

## SUMMARY - SURVEY OF CEREAL AREAS AND VOLUMES – JULY 1, 2014

### Introduction

The objective of this AIMI survey of growers was to determine:

- 2014 harvest production of wheat, barley and oats (final figures)
- Sales channels and levels of on-farm storage
- Autumn plantings and spring planting intentions

The data from the 127 survey farms as at July 1, 2014 are scaled up to the national level using the most recent Agricultural Production Statistics. As with all surveys, there is a margin of error which needs to be considered in relation to this report.

At the 1<sup>st</sup> July 2014:

- For the 2014 harvest (final figures), the average yield of milling wheat (8.7 t/ha), including biscuit and gristing wheats, was slightly down on the 2013 harvest yield (of 9.4 t/ha, on the same survey farms). Yields of the other five crops were very similar between the 2014 harvest and the previous, 2013 harvest. For feed wheat, yields were 8.9 t/ha in 2014 as compared to 9.1 t/ha in 2013. For malting barley, yields were 7.8 t/ha in 2014 as compared to 7.6 t/ha in 2013. For feed barley, yields were 7.6 t/ha in 2014 as compared to 7.5 t/ha in 2013. For milling oats, yields were 6.8 t/ha in 2014 as compared to 6.6 t/ha in 2013. For feed oats, yields were 5.5 t/ha in 2014 as compared to 5.7 t/ha in 2013. The 2014 harvest followed “two years in a row” (2012 and 2013 harvests) of very good growing season in most areas, so the 2014 harvest yields were surprisingly high (though in many areas, obtained at greater expense in terms of disease control than the preceding seasons).
- For feed wheat and feed barley, the similarity of yield between the 2013 and 2014 harvests, along with small estimated changes in areas harvested, resulted in small estimated changes in the tonnes of feed grains harvested (feed wheat 4% decrease; feed barley 6% increase).

- The effect of the carryover of stock as a result of the high volumes of feed grain produced in the last two growing seasons (bumper 2012 and 2013 harvests) is now gone, and tonnages of feed grain unsold on farm (as at July 1) are back to more normal levels. For feed wheat there was an estimated 44,000 tonnes unsold on July 1, 2014 (as compared to 100,000t in the July 1, 2013 AIMI survey report, 128,000t in the July 1, 2012 AIMI survey report and 38,000t in the July 1, 2011 AIMI survey report). For feed barley there was also 44,000 tonnes unsold (as compared to 68,000t unsold in 2013, 113,000t in 2012 and 67,000t in 2011).
- For feed wheat, total stocks on farm (sold and unsold) on July 1, 2014, are estimated to be 179,000 tonnes, which is down compared to the same time in the last two years (251,000t in 2013, 274,000t in 2012 and 100,000t in 2011). For feed barley, stocks are estimated to be 185,000 tonnes, which is down slightly on the last two years (216,000t in 2013, 208,000t in 2012 and 123,000t in 2011).
- For milling wheat, there was an estimated 24,000t of unsold grain on farm as at July 1 2014 (as compared to 48,000t unsold grain on farm on July 1, 2013, 29,000t in 2012, and 20,000t in 2011). Total stocks on farm (sold and unsold) on July 1, 2014 of milling wheat are estimated to be 98,000t, which is down compared to the same time last year (120,000t in 2013, 96,000t in 2012, and 101,000t in 2011).
- Sales of the six crops in the three-month period between surveys (April 1, 2014 to July 1, 2014) are estimated to be 6,700 tonnes of milling wheat (22% of the grain that was unsold on April 1, 2014), 16,600t of feed wheat (28% of the unsold grain), 5,500t of malting barley (87% of the unsold grain), 16,100t of feed barley (27% of the unsold grain), 1,000t of milling oats (41% of the unsold grain), and 100t of feed oats (14% of the unsold grain).
- The areas of milling and feed wheat, and malting and feed barley crops planted in the autumn were down by 17 - 21% (as at July 1, 2014) when compared with plantings plus intended plantings at the time of the last survey (April 1, 2014), presumably because of the exceptionally wet weather that occurred during March and April in the main cropping areas. Unlike the wet autumn last year (2013), when priority was given to getting the feed wheat into the ground (down only 2% on intentions) at the expense of feed barley (down 32% on intentions) which was delayed until the spring, the sowing of the feed wheat crop was badly affected in autumn 2014 (down 18% on intentions), with feed barley also affected (down 21% on intentions).
- When the areas of wheat, barley and oats planted in the autumn are combined with spring planting intentions, the predicted area of feed barley is up by approximately 18%, while the areas of feed wheat and feed oats are predicted to remain the same (0% change) as

last year. Areas of milling wheat and oats and malting barley are predicted to be up 1%, down 14% and down 10% respectively on what was sown last year (autumn and spring 2013), though these estimated changes are within the margin of error for the survey, so the predicted changes may not be real.

- These figures reflect the position at the 1<sup>st</sup> July 2014 and there may have been sales since this time. There will also have been changes in planting intentions in relation to soil and weather conditions and market trends.

## Estimated national figures for 2013 and 2014 as at July 1, 2014

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
<b>Number of farmers in the survey who harvested this crop in 2014</b>		<b>40</b>	<b>84</b>	<b>24</b>	<b>96</b>	<b>11</b>	<b>12</b>
<b>2013 harvest</b>							
Estimated NZ total hectares, 2013 harvest	Ha	13,557	35,643	9,342	51,958	4,074	1,370
Estimated NZ total tonnes, 2013 harvest	Tonnes	125,522	322,278	64,397	352,103	21,869	6,356
<b>2014 harvest</b>							
Estimated NZ total hectares, 2014 harvest	Ha	14,419	35,226	7,761	53,903	3,920	1,626
Estimated NZ total tonnes, 2014 harvest	Tonnes	124,159	310,782	54,812	371,601	21,453	7,181
Sold on pre-harvest contract and delivered by July 1 2014	Tonnes	16,625	100,306	25,947	120,785	3,327	2,897
Sold on pre-harvest contract and stored on farm on July 1 2014	Tonnes	69,893	104,932	22,043	114,092	15,554	1,802
Sold at spot/ free price and delivered by July 1 2014	Tonnes	1,274	23,047	1,212	62,284	1,178	1,504
Sold at spot/ free price and stored on farm on July 1 2014	Tonnes	4,351	30,193	0	27,004	0	0
(For milling or malting only) Downgraded and sold as feed by July 1 2014	Tonnes	8,419	-	4,814	-	0	-
(For feed only) Used on own farm by July 1 2014	Tonnes	-	8,743	-	3,688	-	277
Unsold on July 1 2014	Tonnes	23,598	43,562	797	43,748	1,393	700
<b>Sales channels (2014 harvest)</b>							
Sold on pre-harvest contract (total) by July 1 2014	Tonnes	86,517	205,238	47,990	234,877	18,881	4,700
Sold at spot/ free price (total) by July 1 2014	Tonnes	5,624	53,240	1,212	89,288	1,178	1,504
<b>On farm storage (2014 harvest)</b>							
Sold and delivered (total) by July 1 2014	Tonnes	17,898	123,353	27,159	183,069	4,505	4,401
Sold and stored on farm (total) on July 1 2014	Tonnes	74,243	135,125	22,043	141,096	15,554	1,802
<b>Total sales (2014 harvest)</b>							
Sold (grand total) by July 1 2014 (includes used on farm)	Tonnes	100,561	267,221	54,016	327,853	20,060	6,481
Unsold (from 2014 harvest) on July 1 2014	Tonnes	23,598	43,562	797	43,748	1,393	700
<b>Comparison of hectares and tonnages between last two harvests</b>							
Estimated % change in hectares, 2013 to 2014 harvest	%	6.4	-1.2	-16.9	3.7	-3.8	18.8
Estimated % change in tonnes, 2013 to 2014 harvest	%	-1.1	-3.6	-14.9	5.5	-1.9	13.0

**Comparison of Unsold grain as at July 1, 2014, with Unsold grain as at April 1, 2014**

Unsold (2014 harvest) as at April 1 2014 (includes unharvested grain) (new matched estimate, based upon scaling up data from exact same 127 survey farms as above)	Tonnes	30,344	60,166	6,337	59,817	2,371	818
Unsold (2014 harvest) on July 1 2014 ( <i>as above</i> )	Tonnes	23,598	43,562	797	43,748	1,393	700
Estimated % drop in tonnes of Unsold grain between 1 April 2014 and 1 July 2014	%	22%	28%	87%	27%	41%	14%

In the table above, the last two rows shown on the previous page are a comparison of estimated total NZ hectares and tonnages between the 2013 and 2014 harvests. For the 2014 harvest, these are based on final figures which include actual (instead of estimated) tonnages for the grain which was still to be harvested at the time of the last survey on April 1, 2014. Looking at the three largest crops (milling and feed wheat and feed barley), estimated final total NZ tonnages for the 2014 harvest were up slightly for feed barley and down slightly for feed wheat when compared to the 2013 harvest (which was a very good harvest); for milling wheat, tonnages were very similar between the two harvests.

The percentage changes in tonnage from 2013 to 2014 are accounted for by changes in hectares harvested and by changes in yield per hectare. However, for all six crops, the changes in hectares and tonnage are within the margin of error of the survey, so there is no definite proof of a change from 2013 to 2014.

The very last two rows of the table, which appear at the top of this page, allow a comparison of the levels of unsold grain at this July 1, 2014 survey point compared with the previous survey point at April 1, 2014. For malting barley, 87% of the grain that was unsold at April 1, 2014, had been sold by July 1, 2014. The next highest was milling oats, for which 41% of the grain that was unsold on April 1, 2014, had been sold by July 1, 2014. For the unsold grain for the three largest crops, the percentages sold between the survey points were 22% for milling wheat, 28% for feed wheat and 27% for feed barley. For feed oats, the estimate of sales of unsold grain was the lowest of the crops, at 14%.

## Plantings and planting intentions as at July 1, 2014

	Milling wheat (ha)	Feed wheat (ha)	Malting barley (ha)	Feed barley (ha)	Milling oats (ha)	Feed oats (ha)
Estimated NZ total hectares, 2013 harvest	13,557	35,643	9,342	51,958	4,074	1,370
Estimated NZ total hectares, 2014 harvest	14,419	35,226	7,761	53,903	3,920	1,626
Estimated NZ total autumn/ winter 2014 plantings as at July 1, 2014 (hectares for harvest in 2015)	5,631	28,031	968	19,718	873	223
Estimated NZ total spring 2014 planting intentions at at July 1, 2014 (hectares for harvest in 2015)	8,968	7,265	6,055	43,939	2,517	1,395
Predicted NZ total hectares, 2015 harvest (Autumn /winter 2014 and Spring 2014 planting intentions combined)	14,599	35,296	7,023	63,657	3,390	1,618
<b>Comparison of hectares between 2013, 2014 and 2015 (predicted) harvests</b>						
Estimated % change in NZ total harvest hectares, 2013 to 2014	6.4	-1.2	-16.9	3.7	-3.8	18.8
Estimated % change in NZ total harvest hectares, 2014 to 2015 harvest (predicted)	1.3	0.2	-9.5	18.1	-13.5	-0.5
<b>Comparison of Autumn/ Winter 2014 <i>actual</i> plantings (as at July 1, 2014) with plantings plus intended plantings as at April 1, 2014</b>						
Estimated NZ total autumn/ winter 2014 plantings and intentions as at April 1, 2014 (date of previous survey) (hectares, for harvest in 2015) (new, matched estimate)	6,785	34,163	1,207	25,064	548	916
Percentage drop in autumn/ winter 2014 actual plantings (as at July 1, 2014) compared to plantings and intentions as at April 1, 2014	17%	18%	20%	21%	-59%	76%

For the three largest crops, the predicted total NZ 2015 harvest hectares are similar to 2014 harvest hectares for milling wheat (1% increase) and feed wheat (0% change), but the 2015 harvest for feed barley is predicted to be higher than the 2014 harvest, with a predicted increase of 18% in total NZ harvest hectares.

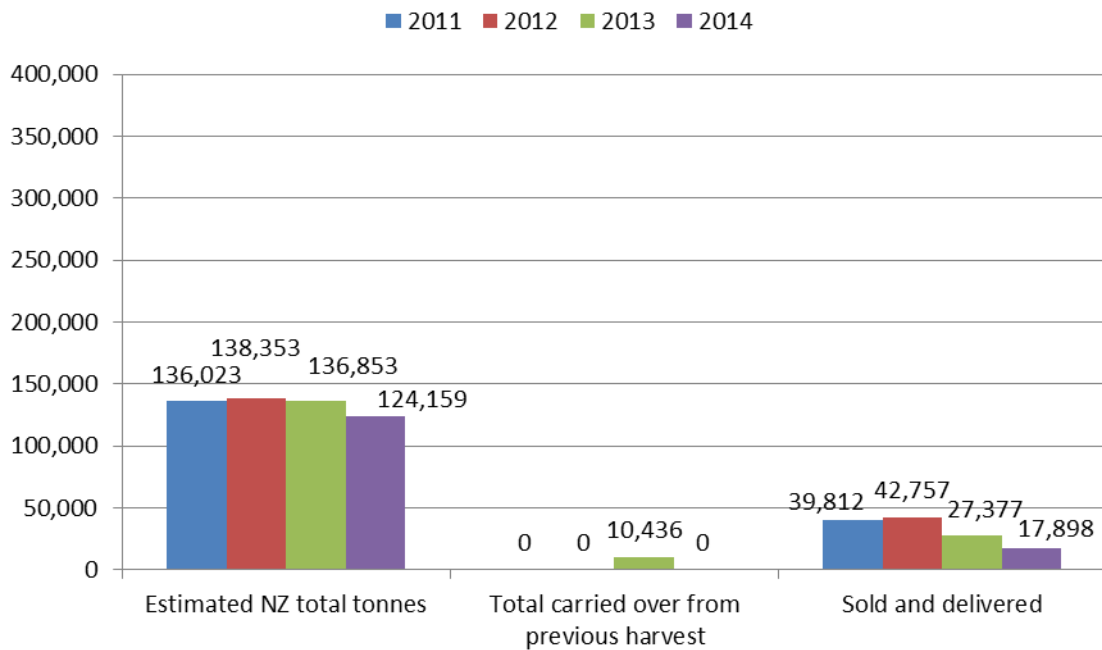
The last row of the table compares actual autumn plantings as at July 1, 2014 and the corresponding autumn planting intentions as at April 1, 2014. This reveals that the actual autumn sowings of milling and feed crops of both wheat and barley were 17 - 21% lower than the intended autumn sowings. This was presumably due to the extremely high autumn rainfall in many of the main cropping areas.

## Summary results in July each year – graphs

For the three main crops, the following graphs present information from the AIMI Survey Reports for July 1, 2011, 2012, 2013 and 2014 in graphical form. Note that for 2013, the estimated NZ total harvest tonnages differ from those presented in the first table of this report. The estimated harvest tonnages in the table are a more accurate, matched comparison of 2013 and 2014 harvest tonnages on the same survey farms (scaled up to national totals), so are the best figures for estimating changes in tonnage or hectares from 2013 to 2014. By comparison, the four July survey reports are based upon four different (though overlapping) survey samples, so the comparisons of estimated harvest tonnages from season to season are less precise. On the other hand, the successive July reports all provide information on the breakdown into the categories “sold and delivered”, “sold and stored”, “unsold” and so on, and these data are used here since this is the focus of these graphs.

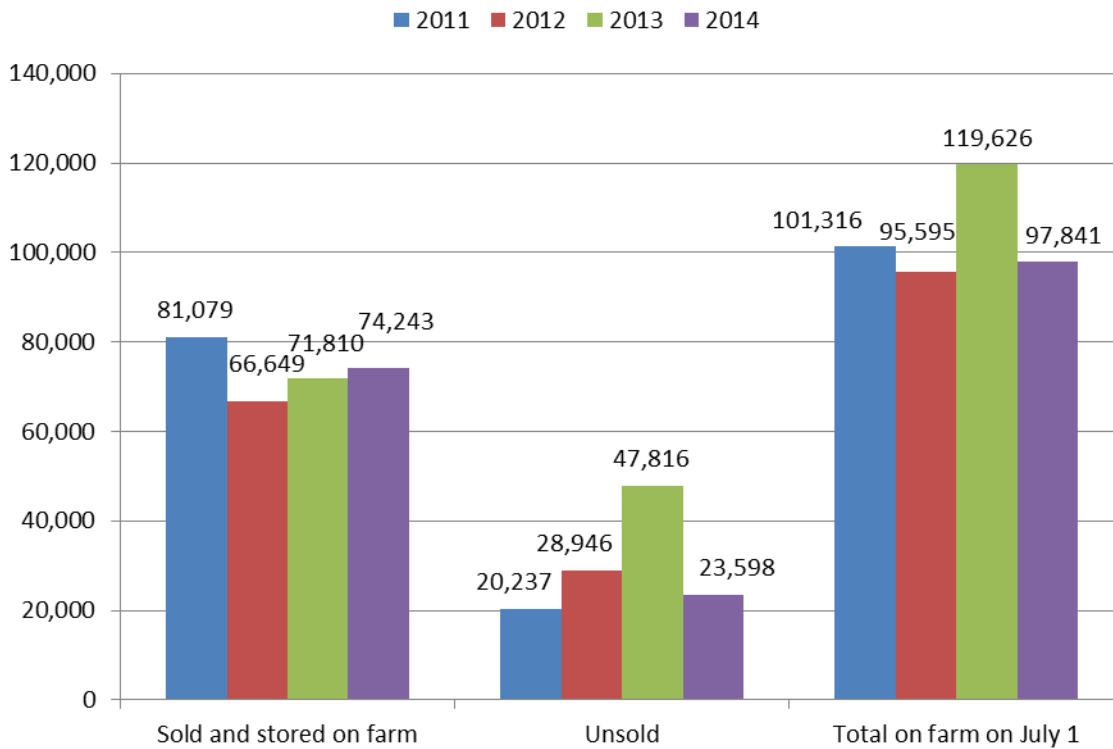
## Delivered Sales and Tonnage: Milling Wheat (Tonnes)

Note: Tonnes carried over from the previous harvest includes both sold and unsold stock on farm.  
Sold and delivered relates to the current crop, excluding sales of carryover stock.



## Stock on farms at July 1: Milling Wheat (Tonnes)

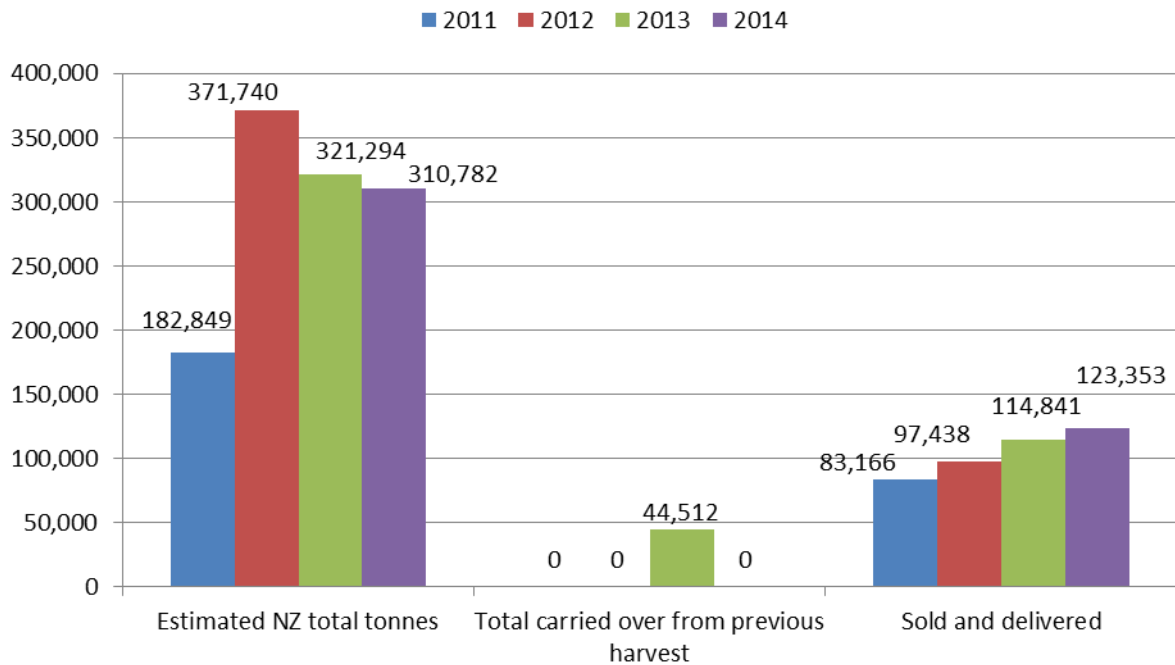
[Note: Carryover stock from the previous season is included in all three bar graphs.  
Stock used on farm is excluded.]





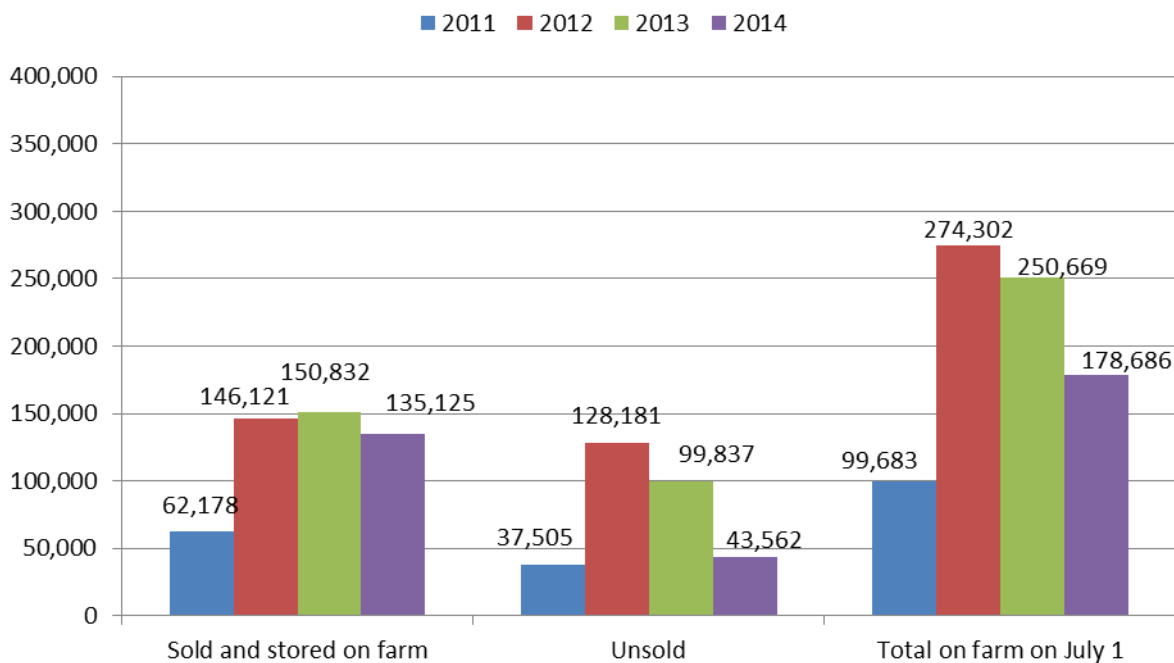
## Delivered Sales and Tonnage: Feed Wheat (Tonnes)

Note: Tonnes carried over from the previous harvest includes both sold and unsold stock on farm.  
Sold and delivered relates to the current crop, excluding sales of carryover stock.



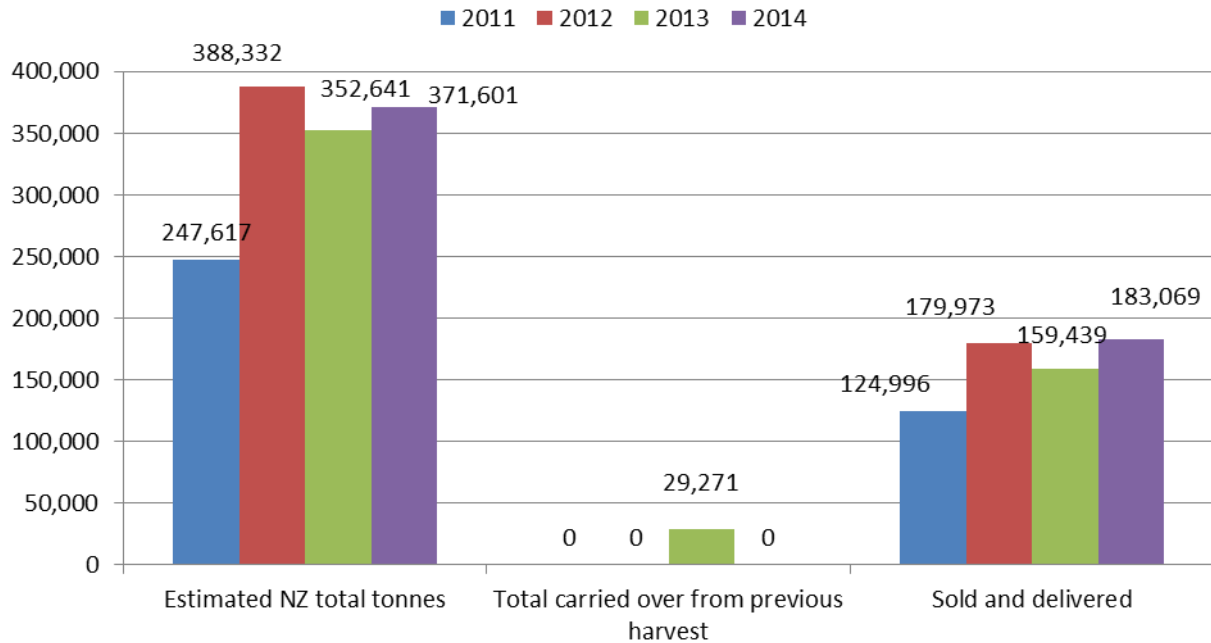
## Stock on farms at July 1: Feed Wheat (Tonnes)

[Note: Carryover stock from the previous season is included in all three bar graphs.  
Stock used on farm is excluded. ]



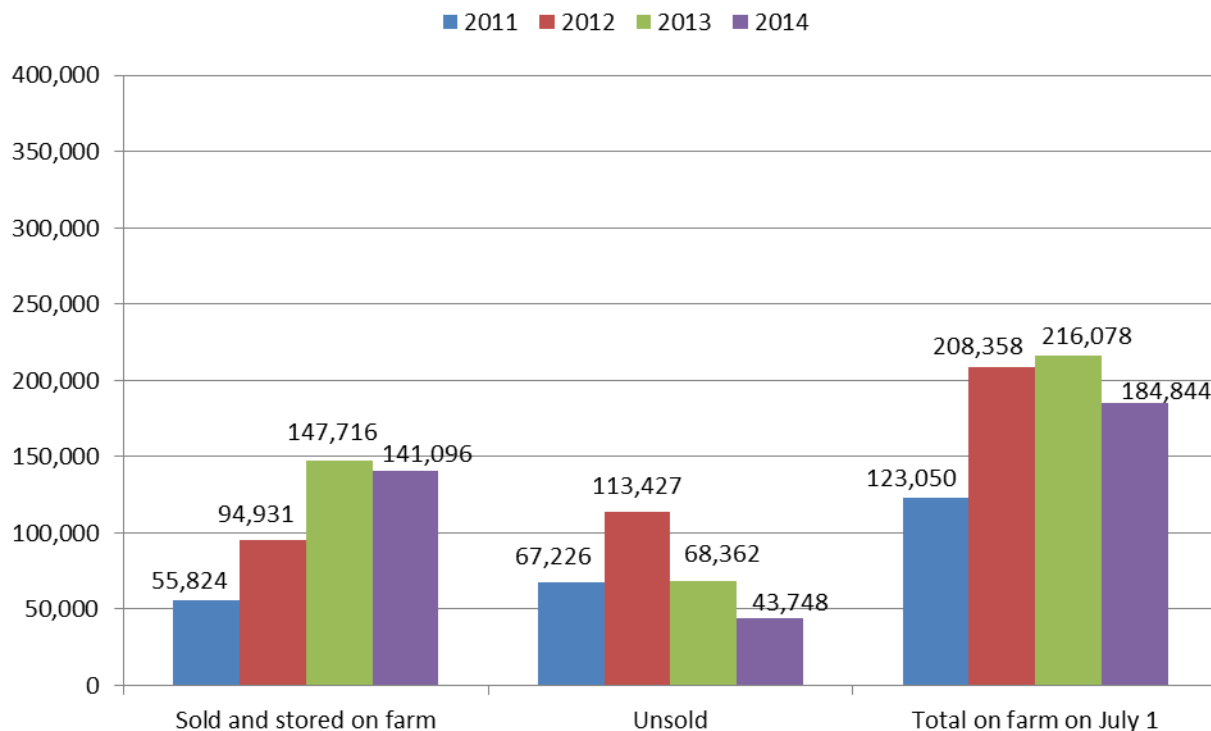
## Delivered Sales and Tonnage: Feed Barley (Tonnes)

Note: Tonnes carried over from the previous harvest includes both sold and unsold stock on farm.  
Sold and delivered relates to the current crop, excluding sales of carryover stock.



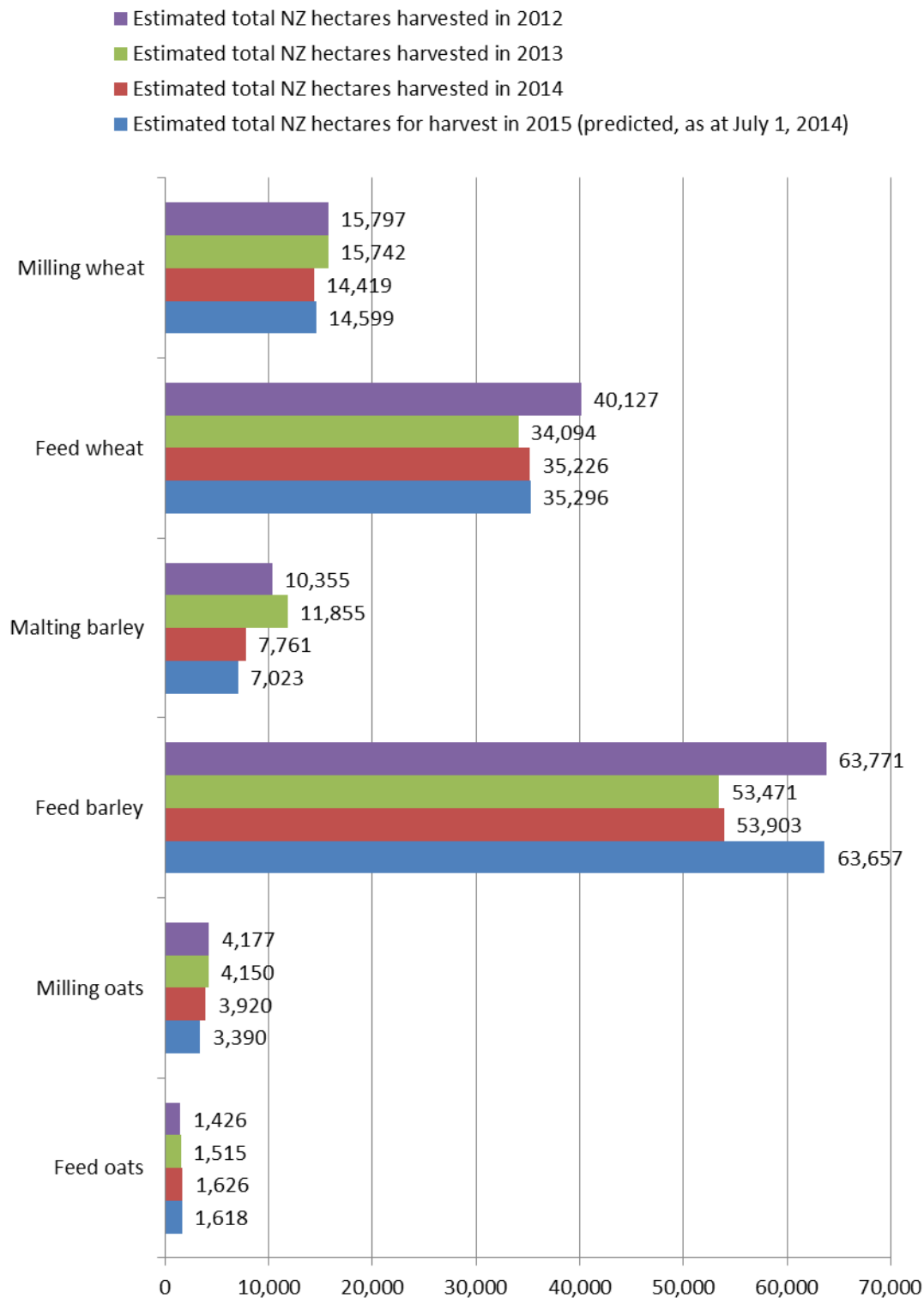
## Stock on farms at July 1: Feed Barley (Tonnes)

[Note: Carryover stock from the previous season is included in all three bar graphs.  
Stock used on farm is excluded. ]



## Estimated total hectares for harvest in 2015

The graph below shows the estimated total NZ hectares harvested in 2012, 2013 and 2014, as well as the predictions for the 2015 harvest. The 2015 figures are based on plantings in autumn and planting intentions for spring, and the earlier estimates are taken from the three previous July 1 AIMI survey reports.



Note: these are estimated totals derived from the survey, and have an associated margin of error.

## Comparison of yield (tonnes per ha) on survey farms between harvests

The graphs below present a comparison of yields (T/Ha) over the 2010, 2011, 2012, 2013, and 2014 harvests for the crops milling wheat, feed wheat, malting barley, feed barley, milling oats and feed oats.

The data presented here are from July 1 AIMI Survey reports, and are based upon different (though overlapping) survey samples, so the comparisons of estimated yield from season to season are not as precise as the comparison between the last two seasons based upon data from the same survey farms. We use this less precise method since it allows us to compare yields between five seasons rather than just two seasons.

To explain in more detail, the 2014 harvest yields are from this report (July 1, 2014), 2013 yields are from the July 1, 2013 AIMI Survey report, and the 2012, 2011 and 2010 harvest yields are from the July 1, 2012 AIMI Survey report (meaning the comparison is more precise between these first three seasons).

