0	85	165	2,664	291	344	3,548
Estimated NZ total tonnes yet to harvest as at 1 April, 2024	tonnes	0	865	1,035	19,056	2,072	2,594	25,622
Percentage of estimated 2024 crop tonnage which had been harvested by 1 April, 2024	%	100%	100%	99%	93%	89%	78%	97%
Average over previous 10 years of % of crop tonnage which had been harvested by 1 April	%	98%	99%	100%	94%	71%	83%	-
2024 harvest so far								
Sold under pre-harvest contract and delivered by 1 April, 2024	tonnes	11,856	35,199	20,933	40,659	342	991	109,981
Pre-harvest contract grain stored on farm on 1 April, 2024	tonnes	65,636	132,457	66,294	61,121	15,818	5,747	347,073
Sold at spot/free price and delivered by 1 April, 2024	tonnes	0	10,709	0	25,946	0	0	36,655
Sold at spot/free price and stored on farm on 1 April, 2024	tonnes	0	10,601	10,257	8,366	0	0	29,224
(For milling or malting only) Sold for feed by 1 April, 2024	tonnes	0	-	0	-	90	-	90
(For feed only) Used on own farm by 1 April, 2024	tonnes	-	1,974	-	1,713	-	405	4092
Unsold stocks on hand (2024 harvest only) on 1 April, 2024	tonnes	32,567	107,181	5,505	104,734	1,306	1,937	253,230
2024 yet to harvest								
Unharvested grain sold under pre-harvest contract by 1 April, 2024	tonnes	0	865	1,035	12,986	1,802	2,594	19,282
Unharvested grain unsold on 1 April, 2024	tonnes	0	0	0	6,070	270	0	6,340
Sales channels (2024 harvest): includes unharvested grain								
Sold under pre-harvest contract (total) by 1 April, 2024 (includes sold, unharvested grain)	tonnes	77,492	168,521	88,262	114,766	17,962	9,332	476,336
Sold at spot/free price (total) by 1 April, 2024 (includes sold for feed and used on farm)	tonnes	0	23,285	10,257	36,024	90	405	70,061
Delivery status of sold grain (2024 harvest): includes unharvested grain								
Sold and delivered (total) by 1 April, 2024 (includes sold for feed and used on farm)	tonnes	11,856	47,883	20,933	68,318	432	1,396	150,818
Sold and stored on farm (total) on 1 April, 2024 (includes sold, unharvested grain)	tonnes	65,636	143,923	77,587	82,472	17,620	8,341	395,580
Total sales (2024 harvest): includes unharvested grain								
Sold (of total crop) by 1 April, 2024 (includes sold for feed, used on farm, and sold, unharvested grain)	tonnes	77,492	191,806	98,520	150,790	18,052	9,738	546,398
Unsold (of total crop) on 1 April, 2024 (includes unsold, unharvested grain)	tonnes	32,567	107,181	5,505	110,804	1,576	1,937	259,569

Table 1 (continued).

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Comparison of hectares and tonnes between last two harvests								
Estimated % change in hectares, 2023 to 2024 harvest	%	-0.4	0.0	48.1	-13.6	-8.0	24.2	-0.4
Estimated % change in tonnes, 2023 to 2024 harvest	%	-0.1	6.2	40.9	-7.9	-8.9	34.0	3.4
Estimated change in tonnes, 2023 to 2024 harvest	tonnes	-87	17,533	30,211	-22,493	-1,920	2,964	26,208
Comparison of yields (t/ha) between last two harvests								
NZ-wide estimated yield, 2023 harvest	t/ha	9.1	9.9	7.2	7.1	8.0	5.7	8.2
NZ-wide estimated yield, 2024 harvest	t/ha	9.1	10.5	6.8	7.6	7.9	6.1	8.5
Recalculated April 1, 2023 survey breakdown to enable more precise comparisons between April 1, 2023 and April 1, 2024 (based upon matched data)								
Sold under pre-harvest contract and delivered by April 1, 2023	tonnes	9,828	45,037	13,673	74,792	3,216	1,405	147,950
Pre-harvest contract grain stored on farm on April 1, 2023	tonnes	68,798	122,401	52,697	72,110	17,881	4,765	338,651
Sold at spot/free price and delivered by April 1, 2023	tonnes	0	12,278	0	10,822	0	0	23,100
Sold at spot/free price and stored on farm on April 1, 2023	tonnes	0	26,541	0	19,216	0	0	45,757
(For milling or malting only) Sold for feed by April 1, 2023	tonnes	974	-	1,270	-	0	-	2244
(For feed only) Used on own farm by April 1, 2023	tonnes	-	563	-	2,720	-	189	3471
Unsold stocks on hand (2023 harvest only) on April 1, 2023	tonnes	29,465	73,543	6,173	100,636	451	2,351	212,619
Pre-harvest contract grain yet to be harvested as at April 1, 2023	tonnes	216	1,082	0	0	0	0	1,298
Unsold grain yet to be harvested as at April 1, 2023	tonnes	865	11	0	3,792	0	0	4,669
Comparison of on-farm storage (including unharvested grain) between last April and this April								
Sold but not delivered (total) on 1 April, 2023 (from 2023 harvest)	tonnes	69,014	150,024	52,697	91,325	17,881	4,765	385,706
Sold but not delivered (total) on 1 April, 2024 (from 2024 harvest) (from above)	tonnes	65,636	143,923	77,587	82,472	17,620	8,341	395,580
Unsold (from 2023 harvest) on 1 April, 2023	tonnes	30,330	73,554	6,173	104,428	451	2,351	217,288
Unsold (from 2024 harvest) on 1 April, 2024 (as above)	tonnes	32,567	107,181	5,505	110,804	1,576	1,937	259,569
Change in sold but not delivered (including unharvested grain) as at 1 April (for most recent harvest) between 2023 and 2024	tonnes	-3,378	-6,100	24,890	-8,853	-261	3,576	9,874
Change in unsold as at 1 April (from most recent harvest) between 2023 and 2024	tonnes	2,237	33,627	-668	6,375	1,125	-414	42,282
Change in total grain on farm (both sold and unsold, and including unharvested grain) as at 1 April (for most recent harvest) between 2023 and 2024	tonnes	-1,141	27,527	24,222	-2,478	864	3,162	52,155

Note: The comparisons in the last seven rows do not include carryover stock from the previous season (as given in Table 2).

Statistics NZ is gratefully acknowledged for supplying Final 2023 NZ Agricultural Production Statistics data on total hectares and tonnes for wheat, barley and oats.

In Table 1, the estimated 2024 harvest tonnes of milling wheat was almost identical to that for the 2023 harvest. For feed wheat, the estimated 2024 harvest tonnes was 6% *higher* than for 2023 (up 17,500 t), and for feed barley, the estimated 2024 harvest tonnes was 8% *down* on 2023 (down 22,500 t). Estimated 2024 harvest tonnes of malting barley was *up* by 41% (up 30,200 t). Harvest tonnes of milling oats was *down* by 9% (down 1,900 t) and feed oats tonnage was *up* by 34% (up 3,000 t).

The last few rows of Table 1 show the differences in on-farm storage between 1 April 2023 (of 2023 harvest grain) and 1 April, 2024 (of 2024 harvest grain). Unharvested grain has been included in the estimates to take account of the differing percentages of grain harvested by 1 April between the two years. Overall, on-farm storage is up by 52,200 tonnes on the same time last year.

For milling wheat, feed wheat, feed barley and milling oats there were decreases in the tonnage of grain sold, but not delivered by 1 April between the two seasons (decreases of 3,400, 6,100, 8,900 and 260 t, respectively). For malting barley and feed oats there were increases in the tonnage of grain sold, but not delivered by 1 April between the two seasons (increases of 24,900 and 3,600 t, respectively).

In terms of unsold tonnage, there were increases in unsold tonnages as at 1 April between the two seasons for milling wheat, feed wheat, feed barley and milling oats, for which the unsold tonnage increased by 2,200, 33,600, 6,400 and 1,100 tonnes respectively. For two of the other crops, there were decreases in unsold tonnage between the two seasons, of 700 tonnes for malting barley and 400 tonnes for feed oats.

The net effect is that there was a *decrease* in the total tonnage of grain from the most recent harvest stored on farms between 1 April, 2023 and 1 April, 2024 for milling wheat (with an estimated decrease of 1,100 t) and feed barley (with an estimated decrease of 2,500 t). For all other crops, there was an increase in the tonnage of grain stored on farms, of 27,500 tonnes for feed wheat, 24,200 tonnes for malting barley, 900 tonnes for milling oats and 3,200 tonnes for feed oats. These figures do not include any change in the amount of grain carried over from the previous harvest (given in Table 2); this change in tonnage of carry-over grain needs to be added to give the total picture.

Table 2 below shows that when totalled over all six crops, *unsold* carry-over stocks on hand on 1 April, 2024 from the previous (2023) harvest were at a level of 2.2% of this harvest. Milling wheat had 3.6% of the 2023 crop unsold (4,000 t), feed wheat had 2.1% of the 2023 crop unsold (6,000 t) and feed barley had 2.5% unsold (7,000 t). Malting barley, milling oats and feed oats had no unsold carry-over grain.

In terms of *sold* carry-over grain stored on farm from the 2023 harvest, there were four crops with grain sold and stored. These were milling wheat (500 t), feed wheat (12,800 t), feed barley (2,500 t) and milling oats (50 t).

In the last four rows, Table 2 (continued on to the next page) tracks the movement of unsold grain from the 2023 harvest between 10 October, 2023 and 1 April, 2024. For malting barley, milling oats and feed oats, all of the grain (100%) that was unsold as at 10 October, 2023, was sold between these two dates. For milling wheat, 80% of unsold grain was sold between these two dates. For feed wheat, 79% of unsold grain was sold between these two dates, and for feed barley, 87% of unsold grain was sold between these two dates.

When the tonnage of unsold carry-over grain is added to the unsold tonnage from the current harvest, the estimated tonnage of unsold grain as at 1 April, 2024 is 113,200 tonnes of feed wheat and 117,800 tonnes of feed barley; when summed over these two major feed crops, the total amount of unsold feed (wheat or barley) grain is estimated to be 231,000 tonnes, as compared to the amount on 1 April, 2023, of 181,400 tonnes.

Table 2. Carry-over stock on hand from the 2023 harvest, as at April 1, 2024.

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Number of survey farmers who harvested this crop in 2023	43	77	25	83	8	11	113
Number of survey farmers with carry-over grain from 2023 crop on 1 April, 2024	6	18	0	11	1	0	33
Estimated NZ total sold and stored on farm (2023 crop) on 1 April, 2024 (tonnes)	460	12,765	0	2,494	45	0	15,763
Estimated NZ total unsold stocks on hand (2023 crop) on 1 April, 2024 (tonnes)	4,003	5,998	0	7,039	0	0	17,040
Estimated NZ total 2023 harvest still on farms on 1 April, 2024 (tonnes)	4,462	18,763	0	9,532	45	0	32,803
Estimated NZ unsold stocks on hand of 2023 harvest on 1 April, 2024 as a percentage of tonnes harvested in 2023	3.6%	2.1%	0.0%	2.5%	0.0%	0.0%	2.2%
Comparative figures from last year (matched data for 1 April, 2023)	**tonnes**	**tonnes**	**tonnes**	**tonnes**	**tonnes**	**tonnes**	**tonnes**
Estimated NZ total sold and stored on farm (2022 crop) on 1 April, 2023	865	1,082	0	1,223	0	135	3,306
Estimated NZ total unsold stocks on hand (2022 crop) on 1 April, 2023	0	1,650	0	1,722	270	360	4,002
Comparative figures from year before that (1 April, 2022 AIMI survey)							
Estimated NZ total sold and stored on farm (2021 crop) on 1 April, 2022	0	0	0	971	0	0	971
Estimated NZ total unsold stocks on hand (2021 crop) on 1 April, 2022	95	0	0	75	121	28	318
Comparative figures from two years before that (1 April, 2021 AIMI survey)							
Estimated NZ total sold and stored on farm (2020 crop) on 1 April, 2021	597	2,707	2,210	1,392	0	0	6,906
Estimated NZ total unsold stocks on hand (2020 crop) on 1 April, 2021	2,593	5,699	0	700	0	10	9,001
Comparative figures from three years before that (1 April, 2020 AIMI survey)							
Estimated NZ total sold and stored on farm (2019 crop) on 1 April, 2020	0	2,303	0	3,199	2,573	0	8,075
Estimated NZ total unsold stocks on hand (2019 crop) on 1 April, 2020	0	2,062	0	6,686	0	0	8,747
Comparative figures from four years before that (1 April, 2019 AIMI survey)							
Estimated NZ total sold and stored on farm (2018 crop) on 1 April, 2019	288	2,986	0	712	4,118	265	8,368
Estimated NZ total unsold stocks on hand (2018 crop) on 1 April, 2019	0	2,796	0	7,255	44	0	10,095
Comparative figures from five years before that (1 April, 2018 AIMI survey)							
Estimated NZ total sold and stored on farm (2017 crop) on 1 April, 2018	319	745	139	278	4,463	705	6,650
Estimated NZ total unsold stocks on hand (2017 crop) on 1 April, 2018	399	2,066	0	676	371	873	4,385

Table 2 (continued).

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Number of survey farmers who harvested this crop in 2023	43	77	25	83	8	11	113
Number of survey farmers with carry-over grain from 2023 crop on 1 April, 2024	6	18	0	11	1	0	33
Comparative figures from six years before that (1 April, 2017 AIMI survey)							
Estimated NZ total sold and stored on farm (2016 crop) on 1 April, 2017	354	2,538	0	9,851	463	819	14,026
Estimated NZ total unsold stocks on hand (2016 crop) on 1 April, 2017	708	3,790	0	3,604	98	1,097	9,297
Comparative figures from seven years before that (1 April, 2016 AIMI survey)							
Estimated NZ total sold and stored on farm (2015 crop) on 1 April, 2016	1,356	3,227	930	3,084	2,040	0	10,636
Estimated NZ total unsold stocks on hand (2015 crop) on 1 April, 2016	3,220	11,578	2,496	30,457	0	35	47,786
Comparative figures from eight years before that (1 April, 2015 AIMI survey)							
Estimated NZ total sold and stored on farm (2014 crop) on 1 April, 2015	399	3,747	227	1,532	0	0	5,904
Estimated NZ total unsold stocks on hand (2014 crop) on 1 April, 2015	68	1,685	0	660	197	395	3,005
Comparative figures from nine years before (1 April, 2014 AIMI survey)							
Estimated NZ total sold and stored on farm (2013 crop) on 1 April, 2014	5,245	17,293	0	11,656	298	0	34,492
Estimated NZ total unsold stocks on hand (2013 crop) on 1 April, 2014	415	6,927	0	375	223	722	8,662
Comparative figures from ten years before (1 April, 2013 AIMI survey)							
Estimated NZ total sold and stored on farm (bumper 2012 crop) on 1 April, 2013	6,838	45,514	2,236	31,266	852	0	86,706
Estimated NZ total unsold stocks on hand (bumper 2012 crop) on 1 April, 2013	9,117	18,909	0	44,372	852	501	73,751
Change in unsold 2023 harvest grain between 10 October, 2023 and 1 April, 2024 (based upon matched data)							
Estimated NZ total unsold stocks on hand (2023 crop) on 10 October, 2023	19,723	27,915	4,235	55,755	270	536	108,434
Estimated NZ total unsold stocks on hand (2023 crop) on 1 April, 2024 (as above)	4,003	5,998	0	7,039	0	0	17,040
Reduction in estimated NZ total unsold stocks on hand (2023 crop) between 10 October, 2023 and 1 April, 2024 (tonnes)	15,721	21,917	4,235	48,716	270	536	91,394
As a percentage, reduction in estimated NZ total unsold stocks on hand (2023 crop) between 10 October, 2023 and 1 April, 2024	80%	79%	100%	87%	100%	100%	84%

Note: The matched comparison in the last section was based upon scaling up data from the exact same survey farms for the last two AIMI surveys (October, 2023 and April, 2024).

Table 3. Autumn/winter sowings and sowing intentions as at April 1, 2024 and comparisons with previous years' estimates.

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Number of farmers in the survey who have sown or intend to sow this crop in the autumn or winter, as at 1 April, 2024	22	60	7	26	3	3	76
Estimated NZ total hectares, 2023 harvest (autumn/winter plus spring sown crops, combined)	12,105	28,395	10,304	39,796	2,701	1,534	94,835
Estimated NZ total hectares, 2024 harvest (autumn/winter plus spring sown crops, combined)	12,057	28,406	15,255	34,374	2,484	1,906	94,483
Estimated NZ total hectares already sown, as at 1 April, 2024	0	520	0	0	0	0	520
Estimated NZ total hectares intending to sow in autumn or winter, as at 1 April, 2024	6,304	23,838	1,924	9,774	696	614	43,150
Estimated NZ total autumn/ winter 2024 sowings and/or sowing intentions as at April 1, 2024 (hectares, for harvest in 2025)	6,304	24,359	1,924	9,774	696	614	43,670
Estimated percentage of autumn/ winter 2024 sowings already sown by 1 April, 2024	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	1.2%
Average over previous 9 years of % of autumn/ winter sowings already sown by 1 April	1.7%	12.6%	0.0%	4.8%	3.0%	1.7%	-
Comparative figures from the same time in thirteen previous years (1 April AIMI surveys)							
Estimated NZ total autumn/ winter 2023 sowings & intentions (ha) (matched data, April 2023 Survey)	7,302	26,250	1,749	12,469	863	78	48,712
Estimated NZ total autumn/ winter 2022 sowings & intentions (ha) (from the April 2022 Survey)	5,428	32,265	625	17,893	485	373	57,069
Estimated NZ total autumn/ winter 2021 sowings & intentions (ha) (from the April 2021 AIMI Survey)	6,454	32,075	1,622	14,907	917	535	56,510
Estimated NZ total autumn/ winter 2020 sowings & intentions (ha) (from the April 2020 AIMI Survey)	8,217	32,343	4,031	14,770	1,044	496	60,901
Estimated NZ total autumn/ winter 2019 sowings & intentions (ha) (from the April 2019 AIMI Survey)	6,684	34,579	2,860	17,939	270	1,387	63,719
Estimated NZ total autumn/ winter 2018 sowings & intentions (ha) (from the April 2018 AIMI Survey)	5,640	38,371	2,923	22,076	1,553	761	71,323
Estimated NZ total autumn/ winter 2017 sowings & intentions (ha) (from the April 2017 AIMI Survey)	11,330	41,751	4,306	20,949	1,036	1,262	80,634
Estimated NZ total autumn/ winter 2016 sowings & intentions (ha) (from the April 2016 AIMI Survey)	12,688	34,048	3,133	14,167	1,369	2,159	67,565
Estimated NZ total autumn/ winter 2015 sowings & intentions (ha) (from the April 2015 AIMI Survey)	8,171	32,070	1,434	26,849	909	1,658	71,092
Estimated NZ total autumn/ winter 2014 sowings & intentions (ha) (from the April 2014 AIMI Survey)	7,078	32,607	1,148	23,380	554	926	65,692
Estimated NZ total autumn/ winter 2013 sowings & intentions (ha) (from the April 2013 AIMI Survey)	8,733	34,325	1,461	27,041	1,155	719	73,434
Estimated NZ total autumn/ winter 2012 sowings & intentions (ha) (from the April 2012 AIMI Survey)	8,173	31,136	2,101	23,485	1,286	1,540	67,721
Estimated NZ total autumn/ winter 2011 sowings & intentions (ha) (from the April 2011 AIMI Survey)	9,960	32,020	1,650	24,510	1,120	430	69,690
Estimated change in autumn/ winter sowings & intentions, 2022 to 2023 (ha)	1,874	-6,014	1,123	-5,424	378	-295	-8,358
Estimated change in autumn/ winter sowings & intentions, 2023 to 2024 (ha)	-998	-1,891	175	-2,695	-167	536	-5,041
Estimated % change in autumn/ winter sowings & intentions, 2023 to 2024	-14%	-7%	10%	-22%	-19%	683%	-10%

Table 3 above shows that most autumn/winter cereal crops had not been sown by 1 April, 2024. For feed wheat, only 2% had been sown. No milling wheat, malting barley, feed barley, milling oats or feed oats had been sown on the survey farms. Therefore, the estimates in the table are primarily sowing *intentions*. The percentages sown for each crop are generally lower than the averages over the previous nine years, as reported in Table 3.

For feed wheat, autumn/winter sowings plus sowing intentions for 2024, as at 1 April, 2024, are *lower* than at the same time last year, 1 April, 2023 (down 7%, or down 1,900 hectares). For feed barley, autumn/winter sowings plus sowing intentions for 2024, as at 1 April, 2024, are *lower* than at the same time last year, 1 April, 2023 (down 22%, or down 2,700 hectares). Autumn/winter sowings plus sowing intentions for 2024 are *down* 14% for milling wheat (down 1,000 ha), *up* 10% for malting barley (up 200 ha), *down* 19% for milling oats (down 170 ha) and *up* 540 ha for feed oats. When the autumn/winter sowings plus sowing intentions are summed over the four wheat and barley crops, the prediction is for an 11% decrease in autumn/winter sowings (a 5,400 ha decrease in area sown). This predicted decrease in area sown in the autumn/winter of 2024 reduces to a decrease of 5,000 hectares when we add in the two oats crops.

AIMI receives funding from Ministry for Primary Industries, FAR, Arable Food Industry Council, NZ Flour Millers Association, NZ Feed Manufacturers Association, Federated Farmers and United Wheat Growers.

AIMI Arable Industry Marketing Initiative	**FOR AIMI COMMITTEE ONLY: APPENDIX** NEW ZEALAND SURVEY OF CEREAL AREAS AND VOLUMES: APRIL 1, 2024

Report group*	**116**
Completed Survey	132
Out of	**147**

* Must have completed April 23, October 23 and April 24 surveys

Region	Responses
ENI	7
SWNI	4
NSI	27
MC	36
SCNO	17
SOS	25
Total	**116**

Comments:

Harvest/yields

- Generally good, dry in parts of Canterbury but yields better than expected. Wet in parts of Southland prolonging harvest

Price/demand – Market been slow – price too low, no profit in it, expenses gone up, get paid $440 but need $550

Sowings – generally good conditions for autumn/winter sowings, although dry in South Canterbury, and wet in Southland.

Number of participants that harvested or intend to harvest in 2024 (from 116 responses):

Region	Milling Wheat	Feed Wheat	Malting Barley	Feed Barley	Milling Oats	Feed Oats
ENI	3	4	6	5	-	1
SWNI	-	2	3	-	-	-
NSI	9	15	3	19	-	3
MC	17	26	15	18	-	3
SCNO	8	13	1	11	-	2
SOS	1	18	1	22	9	3
Total	**38**	**78**	**29**	**75**	**9**	**12**

Average yields (t/ha) (from 116 responses, SCALED TO NZ FIGURES):

Region	Milling Wheat	Feed Wheat	Malting Barley	Feed Barley	Milling Oats	Feed Oats
ENI	6.4	6.9	5.8	5.8	-	5.6
SWNI	-	6.5	5.3	-	-	-
NSI	9.0	10.5	6.7	7.2	-	4.6
MC	9.4	12.0	7.1	8.9	-	7.1
SCNO	8.9	10.5	8.1	8.3	-	4.5
SOS	12.5	10.1	6.9	6.9	7.9	7.5
Average	**9.1**	**10.5**	**6.8**	**7.6**	**7.9**	**6.1**

Tonnes of unsold grain (incl. yet to harvest and carry over) (from 116 responses) - SCALED TO NZ FIGURES:

Region	Milling Wheat	Feed Wheat	Malt Barley	Feed Barley	Milling Oats	Feed Oats	Region Total
ENI	-	1,698	-	5,834	-	-	**7,533**
SWNI	-	-	-	-	-	-	**-**
NSI	10,985	9,525	329	15,267	-	90	**36,197**
MC	24,096	29,646	5,176	45,987	-	1,081	**105,986**
SCNO	1,487	29,202	-	21,813	-	450	**52,953**
SOS	-	43,108	-	28,941	1,576	315	**73,941**
Total	**36,569**	**113,180**	**5,505**	**117,842**	**1,576**	**1,937**	**276,609**

Table A.1 Data totalled over all survey respondents (116 responses)

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of farmers in the survey who harvested or will harvest this crop in 2024		38	78	29	75	9	12
Number of survey farmers who have already harvested some or all of this crop, as at 1 April, 2024		38	77	29	71	7	12
Number of survey farmers who are still to harvest some or all of this crop, as at 1 April, 2024		0	1	1	10	2	2
2023 harvest (matched data from 1 April, 2023 survey)							
Total hectares on survey farms, 2023 harvest	ha	2,279	5,347	1,002	3,868	307	174
Total tonnes on survey farms, 2023 harvest	tonnes	20,364	52,036	7,844	30,189	2,392	967
Total hectares on survey farms, already harvested by 1 April, 2023	ha	2,256	5,326	1,002	3,794	307	174
Total tonnes on survey farms, already harvested by 1 April, 2023	tonnes	20,164	51,834	7,844	29,786	2,392	967
Total hectares on survey farms, yet to harvest (as at 1 April, 2023)	ha	23	21	0	75	0	0
Total tonnes on survey farms, yet to harvest (as at 1 April, 2023)	tonnes	200	202	0	403	0	0
2024 harvest							
Total hectares on survey farms, 2024 harvest	ha	2,270	5,349	1,483	3,341	282	216
Total tonnes on survey farms, 2024 harvest	tonnes	20,348	55,278	11,055	27,799	2,179	1,296
Total hectares on survey farms, already harvested by 1 April, 2024	ha	2,270	5,333	1,467	3,082	249	177
Total tonnes on survey farms, already harvested by 1 April, 2024	tonnes	20,348	55,118	10,945	25,774	1,949	1,008
Total hectares on survey farms, yet to harvest (as at 1 April, 2024)	ha	0	16	16	259	33	39
Total tonnes on survey farms, yet to harvest (as at 1 April, 2024)	tonnes	0	160	110	2,025	230	288
2024 harvest so far							
Sold under pre-harvest contract and delivered by 1 April, 2024	tonnes	2,192	6,508	2,225	4,321	38	110
Pre-harvest contract grain stored on farm on 1 April, 2024	tonnes	12,135	24,489	7,045	6,495	1,756	638
Sold at spot/free price and delivered by 1 April, 2024	tonnes	0	1,980	0	2,757	0	0
Sold at spot/free price and stored on farm on 1 April, 2024	tonnes	0	1,960	1,090	889	0	0
(For milling or malting only) Sold for feed by 1 April, 2024	tonnes	0	-	0	-	10	-
(For feed only) Used on own farm by 1 April, 2024	tonnes	-	365	-	182	-	45
Unsold stocks on hand (2024 harvest only) on 1 April, 2024	tonnes	6,021	19,816	585	11,130	145	215

Table A.1 Continued.

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of farmers in the survey who harvested or will harvest this crop in 2024		38	78	29	75	9	12
Number of survey farmers who have already harvested some or all of this crop, as at 1 April, 2024		38	77	29	71	7	12
Number of survey farmers who are still to harvest some or all of this crop, as at 1 April, 2024		0	1	1	10	2	2
2024 yet to harvest							
Unharvested grain sold under pre-harvest contract by 1 April, 2024	tonnes	0	160	110	1,380	200	288
Unsold grain yet to be harvested as at April 1, 2024	tonnes	0	0	0	645	30	0
Data for these SAME survey farms from April 1, 2023 survey, to enable more precise, matched comparisons between April 1, 2023 and April 1, 2024							
Sold under pre-harvest contract and delivered by April 1, 2023	tonnes	1,817	8,327	1,453	7,948	357	156
Pre-harvest contract grain stored on farm on April 1, 2023	tonnes	12,720	22,630	5,600	7,663	1,985	529
Sold at spot/free price and delivered by April 1, 2023	tonnes	0	2,270	0	1,150	0	0
Sold at spot/free price and stored on farm on April 1, 2023	tonnes	0	4,907	0	2,042	0	0
(For milling or malting only) Sold for feed by April 1, 2023	tonnes	180	-	135	-	0	-
(For feed only) Used on own farm by April 1, 2023	tonnes	-	104	-	289	-	21
Unsold stocks on hand (2023 harvest only) on April 1, 2023	tonnes	5,448	13,597	656	10,694	50	261
Pre-harvest contract grain yet to be harvested as at April 1, 2023	tonnes	40	200	0	0	0	0
Unsold grain yet to be harvested as at April 1, 2023	tonnes	160	2	0	403	0	0
Data for these SAME survey farms for matched comparisons of unsold grain between April 1, 2023 and April 1, 2024							
Unsold stocks on hand (from 2023 harvest) on April 1, 2023	tonnes	5,448	13,597	656	10,694	50	261
Unsold stocks on hand (from 2024 harvest) on April 1, 2024	tonnes	6,021	19,816	585	11,130	145	215
Comparison of yield (tonnes per ha) on survey farms between harvests							
Survey farms, 2023 harvest	t/ha	8.9	9.7	7.8	7.8	7.8	5.6
Survey farms, 2024 harvest	t/ha	9.0	10.3	7.5	8.3	7.7	6.0

In Table A.1, the yields per hectare on the survey farms were higher for the 2024 harvest as compared to the 2023 harvest except for malting barley and milling oats, which had higher yields in 2023 than 2024. In Table A.2, the data in Table A.1 are expressed as percentages.

Table A.2 Fate of 2024 crop, in percentages (by tonnes)

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of farmers in the survey who harvested or will harvest this crop in 2024	38	78	29	75	9	12
2024 harvested grain: % of total crop						
% Sold under pre-harvest contract and delivered by 1 April, 2024	10.8	11.8	20.1	15.5	1.7	8.5
% Pre-harvest contract grain stored on farm on 1 April, 2024	59.6	44.3	63.7	23.4	80.6	49.2
% Sold at spot/free price and delivered by 1 April, 2024	0.0	3.6	0.0	9.9	0.0	0.0
% Sold at spot/free price and stored on farm on 1 April, 2024	0.0	3.5	9.9	3.2	0.0	0.0
(For milling or malting only) % Sold for feed by 1 April, 2024	0.0	-	0.0	-	0.5	-
(For feed only) % Used on own farm by 1 April, 2024	-	0.7	-	0.7	-	3.5
% Unsold stocks on hand (2024 harvest only) on 1 April, 2024	29.6	35.8	5.3	40.0	6.7	16.6
2024 unharvested grain: % of total crop						
% Unharvested grain sold under pre-harvest contract by 1 April, 2024	0.0	0.3	1.0	5.0	9.2	22.2
% Unharvested grain unsold on 1 April, 2024	0.0	0.0	0.0	2.3	1.4	0.0
Sales channels (2024 harvest): includes unharvested grain						
% Sold under pre-harvest contract (total) by 1 April, 2024 (includes sold, unharvested grain)	70.4	56.4	84.8	43.9	91.5	79.9
% Sold at spot/free price (total) by 1 April, 2024 (includes sold for feed and used on farm)	0.0	7.8	9.9	13.8	0.5	3.5
Delivery status of sold grain (2024 harvest): includes unharvested grain						
% Sold and delivered (total) by 1 April, 2024 (includes sold for feed and used on farm)	10.8	16.0	20.1	26.1	2.2	12.0
% Sold and stored on farm (total) on 1 April, 2024 (includes sold, unharvested grain)	59.6	48.1	74.6	31.5	89.8	71.5

Table A.3 Crops remaining on farms from 2023 harvest (data totalled over all survey respondents)

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of survey farmers who harvested this crop in 2023	43	77	25	83	8	11
Number of survey farmers with 2023 crop sold and stored on farm on 1 April, 2024	3	7	0	4	1	0
Number of survey farmers with unsold stocks on hand of 2023 crop on 1 April, 2024	3	11	0	7	0	0
Total number of survey farmers with carry-over grain from 2023 crop on 1 April, 2024	6	18	0	11	1	0
Tonnes sold and stored on survey farms (2023 crop) on 1 April, 2024	85	2,360	0	265	5	0
Unsold stocks on hand (2023 crop) on survey farms on 1 April, 2024 (tonnes)	740	1,109	0	748	0	0
Total 2023 harvest still on survey farms on 1 April, 2024 (tonnes)	825	3,469	0	1,013	5	0
Unsold stocks on hand of 2023 harvest on 1 April, 2024 as percentage of tonnes harvested in 2023 [on survey farms]	3.6%	2.1%	0.0%	2.5%	0.0%	0.0%
Change in unsold 2023 harvest grain on survey farms between 10 Oct, 2023 and 1 April, 2024 (MATCHED comparison on the SAME survey farms)						
Unsold stocks on hand (2023 crop) on survey farms on 10 October, 2023 (tonnes)	3,647	5,161	450	5,925	30	60
Unsold stocks on hand (2023 crop) on survey farms on 1 April, 2024 (tonnes) (as above)	740	1,109	0	748	0	0
Reduction in unsold stocks on hand (2023 crop) between 10 October, 2023 and 1 April, 2024 (tonnes)	2,907	4,052	450	5,177	30	60
As a percentage, reduction in unsold stocks on hand (2023 crop) between 10 October, 2023 and 1 April, 2024	80%	79%	100%	87%	100%	100%

Table A.3 reports on the tonnages of grain (both sold and unsold) carried over on farms from the previous harvest (2023).

At the bottom of the table, the reduction in unsold 2023 harvest grain on the survey farms is calculated for each crop between the last survey date (10 October 2023) and the present survey date (1 April 2024). These percentages are all in the range 79% to 100%.

Table A.4 Autumn/ winter sowings and intentions (data totalled over all survey respondents)

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of farmers in the survey who have sown or intend to sow this crop in the autumn or winter as at 1 April, 2024	**22**	**60**	**7**	**26**	**3**	**3**
Number of survey farmers who have already sown this crop, as at 1 April, 2024	**0**	**2**	**0**	**0**	**0**	**0**
Number of survey farmers who intend to sow this crop in the autumn or winter, as at 1 April, 2024	**22**	**60**	**7**	**26**	**3**	**3**
Total hectares on survey farms, 2023 harvest (autumn/winter plus spring sown crops, combined)	2,279	5,347	1,002	3,868	307	174
Total hectares on survey farms, 2024 harvest (autumn/winter plus spring sown crops, combined)	2,270	5,349	1,483	3,341	282	216
Total hectares already sown on survey farms, as at 1 April, 2024	0	98	0	0	0	0
Total hectares intending to sow in autumn or winter on survey farms, as at 1 April, 2024	1,187	4,489	187	950	79	70
Autumn/winter 2024 sowings and/or sowing intentions on survey farms as at April 1, 2024 (hectares, for harvest in 2025)	1,187	4,587	187	950	79	70
Percentage of autumn/winter 2024 sowings already sown by 1 April, 2024	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%

In Table A.4, autumn/winter sowings and autumn/winter sowing intentions are given as sums over the 116 survey farms.

For scaling up to NZ-wide totals, the most recent figures are the Final 2023 Agricultural Production Statistics (APS) figures, as in Table A.5. On average, the yields on the survey farms were higher than the APS yields for barley, and slightly lower for wheat and oats.

From the scale-up factors, we can see what percentage of the area of each 2023 harvest crop was on the survey farms. For wheat, it was 100/ 5.311 = 18.8%. For barley, it was 100/ 10.288 = 9.7%. For oats, it was 100/ 8.808 = 11.4%. That is, the percentages were relatively high for wheat (with about one fifth of hectares sampled in the survey), lower for oats (with about one ninth of hectares sampled) and lower again for barley (with about one tenth of hectares sampled).

Table A.5 Scaling up from survey totals to NZ-wide totals using Final 2023 Agricultural Production Statistics (APS)

	Total wheat	Total barley	Total oats
Total hectares on survey farms, 2023 harvest	7,626	4,870	481
Total tonnes on survey farms, 2023 harvest	72,400	38,033	3,359
APS statistics for 2023 harvest, total hectares	40,500	50,100	4,235
APS statistics for 2023 harvest, total tonnes	391,600	357,900	30,259
Multiplier for scaling up from 2023 survey farm totals to 2023 APS totals			
Hectares	5.311	10.288	8.808
Tonnes	5.409	9.410	9.008
Comparison of yields between survey and APS statistics			
Survey farms, 2023 harvest (t/ha)	9.5	7.8	7.0
APS statistics, 2023 harvest (t/ha)	9.7	7.1	7.1

Matched vs unmatched data:
** Matched data – The same growers are used to compare two seasons of data. Matched data are scaled up from totals over the survey farms to totals for NZ using the same scaling factors (given in Table A.5). Data in the tables consist of matched data except when a previous AIMI survey is referenced.*
** Unmatched data – Data comes from annual AIMI reports and doesn't compare the same set of growers or use the same scale-up factors. The graphs present unmatched data, except when stated otherwise in the caption.*

AIMI receives funding from Ministry for Primary Industries, FAR, Arable Food Industry Council, NZ Flour Millers Association, NZ Feed Manufacturers Association, Federated Farmers and United Wheat Growers.