



*The objectives of this AIMI survey of New Zealand (NZ) cereal growers were to determine, as at April 1, 2022:*

- *The size of the 2022 NZ harvest of wheat, barley and oats*
- *The sales channels, storage status and unsold amount of the 2022 NZ harvest*
- *The tonnages of carry-over stocks on farms from the 2021 NZ harvest*
- *NZ sowings and sowing intentions of wheat, barley and oats (both milling/malting and feed) for the autumn and winter of 2022*

## **Survey details**

Data from 141 NZ survey farms who completed both of the last two cereal surveys (October 2021 and April 2022) were scaled up to the national level using the most recent (Provisional 2021) 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 1<sup>st</sup> April 2022 and there will have been changes since this time.

### **Key Points as at 1 April 2022** (figures have been rounded to nearest 100):

- Overall, harvest yields were down 4% compared to last season (averaged over all six crops). However, more hectares were harvested than last season (4% up), and the net result was an almost identical total tonnage compared to last season.
- On the survey farms, the 2022 harvests of malting barley and milling oats were 100% completed by 1 April, with feed wheat harvest 99.9% complete and milling wheat and feed barley harvests 99% complete. The harvest of feed oats was 98% complete, respectively, by 1 April.
- Carry-over stocks (both sold and unsold) of feed wheat and feed barley were almost non-existent on 1 April. Unsold stocks on hand of last year's feed wheat and feed barley crops were 0.00% and 0.03% of the 2021 harvest tonnages, respectively.
- Stocks of unsold feed wheat from the current harvest are up 18% on unsold stocks at this time last year. Unsold stocks of feed barley are down 21% as compared to this time last year, and unsold stocks of milling wheat are down 23%.
- Autumn/winter sowings of feed wheat are predicted to be similar (up by 200 hectares) to predicted sowings a year ago, while feed barley autumn/winter sowings are predicted to be up by 20% (up by 3,000 ha). Milling wheat and malting barley autumn/winter sowings are both predicted to be down by 1,000 ha, milling oats down 430 ha, and feed oats down 160 ha. However, these predictions are based mostly on intentions as over all six crops, only 5% (mostly feed wheat) had been sown by 1 April 2022.

## Summary

**Weather:** Autumn sowing conditions in 2021 were generally dry and warm across all regions. Soil moisture recovered over winter, although some of this was due to heavy rain which led to flooding and created issues for newly established crops and further crop establishment. December and February also brought heavy rain, including two tropical cyclones, and flooding to parts of the upper South Island and lower North Island. The unusually wet summer conditions promoted late season disease and disrupted harvest, ultimately affecting grain quality and yield in many locations in the lower North Island and Canterbury. Southland managed to avoid a lot of the summer rainfall events and the favourable weather conditions led to a timely harvest and some good yields.

**Milling wheat:** Estimated total tonnage (66,700 t) was down 35% compared to last year's harvest (103,400 t). Of this total, 68% has been sold (45,600 t), although much of the sold grain is still stored on farm (76%). The amount of unsold grain is 21,100 tonnes (32%). Unsold grain carried over from the 2021 harvest was 100 tonnes, so the estimate of unsold grain in the market is 21,200 tonnes.

**Feed wheat:** Estimated total tonnage (352,100 t) was up 4% compared to last year's harvest (337,600 t). Of this total, 71% has been sold (249,300 t), with 69% of the sold grain still stored on farm. The amount of unsold grain is 102,800 tonnes (29%). Unsold stock carried over from last season was nil, so the estimate of total unsold grain in the market is 102,800 tonnes.

**Feed barley:** Estimated total tonnage (304,400 t) was up 14% compared to last year (266,200 t). Of this total tonnage, 75% has been sold (228,100 t), with 42% of the sold grain still stored on farm. About 25% (76,300 t) remains unsold. Carryover of unsold grain was 100 tonnes, taking the estimate of total unsold grain in the market to 76,400 tonnes.

**For other cereals:** Compared to last year, estimated total tonnages for malting barley (41,100 t) was down by 29%, milling oats (18,700 t) was up by 11%, and feed oats (10,200 t) was down by 16%. For malting barley, 16% of the total harvest was unsold, while milling oats had 39% unsold and feed oats had 19% unsold as at 1 April, 2022. There were no unsold stocks carried over from last season for malting barley, and almost no milling oats and feed oats.

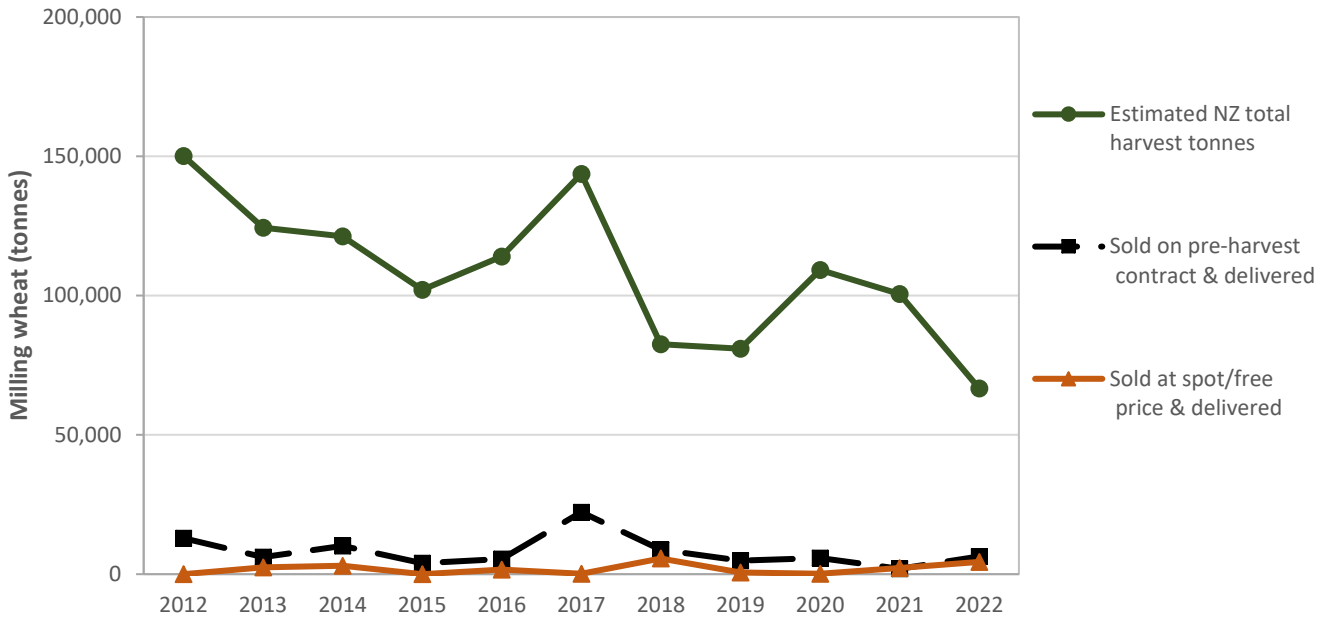
**Sowing intentions:** Only a few autumn/winter cereal crops had been sown by 1 April 2022. For feed wheat, 8% of the planned area had been sown, while for feed barley, 1% had been sown. No milling wheat, malting barley, milling oats or feed oats had been sown.

For autumn/winter wheat and barley overall, the total area sown or intending to be sown as at 1 April 2022, was up 2% (or, up by 1,200 hectares) on sowings plus intentions as at 1 April 2021.

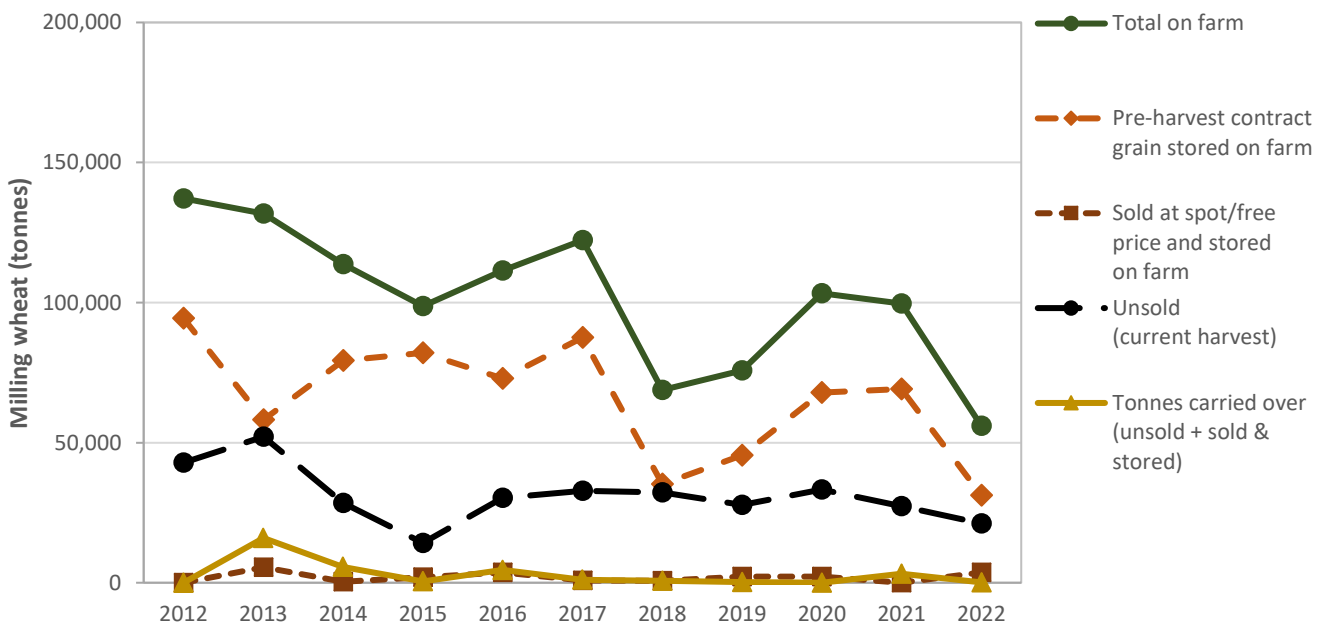
In more detail, feed wheat area sown or intending to be sown in the autumn/winter was up 1% (up 200 hectares) as compared to last year. Autumn/winter feed barley was up 20% (up 3,000 hectares), and milling wheat was down 16% (down 1,000 hectares). Autumn/winter malting barley was predicted to be down 61% (down 1,000 hectares) on last year.

Milling oats area sown or intending to be sown in the autumn/winter was down 47% (down 430 hectares), and feed oats was down 30% (down 160 hectares).

**Milling Wheat (tonnes)**

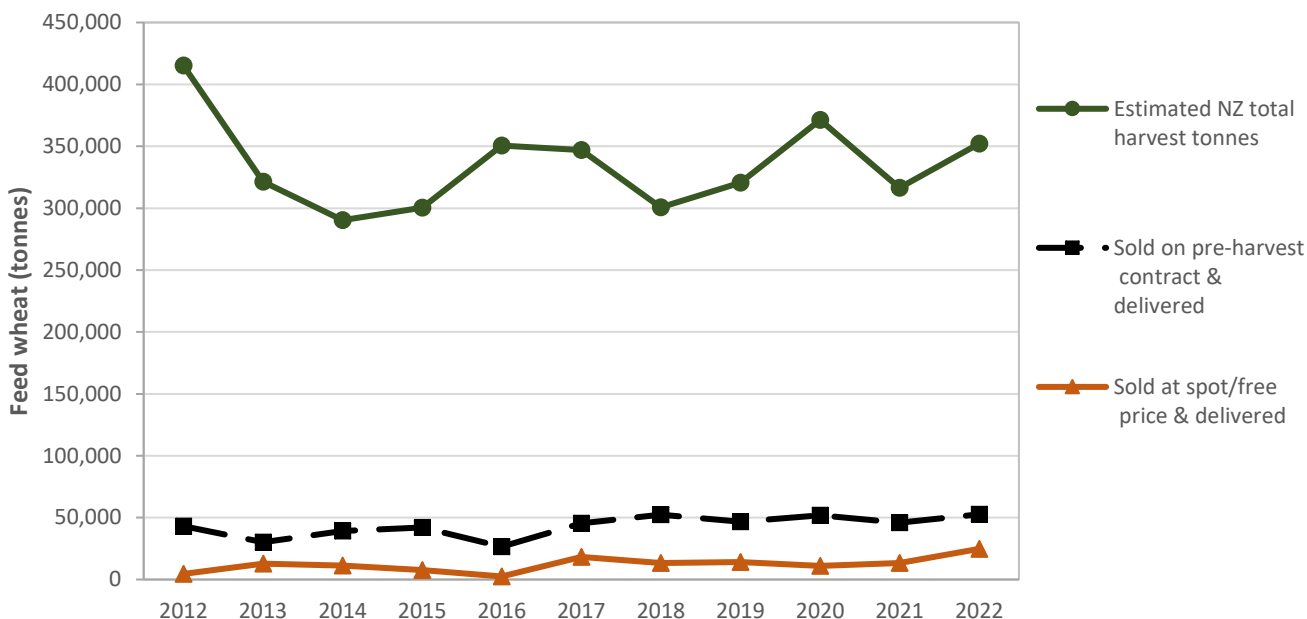


**Figure 1a. NZ harvest tonnage and sales channels for milling wheat as estimated on 1 April each year.** Note: Historical data for 2012 to 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are from the current report. “Total harvest tonnes” includes harvested and unharvested grain for that season’s harvest. “Sold at spot/free price & delivered” includes grain sold for feed.

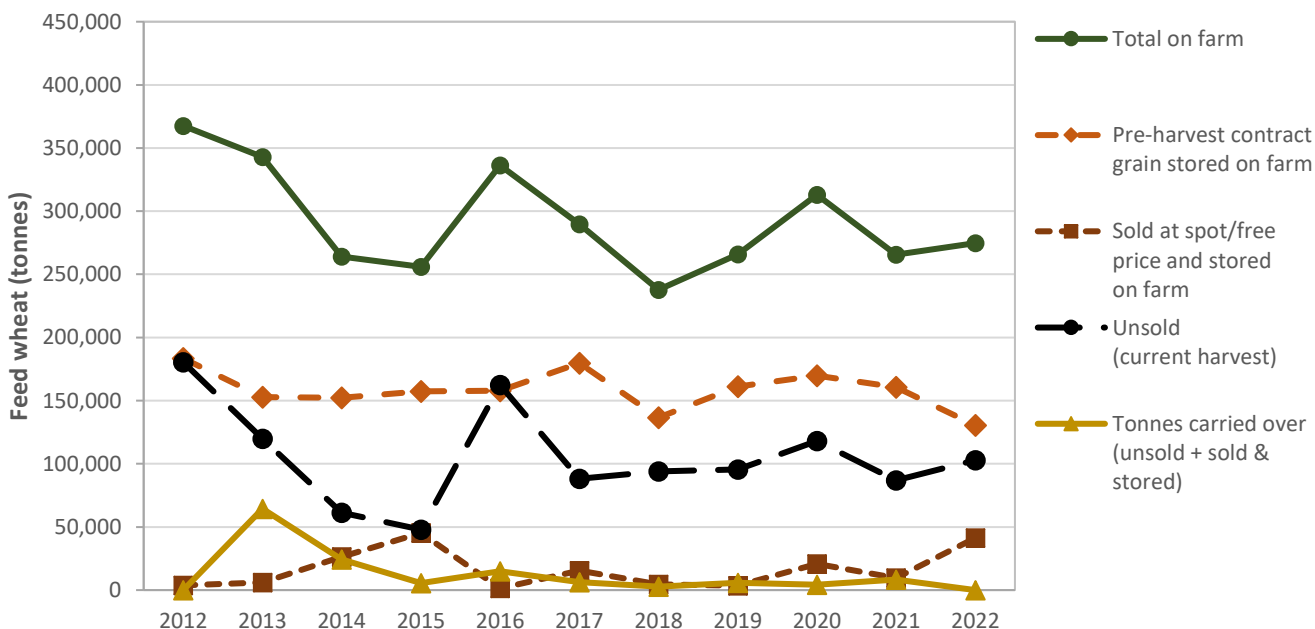


**Figure 1b. NZ stock on farms for milling wheat as estimated on 1 April each year.** Note: Historical data for 2012 to 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are from the current report. Unharvested grain is included. For the 2012 and 2013 harvests, the sales status 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)**

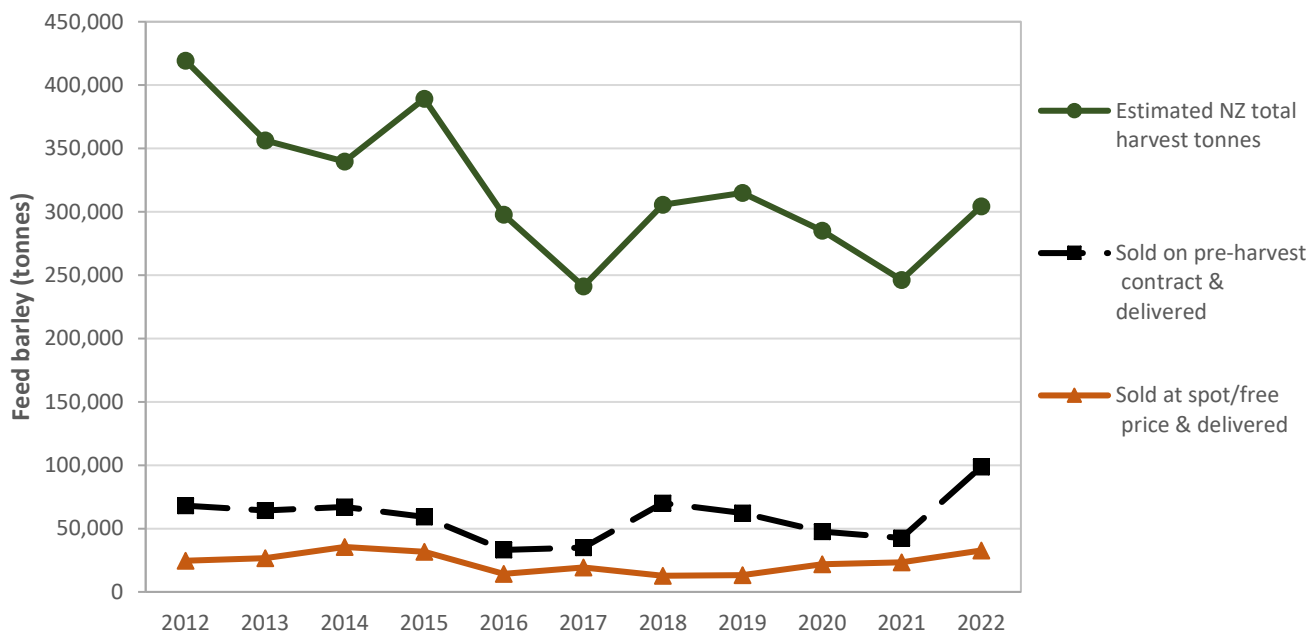


**Figure 2a. NZ harvest tonnage and sales channels for feed wheat as estimated on 1 April each year.**  
 Note: Historical data for 2012 to 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are from the current report. “Total harvest tonnes” includes harvested and unharvested grain for that season’s harvest. “Sold at spot/free price & delivered” includes grain used on own farm.



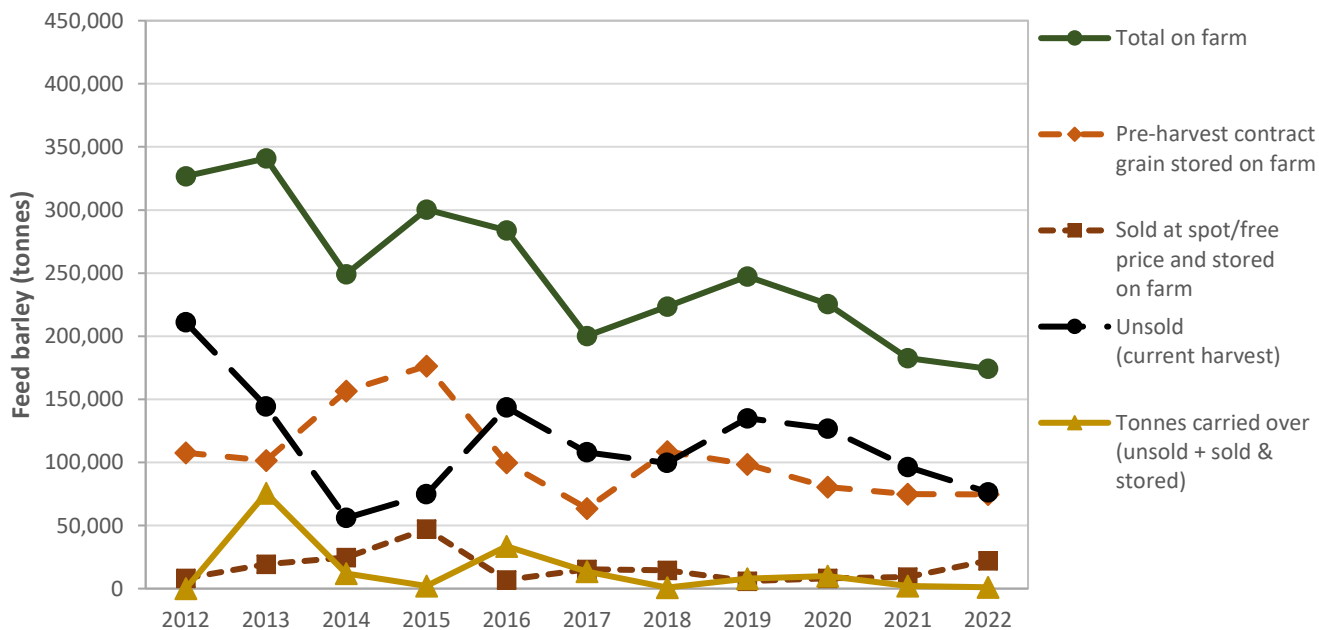
**Figure 2b. NZ stock on farms for feed wheat as estimated on 1 April each year.**  
 Note: Historical data for 2012 to 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are from the current report. Unharvested grain is included. For the 2012 and 2013 harvests, the sales status 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)



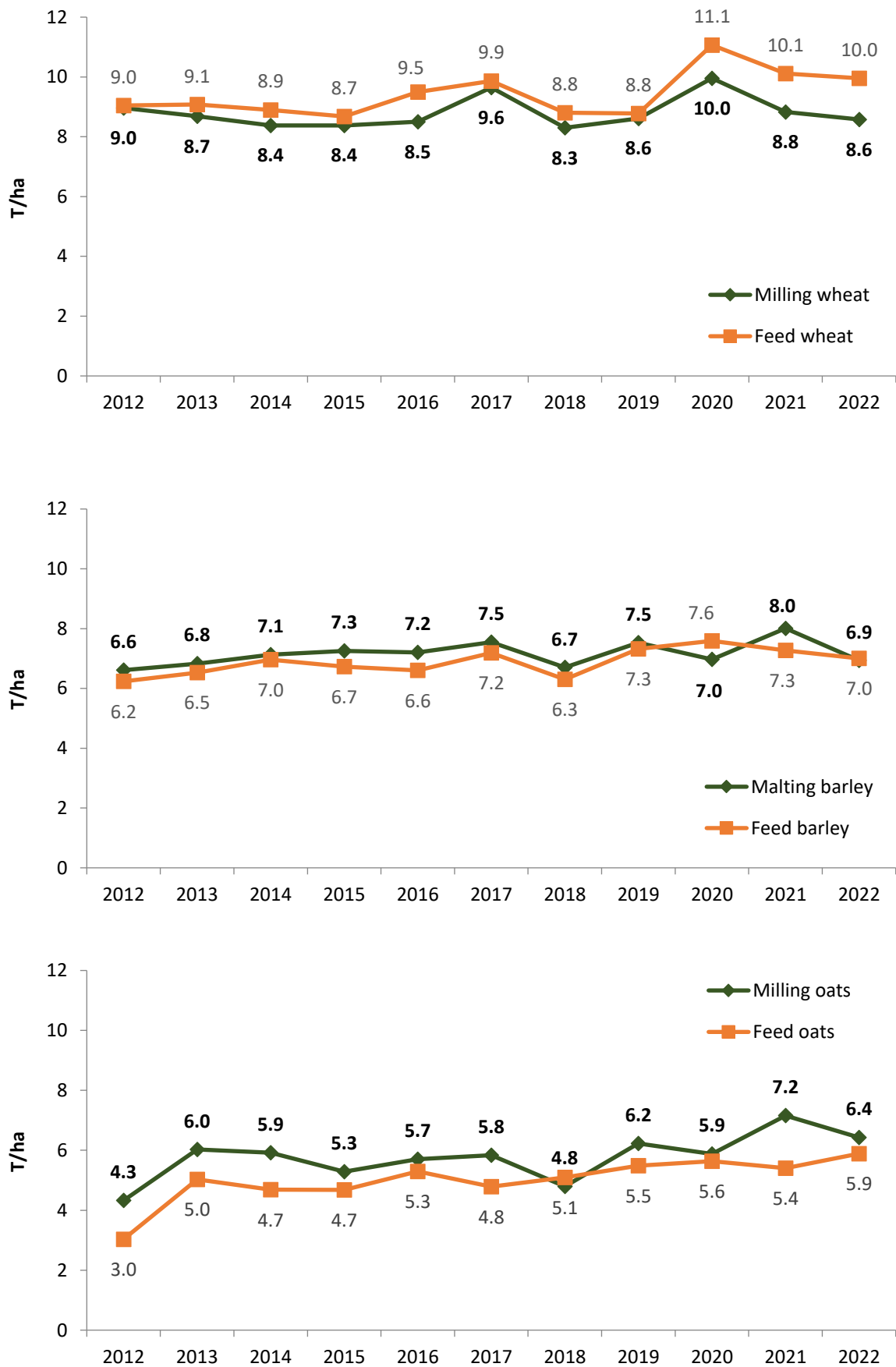
**Figure 3a. NZ harvest tonnage and sales channels for feed barley as estimated on 1 April each year.**

Note: Historical data for 2012 to 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are 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 2021 are from April AIMI Reports for 2021 and earlier, while data for 2022 are 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 2022 harvests for the six cereal crops. Data for 2012 to 2020 are from previous April 1 AIMI reports, while data for 2021 and 2022 are matched data from current report. Note: Milling wheat includes biscuit and gristing varieties.**

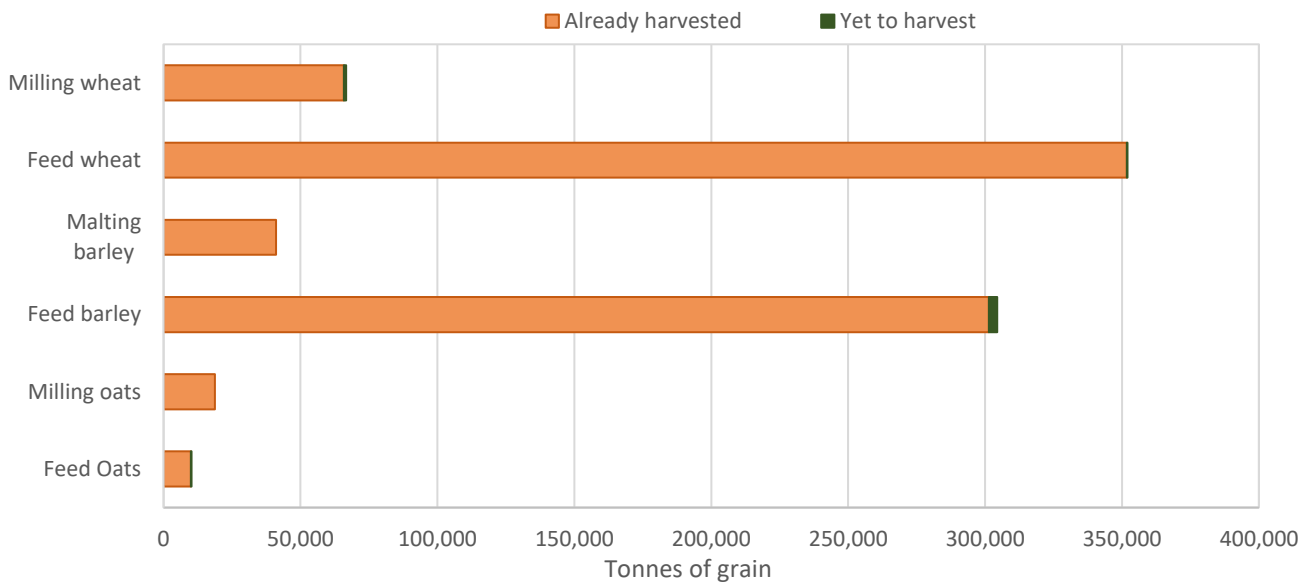


Figure 5. Estimated NZ tonnes harvested before 1 April 2022, and yet to harvest as at 1 April, 2022.

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

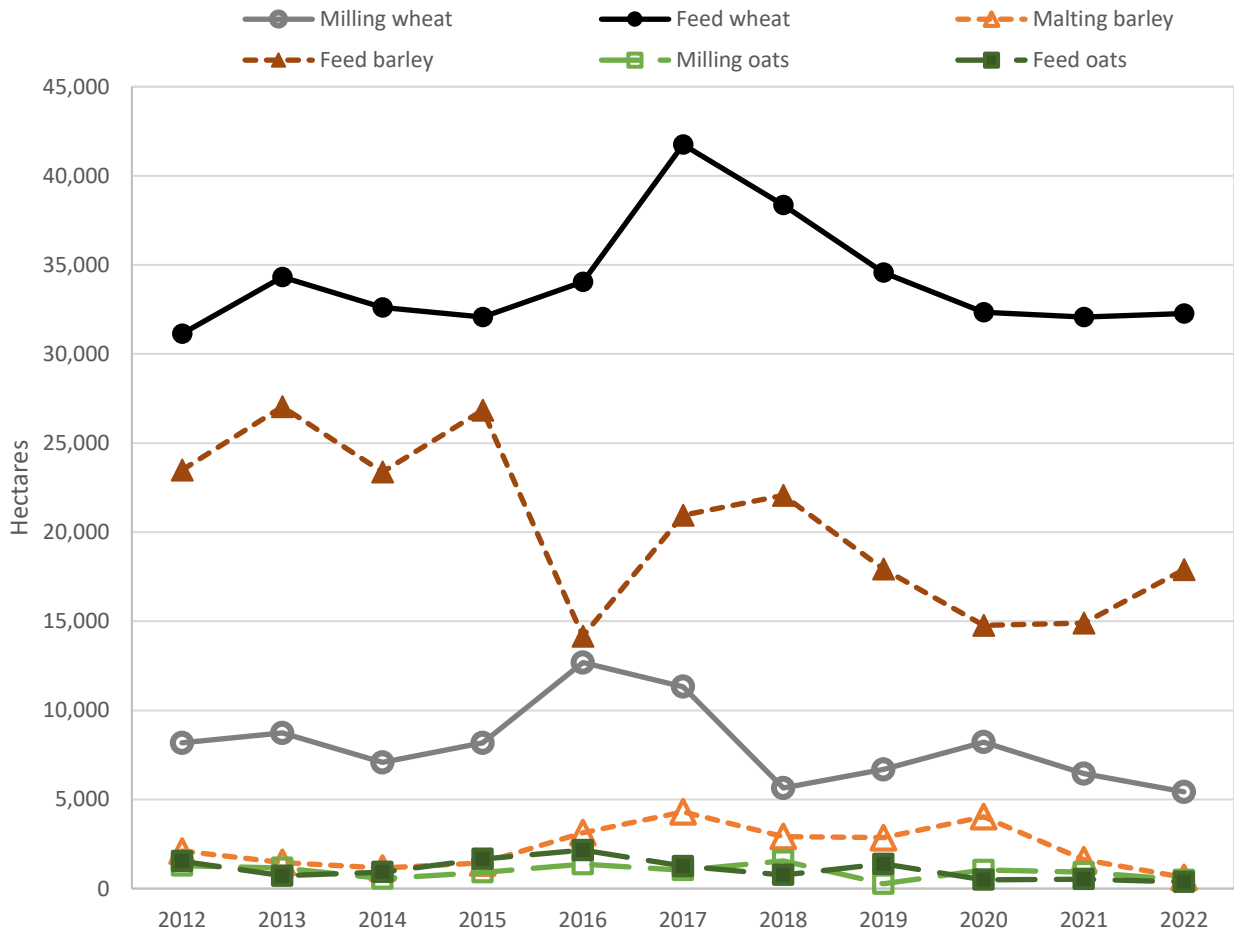
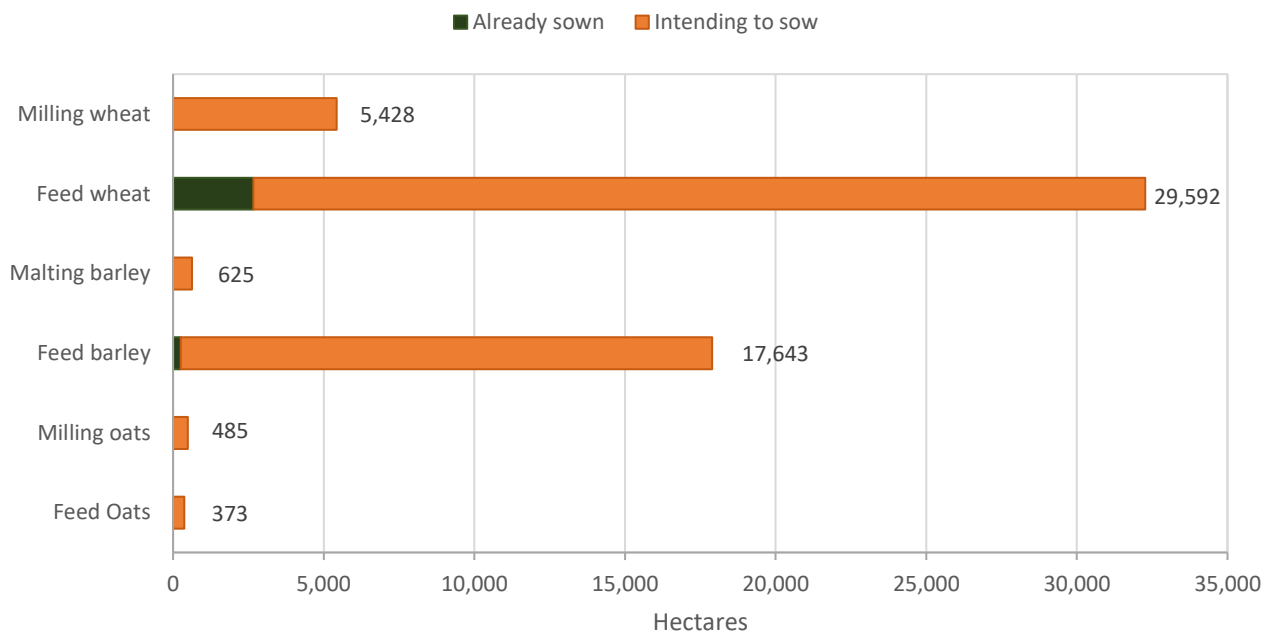


Figure 6. Estimated NZ total hectares sown or intended to be sown in autumn/winter 2022 (spring hectares not included), along with the corresponding estimates from the ten previous 1 April AIMI survey reports. Figures for 2022 are from the current report, while other figures are from previous April AIMI reports for 2012 – 2021. Note: Data are mostly intentions (see Fig. 7). This information is also presented in Table 3 below.



**Figure 7. Estimated NZ autumn/winter 2022 sowings and sowing intentions as at 1 April, 2022.**  
 Note: Numbers at the end of the bars represent autumn/winter sowing intentions (spring intentions are not included). These are estimated totals derived from the survey, and have an associated margin of error.



**Table 1. Estimated national figures for the 2022 harvest, plus sold and delivered tonnages, for six cereal crops as at April 1, 2022.**

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
<b>Number of farmers in the survey who harvested or will harvest this crop in 2022</b>		<b>43</b>	<b>94</b>	<b>23</b>	<b>107</b>	<b>14</b>	<b>23</b>	<b>136</b>
<b>2021 harvest</b>								
Estimated NZ total hectares, 2021 harvest	ha	11,706	33,394	7,201	36,599	2,358	2,242	93,500
Estimated NZ total tonnes, 2021 harvest	tonnes	103,362	337,638	57,671	266,229	16,878	12,122	793,900
<b>2022 harvest</b>								
Estimated NZ total hectares, 2022 harvest	ha	7,774	35,370	5,929	43,472	2,916	1,728	97,188
Estimated NZ total tonnes, 2022 harvest	tonnes	66,714	352,068	41,113	304,427	18,749	10,175	793,245
Estimated NZ total hectares already harvested by 1 April, 2022	ha	7,680	35,340	5,929	42,885	2,916	1,690	96,440
Estimated NZ total tonnes already harvested by 1 April, 2022	tonnes	65,809	351,830	41,113	301,371	18,749	9,985	788,856
Estimated NZ total hectares yet to harvest as at 1 April, 2022	ha	94	30	0	586	0	38	748
Estimated NZ total tonnes yet to harvest as at 1 April, 2022	tonnes	905	238	0	3,056	0	189	4,389
Percentage of estimated 2022 crop tonnage which had been harvested by 1 April, 2022	%	99%	100%	100%	99%	100%	98%	99%
Average over previous 8 years of % of crop tonnage which had been harvested by 1 April	%	98%	99%	100%	92%	64%	79%	-
<b>2022 harvest so far</b>								
Sold under pre-harvest contract and delivered by 1 April, 2022	tonnes	6,350	52,672	8,765	98,653	1,285	2,535	170,260
Pre-harvest contract grain stored on farm on 1 April, 2022	tonnes	31,161	130,470	23,881	72,421	9,836	4,214	271,984
Sold at spot/free price and delivered by 1 April, 2022	tonnes	2,162	23,632	224	26,063	276	923	53,280
Sold at spot/free price and stored on farm on 1 April, 2022	tonnes	3,643	41,358	0	22,140	0	196	67,338
(For milling or malting only) Sold for feed by 1 April, 2022	tonnes	2286	-	1629	-	0	-	3915
(For feed only) Used on own farm by 1 April, 2022	tonnes	-	1,129	-	6,531	-	176	7835
Unsold stocks on hand (2022 harvest only) on 1 April, 2022	tonnes	20,206	102,569	6,613	75,562	7,353	1,942	214,245
<b>2022 yet to harvest</b>								
Unharvested grain sold under pre-harvest contract by 1 April, 2022	tonnes	0	0	0	2,309	0	189	2,498
Unharvested grain unsold on 1 April, 2022	tonnes	905	238	0	747	0	0	1,890
<b>Sales channels (2022 harvest): includes unharvested grain</b>								
Sold under pre-harvest contract (total) by 1 April, 2022 (includes sold, unharvested grain)	tonnes	37,511	183,142	32,646	173,383	11,121	6,938	444,742
Sold at spot/free price (total) by 1 April, 2022 (includes sold for feed and used on farm)	tonnes	8,092	66,119	1,853	54,735	276	1,295	132,368
<b>Delivery status of sold grain (2022 harvest): includes unharvested grain</b>								
Sold and delivered (total) by 1 April, 2022 (includes sold for feed and used on farm)	tonnes	10,798	77,433	10,618	131,247	1,561	3,633	235,290
Sold and stored on farm (total) on 1 April, 2022 (includes sold, unharvested grain)	tonnes	34,805	171,828	23,881	96,871	9,836	4,599	341,820
<b>Total sales (2022 harvest): includes unharvested grain</b>								
Sold (of total crop) by 1 April, 2022 (includes sold for feed, used on farm, and sold, unharvested grain)	tonnes	45,603	249,261	34,500	228,118	11,396	8,233	577,110
Unsold (of total crop) on 1 April, 2022 (includes unsold, unharvested grain)	tonnes	21,111	102,807	6,613	76,309	7,353	1,942	216,135

**Table 1 (continued).**

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
<b>Comparison of hectares and tonnes between last two harvests</b>								
Estimated % change in hectares, 2021 to 2022 harvest	%	-33.6	5.9	-17.7	18.8	23.7	-22.9	3.9
Estimated % change in tonnes, 2021 to 2022 harvest	%	-35.5	4.3	-28.7	14.3	11.1	-16.1	-0.1
Estimated change in tonnes, 2021 to 2022 harvest	tonnes	-36,648	14,430	-16,559	38,198	1,871	-1,948	-655
<b>Comparison of yields (t/ha) between last two harvests</b>								
NZ-wide estimated yield, 2021 harvest	t/ha	8.8	10.1	8.0	7.3	7.2	5.4	8.5
NZ-wide estimated yield, 2022 harvest	t/ha	8.6	10.0	6.9	7.0	6.4	5.9	8.2
<b>Comparison of on-farm storage (including unharvested grain) between last April and this April</b>								
Sold but not delivered (total) on 1 April, 2021 (from 2021 harvest) (April 2021 Report)	tonnes	69,162	170,217	41,299	84,156	14,410	11,622	390,866
Sold but not delivered (total) on 1 April, 2022 (from 2022 harvest) (from above)	tonnes	34,805	171,828	23,881	96,871	9,836	4,599	341,820
Unsold (from 2021 harvest) on 1 April, 2021 (April 2021 AIMI Report)	tonnes	27,324	86,989	9,245	96,373	2,381	804	223,115
Unsold (from 2022 harvest) on 1 April, 2022 (as above)	tonnes	21,111	102,807	6,613	76,309	7,353	1,942	216,135
Change in sold but not delivered (including unharvested grain) as at 1 April (for most recent harvest) between 2021 and 2022	tonnes	-34,357	1,611	-17,417	12,715	-4,575	-7,023	-49,046
Change in unsold as at 1 April (from most recent harvest) between 2021 and 2022	tonnes	-6,213	15,818	-2,632	-20,064	4,972	1,138	-6,980
Change in total grain on farm (both sold and unsold, and including unharvested grain) as at 1 April (for most recent harvest) between 2021 and 2022	tonnes	-40,569	17,429	-20,049	-7,349	397	-5,885	-56,026

**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 Provisional 2021 NZ Agricultural Production Statistics data on total hectares and tonnes for wheat, barley and oats.

In Table 1, the estimated 2022 harvest tonnes of milling wheat was 35% *lower* than for the 2021 harvest (down 36,600 t). For feed wheat, the estimated 2022 harvest tonnes was 4% *higher* than for 2021 (up 14,400 t), and for feed barley, the estimated 2022 harvest tonnes was 14% *up* on 2021 (up 38,200 t). Estimated 2022 harvest tonnes of malting barley was *down* by 29% (down 16,600 t). Harvest tonnes of milling oats was *up* by 11% (up 1,900 t) and feed oats tonnage was *down* by 16% (down 1,900 t).

The last few rows of Table 1 show the differences in on-farm storage between 1 April 2021 (of 2021 harvest grain) and 1 April, 2022 (of 2022 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 down by 56,000 tonnes on the same time last year.

For milling wheat, malting barley, milling oats and feed oats there were decreases in the tonnage of grain sold, but not delivered by 1 April between the two seasons (decreases of 34,400, 17,400, 4,600 and 7,000 t, respectively). For feed wheat and feed barley there were increases in the tonnage of grain sold, but not delivered by 1 April between the two seasons (increases of 1,600 and 12,700 t, respectively).

In terms of unsold tonnage, there were decreases in unsold tonnages as at 1 April between the two seasons for milling wheat, malting barley and feed barley, for which the unsold tonnage decreased by 6,200, 2,600 and 20,100 tonnes respectively. For the other three crops, there were increases in unsold tonnage between the two seasons, of 15,800 tonnes for feed wheat, 5,000 tonnes for milling oats and 1,100 tonnes for feed oats.

The net effect is that there were *decreases* in the tonnages of grain from the most recent harvest stored on farms between 1 April, 2021 and 1 April, 2022 for milling wheat, malting barley, feed barley and feed oats (estimated decreases of 40,600, 20,000, 7,300 and 5,900 t, respectively), and *increases* for feed wheat and milling oats (estimated increases of 17,400 and 400 t, respectively). These figures do not include any change in the amount of grain carried over from the previous harvest (given for 1 April, 2022 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 for all six crops, *unsold* carry-over stocks on hand on 1 April, 2022 from the previous (2021) harvest were at an extremely low level. Milling wheat had 0.1% of the 2021 crop unsold (100 t), feed barley had 0.03% unsold (100 t), milling oats had 0.7% unsold (120 t), and feed oats had 0.2% unsold (30 t). The other two crops (feed wheat and malting barley) had no unsold carry-over grain.

In terms of *sold* carry-over grain stored on farm from the 2021 harvest, there was just one crop with a small amount of grain sold and stored. This was feed barley (1,000 t).

In the last four rows, Table 2 tracks the movement of unsold grain from the 2021 harvest between 10 October, 2021 and 1 April, 2022. For feed wheat and malting barley, all of the grain (100%) that was unsold as at 10 October, 2021, was sold between these two dates. For milling wheat, 99% of unsold grain was sold between these two dates, and for feed barley, 99.6% of unsold grain was sold between these two dates. For milling oats, 74% was sold between the two dates, and for feed oats, 91% was sold between the 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, 2022 is 102,800 tonnes of feed wheat and 76,400 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 179,200 tonnes, as compared to the amount on 1 April, 2021, of 189,800 tonnes.

**Table 2. Carry-over stock on hand from the 2021 harvest, as at April 1, 2022.**

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
<b>Number of survey farmers who harvested this crop in 2021</b>	<b>51</b>	<b>91</b>	<b>24</b>	<b>99</b>	<b>10</b>	<b>28</b>	<b>135</b>
<b>Number of survey farmers with carry-over grain from 2021 crop on 1 April, 2022</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>6</b>
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
Estimated NZ total 2021 harvest still on farms on 1 April, 2022 (tonnes)	95	0	0	1,046	121	28	1,289
Estimated NZ unsold stocks on hand of 2021 harvest on 1 April, 2022 as a percentage of tonnes harvested in 2021	0.1%	0.0%	0.0%	0.0%	0.7%	0.2%	0.0%
<b>Comparative figures from last year (1 April, 2021 AIMI survey)</b>	<b>tonnes</b>	<b>tonnes</b>	<b>tonnes</b>	<b>tonnes</b>	<b>tonnes</b>	<b>tonnes</b>	<b>tonnes</b>
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
<b>Comparative figures from year before that (1 April, 2020 AIMI survey)</b>							
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
<b>Comparative figures from two years before that (1 April, 2019 AIMI survey)</b>							
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
<b>Comparative figures from three years before that (1 April, 2018 AIMI survey)</b>							
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
<b>Comparative figures from four years before that (1 April, 2017 AIMI survey)</b>							
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
<b>Comparative figures from five years before that (1 April, 2016 AIMI survey)</b>							
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
<b>Comparative figures from six years before that (1 April, 2015 AIMI survey)</b>							
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
<b>Comparative figures from seven years before (1 April, 2014 AIMI survey)</b>							
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
<b>Comparative figures from eight years before (1 April, 2013 AIMI survey)</b>							
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

**Table 2 (continued).**

	<b>Milling wheat</b>	<b>Feed wheat</b>	<b>Malting barley</b>	<b>Feed barley</b>	<b>Milling oats</b>	<b>Feed oats</b>	<b>Total (all crops)</b>
<b>Number of survey farmers who harvested this crop in 2021</b>	<b>51</b>	<b>91</b>	<b>24</b>	<b>99</b>	<b>10</b>	<b>28</b>	<b>135</b>
<b>Number of survey farmers with carry-over grain from 2021 crop on 1 April, 2022</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>6</b>
Estimated NZ total unsold stocks on hand (2021 crop) on 10 October, 2021	7,863	18,450	2,839	18,823	472	296	48,743
Estimated NZ total unsold stocks on hand (2021 crop) on 1 April, 2022 (as above)	95	0	0	75	121	28	318
Reduction in estimated NZ total unsold stocks on hand (2021 crop) between 10 October, 2021 and 1 April, 2022 (tonnes)	7,768	18,450	2,839	18,748	351	269	48,425
As a percentage, reduction in estimated NZ total unsold stocks on hand (2021 crop) between 10 October, 2021 and 1 April, 2022	99%	100%	100%	100%	74%	91%	99%

**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, 2021 and April, 2022).

**Table 3. Autumn/winter sowings and sowing intentions as at April 1, 2022 and comparisons with previous years' estimates.**

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
<b>Number of farmers in the survey who have sown or intend to sow this crop in the autumn or winter, as at 1 April, 2022</b>	<b>24</b>	<b>85</b>	<b>3</b>	<b>53</b>	<b>4</b>	<b>5</b>	<b>103</b>
Estimated NZ total hectares, 2021 harvest (autumn/winter plus spring sown crops, combined)	11,706	33,394	7,201	36,599	2,358	2,242	93,500
Estimated NZ total hectares, 2022 harvest (autumn/winter plus spring sown crops, combined)	7,774	35,370	5,929	43,472	2,916	1,728	97,188
Estimated NZ total hectares already sown, as at 1 April, 2022	0	2,672	0	250	0	0	2,923
Estimated NZ total hectares intending to sow in autumn or winter, as at 1 April, 2022	5,428	29,592	625	17,643	485	373	54,147
Estimated NZ total autumn/ winter 2022 sowings and/or sowing intentions as at April 1, 2022 (hectares, for harvest in 2023)	5,428	32,265	625	17,893	485	373	57,069
Estimated percentage of autumn/ winter 2022 sowings already sown by 1 April, 2022	0.0%	8.3%	0.0%	1.4%	0.0%	0.0%	5.1%
Average over previous 7 years of % of autumn/ winter sowings already sown by 1 April	2.1%	14.3%	0.0%	5.4%	3.9%	2.2%	-
<b>Comparative figures from the same time in eleven previous years (1 April AIMI surveys)</b>							
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, 2020 to 2021 (ha)	-1,763	-268	-2,409	137	-127	39	-4,391
Estimated change in autumn/ winter sowings & intentions, 2021 to 2022 (ha)	-1,026	190	-996	2,987	-433	-161	560
Estimated % change in autumn/ winter sowings & intentions, 2021 to 2022	-16%	1%	-61%	20%	-47%	-30%	1%

Table 3 above shows that most autumn/winter cereal crops had not been sown by 1 April, 2022. For feed wheat, 8% had been sown, and for feed barley, 1% had been sown. No milling wheat, malting 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 seven years, as reported in Table 3.

For feed wheat, autumn/winter sowings plus sowing intentions for 2022, as at 1 April, 2022, are *similar* to the same time last year, 1 April, 2021 (up 1%, or up 200 hectares). For feed barley, autumn/winter sowings plus sowing intentions for 2022, as at 1 April, 2022, are *considerably higher* than at the same time last year, 1 April, 2021 (up 20%, or up 3,000 hectares). Autumn/winter sowings plus sowing intentions for 2022 are *down* 16% for milling wheat (down 1,000 ha), *down* 61% for malting barley (down 1,000 ha), *down* 47% for milling oats (down 430 ha) and *down* 30% for feed oats (down 160 ha). When the autumn/winter sowings plus sowing intentions are summed over the four wheat and barley crops, the prediction is for a 2% increase in autumn/winter sowings (a 1,200 ha increase in area sown). This predicted increase in area sown in the autumn/winter of 2022 reduces to an increase of 600 hectares when we add in the two oats crops.

© Foundation for Arable Research (FAR)

DISCLAIMER: This report is intended to provide accurate and adequate information relating to the subject matter contained in it. It has been prepared and made available to all persons and entities strictly on the basis that FAR, its researchers and authors are fully excluded from any liability for damages arising out of any reliance in part or in full upon any of the information for any purpose.

Report group\*                   **141**  
 Completed Survey               141  
 Out of                               **148**

\* Must have completed Oct 21 and Apr 22

#### Number of participants that HAVE HARVESTED this crop in 2022 (by April 1, 2022) (from 141 responses):

Region	Milling Wheat	Feed Wheat	Malting Barley	Feed Barley	Milling Oats	Feed Oats
ENI	2	5	4	7	1	2
SWNI	1	3	2	1		
NSI	10	16	4	28		3
MC	23	31	11	30	1	6
SCNO	7	18	1	14		5
SOS		21	1	27	12	7
<b>Total</b>	<b>43</b>	<b>94</b>	<b>23</b>	<b>107</b>	<b>14</b>	<b>23</b>

#### Average yields of harvested grain (from 141 responses, unscaled data):

Region	Milling Wheat	Feed Wheat	Malting Barley	Feed Barley	Milling Oats	Feed Oats
ENI	7.4	7.2	5.8	5.2	4.3	7.2
SWNI	7.5	4.8	7.4	3.5		
NSI	8.2	9.6	7.5	7.3		5.4
MC	8.9	10.2	7.9	7.4	7.0	6.8
SCNO	8.1	8.9	6.7	6.8		4.8
SOS		10.5	7.5	8.4	7.0	6.6
<b>Average</b>	<b>8.4</b>	<b>9.8</b>	<b>7.3</b>	<b>7.3</b>	<b>7.0</b>	<b>6.4</b>

#### Tonnes of unsold grain (incl. yet to harvest) (from 141 responses) - SCALED TO NZ FIGURES:

Region	Milling Wheat	Feed Wheat	Malting Barley	Feed Barley	Milling Oats	Feed Oats	Region Total
ENI	667	2,219		5,739			<b>8,625</b>
SWNI							
NSI	7,453	4,067		16,006		45	<b>27,571</b>
MC	10,467	30,740	3,848	31,371		981	<b>77,407</b>
SCNO	2,524	30,718	2,765	11,433		69	<b>47,509</b>
SOS		35,062		11,761	7,353	847	<b>55,023</b>
<b>Total</b>	<b>21,111</b>	<b>102,807</b>	<b>6,613</b>	<b>76,309</b>	<b>7,353</b>	<b>1,942</b>	<b>216,135</b>

#### Comments:

##### Harvest/yields

- majority said difficult harvest, poor yields – all regions
- yields were good or average – Southland, South Canterbury, some dryland MC

**Price/demand** – Price for grain going up which is welcomed, offset by the increase in costs

**Sowings** – many going to sow in spring



## Totals over 141 survey responses

**Table A.1 Data totalled over all survey respondents**

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
<b>Number of farmers in the survey who harvested or will harvest this crop in 2022</b>		<b>43</b>	<b>94</b>	<b>23</b>	<b>107</b>	<b>14</b>	<b>23</b>
<b>Number of survey farmers who have already harvested some or all of this crop, as at 1 April, 2022</b>		<b>43</b>	<b>94</b>	<b>23</b>	<b>107</b>	<b>14</b>	<b>22</b>
<b>Number of survey farmers who are still to harvest some or all of this crop, as at 1 April, 2022</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>
<b>2021 harvest</b>							
Total hectares on survey farms, 2021 harvest	ha	2,501	7,135	921	4,681	628	597
Total tonnes on survey farms, 2021 harvest	tonnes	21,703	70,894	7,718	35,629	4,901	3,520
<b>2022 harvest</b>							
Total hectares on survey farms, 2022 harvest	ha	1,661	7,557	758	5,560	776	460
Total tonnes on survey farms, 2022 harvest	tonnes	14,008	73,924	5,502	40,741	5,444	2,955
Total hectares on survey farms, already harvested by 1 April, 2022	ha	1,641	7,551	758	5,485	776	450
Total tonnes on survey farms, already harvested by 1 April, 2022	tonnes	13,818	73,874	5,502	40,332	5,444	2,900
Total hectares on survey farms, yet to harvest (as at 1 April, 2022)	ha	20	6	0	75	0	10
Total tonnes on survey farms, yet to harvest (as at 1 April, 2022)	tonnes	190	50	0	409	0	55
<b>2022 harvest so far</b>							
Sold under pre-harvest contract and delivered by 1 April, 2022	tonnes	1,333	11,060	1,173	13,203	373	736
Pre-harvest contract grain stored on farm on 1 April, 2022	tonnes	6,543	27,395	3,196	9,692	2,856	1,224
Sold at spot/free price and delivered by 1 April, 2022	tonnes	454	4,962	30	3,488	80	268
Sold at spot/free price and stored on farm on 1 April, 2022	tonnes	765	8,684	0	2,963	0	57
(For milling or malting only) Sold for feed by 1 April, 2022	tonnes	480	-	218	-	0	-
(For feed only) Used on own farm by 1 April, 2022	tonnes	-	237	-	874	-	51
Unsold stocks on hand (2022 harvest only) on 1 April, 2022	tonnes	4,243	21,537	885	10,112	2,135	564
<b>2022 yet to harvest</b>							
Unharvested grain sold under pre-harvest contract by 1 April, 2022	tonnes	0	0	0	309	0	55
<b>Comparison of yield (tonnes per ha) on survey farms between harvests</b>							
Survey farms, 2021 harvest	t/ha	8.7	9.9	8.4	7.6	7.8	5.9
Survey farms, 2022 harvest	t/ha	8.4	9.8	7.3	7.3	7.0	6.4

In Table A.1, the yields per hectare on the survey farms were lower for the 2022 harvest as compared to the 2021 harvest except for feed oats, which had higher yields in 2022 than 2021.

**Table A.2 Fate of 2022 crop, in percentages (by tonnes)**

		Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
<b>Number of farmers in the survey who harvested or will harvest this crop in 2022</b>	<b>Units</b>	<b>43</b>	<b>94</b>	<b>23</b>	<b>107</b>	<b>14</b>	<b>23</b>
<b>2022 harvested grain: % of total crop</b>							
% Sold under pre-harvest contract and delivered by 1 April, 2022	%	9.5	15.0	21.3	32.4	6.9	24.9
% Pre-harvest contract grain stored on farm on 1 April, 2022	%	46.7	37.1	58.1	23.8	52.5	41.4
% Sold at spot/free price and delivered by 1 April, 2022	%	3.2	6.7	0.5	8.6	1.5	9.1
% Sold at spot/free price and stored on farm on 1 April, 2022	%	5.5	11.7	0.0	7.3	0.0	1.9
(For milling or malting only) % Sold for feed by 1 April, 2022	%	3.4	-	4.0	-	0.0	-
(For feed only) % Used on own farm by 1 April, 2022	%	-	0.3	-	2.1	-	1.7
% Unsold stocks on hand (2022 harvest only) on 1 April, 2022	%	30.3	29.1	16.1	24.8	39.2	19.1
<b>2022 unharvested grain: % of total crop</b>							
% Unharvested grain sold under pre-harvest contract by 1 April, 2022	%	0.0	0.0	0.0	0.8	0.0	1.9
% Unharvested grain unsold on 1 April, 2022	%	1.4	0.1	0.0	0.2	0.0	0.0
<b>Sales channels (2022 harvest): includes unharvested grain</b>							
% Sold under pre-harvest contract (total) by 1 April, 2022 (includes sold, unharvested grain)	%	56.2	52.0	79.4	57.0	59.3	68.2
% Sold at spot/free price (total) by 1 April, 2022 (includes sold for feed and used on farm)	%	12.1	18.8	4.5	18.0	1.5	12.7
<b>Delivery status of sold grain (2022 harvest): includes unharvested grain</b>							
% Sold and delivered (total) by 1 April, 2022 (includes sold for feed and used on farm)	%	16.2	22.0	25.8	43.1	8.3	35.7
% Sold and stored on farm (total) on 1 April, 2022 (includes sold, unharvested grain)	%	52.2	48.8	58.1	31.8	52.5	45.2
<b>Total sales (2022 harvest): includes unharvested grain</b>							
% Sold (of total crop) by 1 April, 2022 (includes sold for feed, used on farm, and sold, unharvested grain)	%	68.4	70.8	83.9	74.9	60.8	80.9
% Unsold (of total crop) on 1 April, 2022 (includes unsold, unharvested grain)	%	31.6	29.2	16.1	25.1	39.2	19.1

In Table A.2, the data in Table A.1 are expressed as percentages.

**Table A.3 Crops remaining on farms from 2021 harvest (data totalled over all survey respondents)**

	Milling wheat (Tonnes)	Feed wheat (Tonnes)	Malting barley (Tonnes)	Feed barley (Tonnes)	Milling oats (Tonnes)	Feed oats (Tonnes)
<b>Number of survey farmers who harvested this crop in 2021</b>	51	91	24	99	10	28
<b>Number of survey farmers with 2021 crop sold and stored on farm on 1 April, 2022</b>	0	0	0	2	0	0
<b>Number of survey farmers with unsold stocks on hand of 2021 crop on 1 April, 2022</b>	1	0	0	1	1	2
<b>Total number of survey farmers with carry-over grain from 2021 crop on 1 April, 2022</b>	1	0	0	3	1	2
<b>Tonnes sold and stored on survey farms (2021 crop) on 1 April, 2022</b>	0	0	0	130	0	0
<b>Unsold stocks on hand (2021 crop) on survey farms on 1 April, 2022 (tonnes)</b>	20	0	0	10	35	8
<b>Total 2021 harvest still on survey farms on 1 April, 2022 (tonnes)</b>	20	0	0	140	35	8
<b>Unsold stocks on hand of 2021 harvest on 1 April, 2022 as percentage of tonnes harvested in 2021 [on survey farms]</b>	0.1%	0.0%	0.0%	0.0%	0.7%	0.2%
<b>Change in unsold 2021 harvest grain on survey farms between 10 Oct, 2021 and 1 April, 2022 (MATCHED comparison on the SAME survey farms)</b>						
<b>Unsold stocks on hand (2021 crop) on survey farms on 10 October, 2021 (tonnes)</b>	1,651	3,874	380	2,519	137	86
<b>Unsold stocks on hand (2021 crop) on survey farms on 1 April, 2022 (tonnes) (as above)</b>	20	0	0	10	35	8
<b>Reduction in unsold stocks on hand (2021 crop) between 10 October, 2021 and 1 April, 2022 (tonnes)</b>	1,631	3,874	380	2,509	102	78
<b>As a percentage, reduction in unsold stocks on hand (2021 crop) between 10 October, 2021 and 1 April, 2022</b>	99%	100%	100%	100%	74%	91%

Table A.3 reports on the tonnages of grain (both sold and unsold) carried over on farms from the previous harvest (2021). As a percentage of each crop harvested in 2021, the carryover is extremely low.

At the bottom of the table, the reduction in unsold 2021 harvest grain on the survey farms is calculated for each crop between the last survey date (10 October 2021) and the present survey date (1 April 2022). These percentages are close to 100% for the four wheat and barley crops, and 74% and 91% for milling oats and feed oats respectively.

In Table A.4, autumn/winter sowings and autumn/winter sowing intentions are given as sums over the 141 survey farms.

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, 2022	24	85	3	53	4	5
Number of survey farmers who have already sown this crop, as at 1 April, 2022	0	7	0	2	0	0
Number of survey farmers who intend to sow this crop in the autumn or winter, as at 1 April, 2022	24	83	3	51	4	5
Total hectares on survey farms, 2021 harvest (autumn/winter plus spring sown crops, combined)	2,501	7,135	921	4,681	628	597
Total hectares on survey farms, 2022 harvest (autumn/winter plus spring sown crops, combined)	1,661	7,557	758	5,560	776	460
Total hectares already sown on survey farms, as at 1 April, 2022	0	571	0	32	0	0
Total hectares intending to sow in autumn or winter on survey farms, as at 1 April, 2022	1,160	6,323	80	2,257	129	99
Autumn/winter 2022 sowings and/or sowing intentions on survey farms as at April 1 2022 (hectares, for harvest in 2023)	1,160	6,894	80	2,289	129	99
Percentage of autumn/winter 2022 sowings already sown by 1 April, 2022	0.0%	8.3%	0.0%	1.4%	0.0%	0.0%

Table A.5 Scaling up from survey totals to NZ-wide totals using Provisional 2021 Agricultural Production Statistics (APS)

	Units	Total wheat	Total barley	Total oats
Total hectares on survey farms, 2021 harvest	ha	9,636	5,602	1,225
Total tonnes on survey farms, 2021 harvest	tonnes	92,597	43,347	8,421
APS statistics for 2021 harvest, total hectares	ha	45,100	43,800	4,600
APS statistics for 2021 harvest, total tonnes	tonnes	441,000	323,900	29,000
<b>Multiplier for scaling up from 2021 survey farm totals to 2021 APS totals</b>				
Hectares		4.680	7.819	3.757
Tonnes		4.763	7.472	3.444
<b>Comparison of 2021 harvest yields between survey and APS statistics</b>				
Survey farms, 2021 harvest	t/ha	9.6	7.7	6.9
APS statistics, 2021 harvest	t/ha	9.8	7.4	6.3

For scaling up to NZ-wide totals, the most recent figures are the Provisional 2021 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 oats, and lower for wheat.

From the scale-up factors, we can see what percentage of the area of each 2021 harvest crop was on the survey farms. For wheat, it was  $100 / 4.680 = 21.4\%$ . For barley, it was  $100 / 7.819 = 12.8\%$ . For oats, it was  $100 / 3.757 = 26.6\%$ . That is, the percentages were relatively high for both wheat and oats (with over one fifth and one quarter, respectively, of hectares sampled in the survey), and lower for barley (with over one eighth of hectares sampled).

**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 (as in Figure 4, where the last two years are matched).