SUMMARY - SURVEY OF CEREAL AREAS AND VOLUMES – APRIL 1, 2017

Introduction

The objective of this AIMI survey of growers was to determine, as at April 1, 2017:

- the size of the 2017 harvest of wheat, barley and oats
- the sales channels, storage status and unsold amount of the 2017 harvest
- the tonnages of carry-over stocks on farms from the 2016 harvest
- the sowing intentions for the autumn/ winter of 2017

The data from 122 survey farms as at April 1, 2017 were 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. These figures reflect the position at the 1st April 2017 and there will have been changes since this time.

Key Points at 1 April 2017 (figures have been rounded to nearest 100)**:**

- Average yields were up 8% (over all six crops) compared to last season, resulting in a 7% increase in total tonnage harvested from 1% less hectares harvested.
- Carry-over stocks were considerably lower than the previous season with the exception of feed oats.
- Feed wheat and barley have much lower stocks of unsold grain compared to this time last year, with milling wheat and oats at similar levels, but an increase in unsold stocks of feed oats.
- Autumn/winter sowings of feed barley and feed wheat are predicted to be up on predicted sowings a year ago. However these predictions are based mostly on intentions as very little crop had been sown by 1 April 2017.

Milling wheat: Estimated total tonnage (143,600 t) including unharvested grain (2%) was up 16% compared to last year's harvest. Of this total, 77% has been sold (110,800 t), although most of the sold grain is still stored on farm (80%). The amount of unsold grain is 32,800 tonnes (23%). Carryover of unsold grain from the 2016 harvest was 700 t, taking the estimate of unsold grain in the market to approximately 33,500 tonnes which is identical to 2016 (33,500 t), higher than 2015 (14,300 t) and 2014 (28,800 t), but lower than 2013 (61,200 t).

Feed wheat: Estimated total tonnage (346,800 t) including unharvested grain (1%) was up 18% compared to last year's harvest. Of this total, 75% has been sold (258,700 t), with 75% of the sold grain still stored on farm. The amount of unsold grain is 88,100 tonnes (25%). Unsold stock carried over from last season was 3,800 t, taking the estimate of total unsold grain in the market to 91,900 tonnes which is less than last season (174,000 t in 2016), 49,600 t in 2015, 68,100 t in 2014 and 138,700 t in 2013.

Feed barley: Estimated total tonnage (241,200 t) including unharvested grain (12%) was down 12% compared to last year. Of this total tonnage, 55% has been sold (133,200 t), with 59% of the sold grain still stored on farm. About 45% (108,000 t) remains unsold. Carryover of unsold grain was 3,600 t, taking the estimate of total unsold grain in the market to approximately 111,600 tonnes which is less than last season (174,000 t), higher than 2015 (75,400 t) and 2014 (56,300 t), and lower than 2013 (188,800 t).

For other cereals: Compared to last year, estimated total tonnages, including unharvested grain, for malting barley (74,700 t) increased by 5%, milling oats (34,000 t) was up by 69%, and feed oats (11,200 t) was down by 31%. All (100%) of the malting barley crop tonnage had been harvested by 1 April 2017, while 64% of milling oats and 18% of feed oats were yet to be harvested. For malting barley, 6% of the total harvest was unsold, while milling oats had 7% unsold and feed oats had 27% unsold as at 1 April, 2017. There were no unsold stocks carried over from last season for malting barley, minimal unsold carryover stocks for milling oats (100 t) and an estimated 1,100 t for feed oats.

Sowing intentions: Only a few autumn/winter cereal crops had been sown by 1 April 2017. For feed wheat, 19% has been sown, while for the other five crops, either none or less than 5% had been sown. The total area sown or intending to be sown in autumn/winter wheat or barley, as at 1 April 2017, was up 22% overall (or, up by 14,300 hectares) on sowings plus intentions as at 1 April 2016.

Sowing intentions for autumn/winter feed barley area is predicted to increase by 48% (up 6,800 hectares) from 2016 to 2017, which cancels out some of the drop from 2015 to 2016 (down 12,700 hectares). Feed wheat area sown is predicted to increase by 23% (up 7,700 hectares), and milling wheat area sown is predicted to decrease by 11% (down 1,400 hectares).

Autumn/winter malting barley area sown is predicted to increase by 37% (up 1,200 hectares) from 2016 to 2017. Milling oats and feed oats areas sown are predicted to decrease by 24% and 42% respectively (down 300 and 900 hectares respectively) from 2016 to 2017.

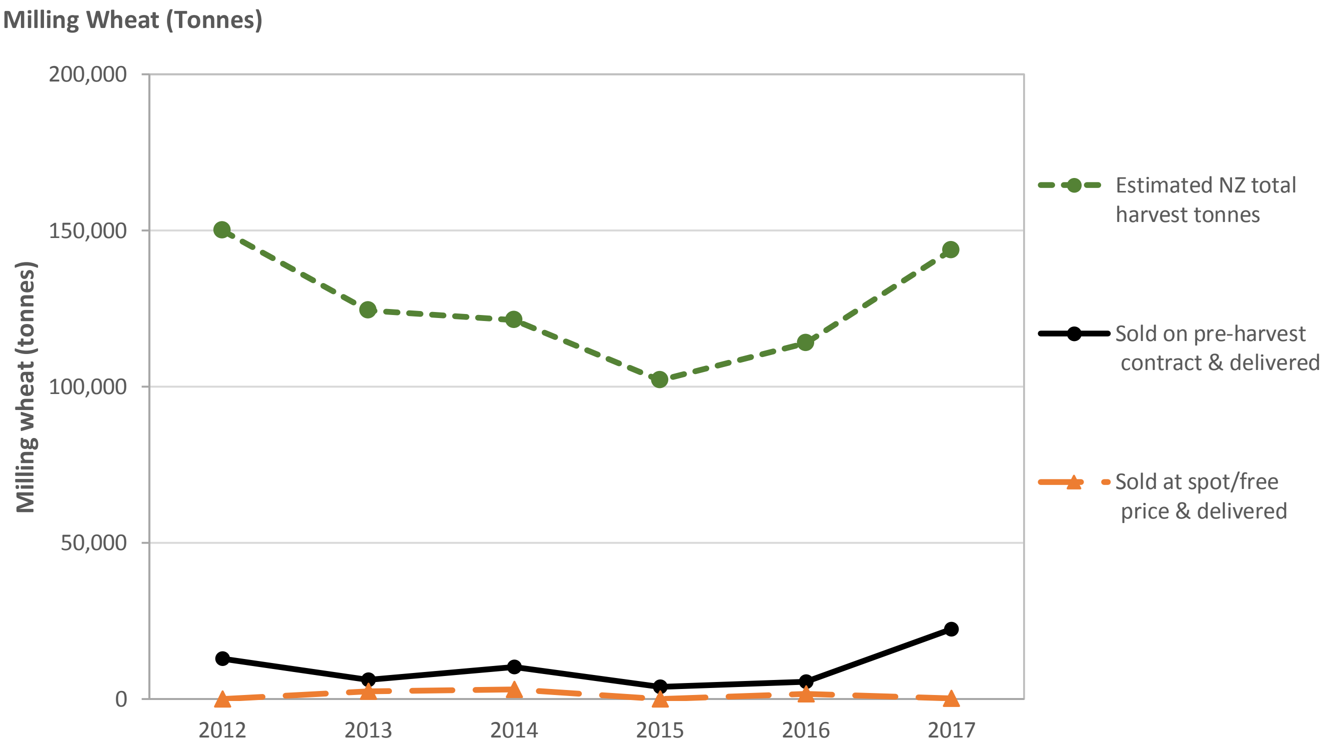

Figure 1a. NZ harvest tonnage and Sales channels for Milling Wheat (tonnes) as estimated on 1 April each year.
(Note: "Total harvest tonnes" includes harvested and unharvested grain for that season's harvest. "Sold at spot/free price & delivered" includes grain sold for feed.)

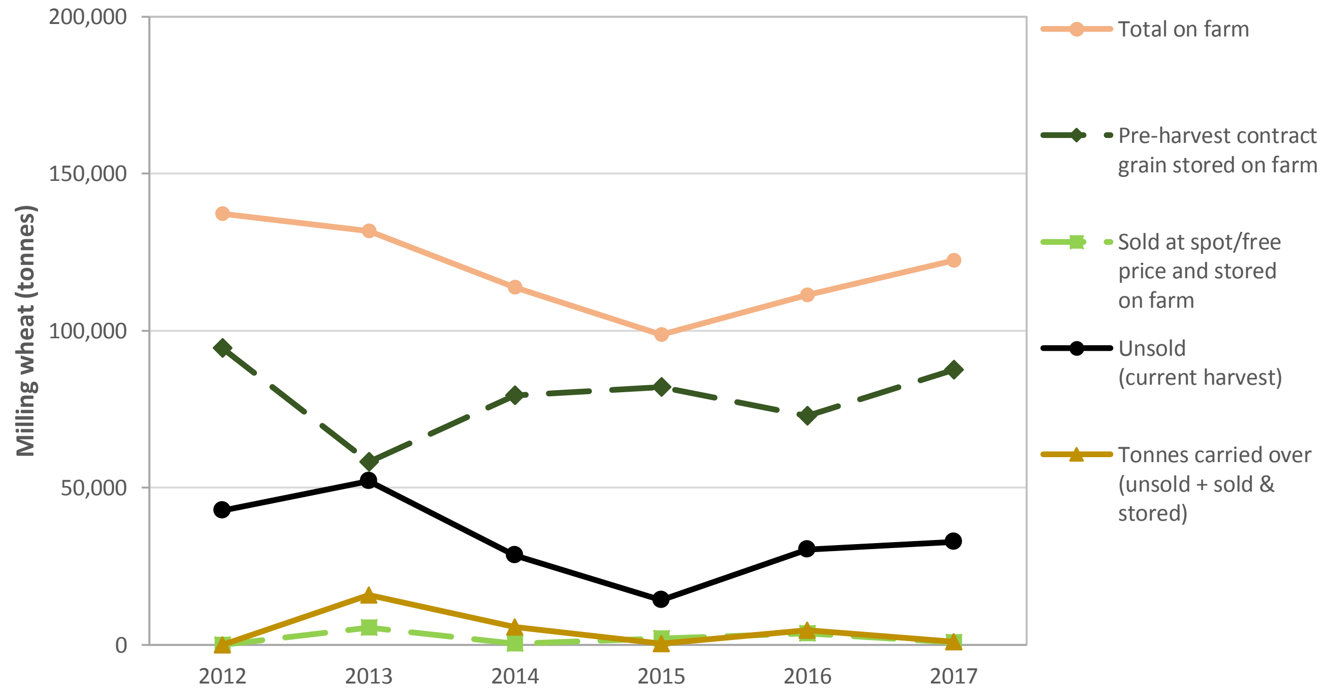

Figure 1b. NZ stock on farms for Milling Wheat (tonnes) as estimated on 1 April each year.
(Note: Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time the sales status of the unharvested grain was 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)

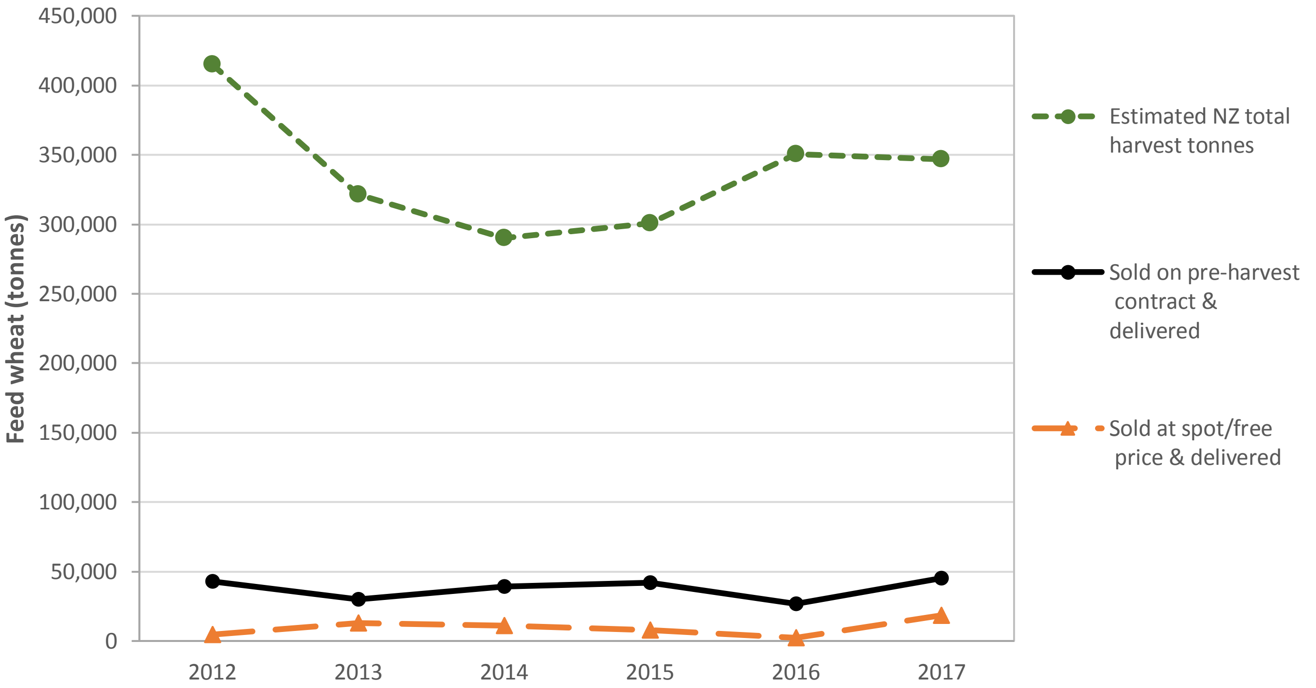

Figure 2a. NZ harvest tonnage and Sales channels for Feed Wheat (tonnes) as estimated on 1 April each year. (Note: “Total harvest tonnes” includes harvested and unharvested grain for that season’s harvest. “Sold at spot/free price & delivered” includes stock used on own farm.)

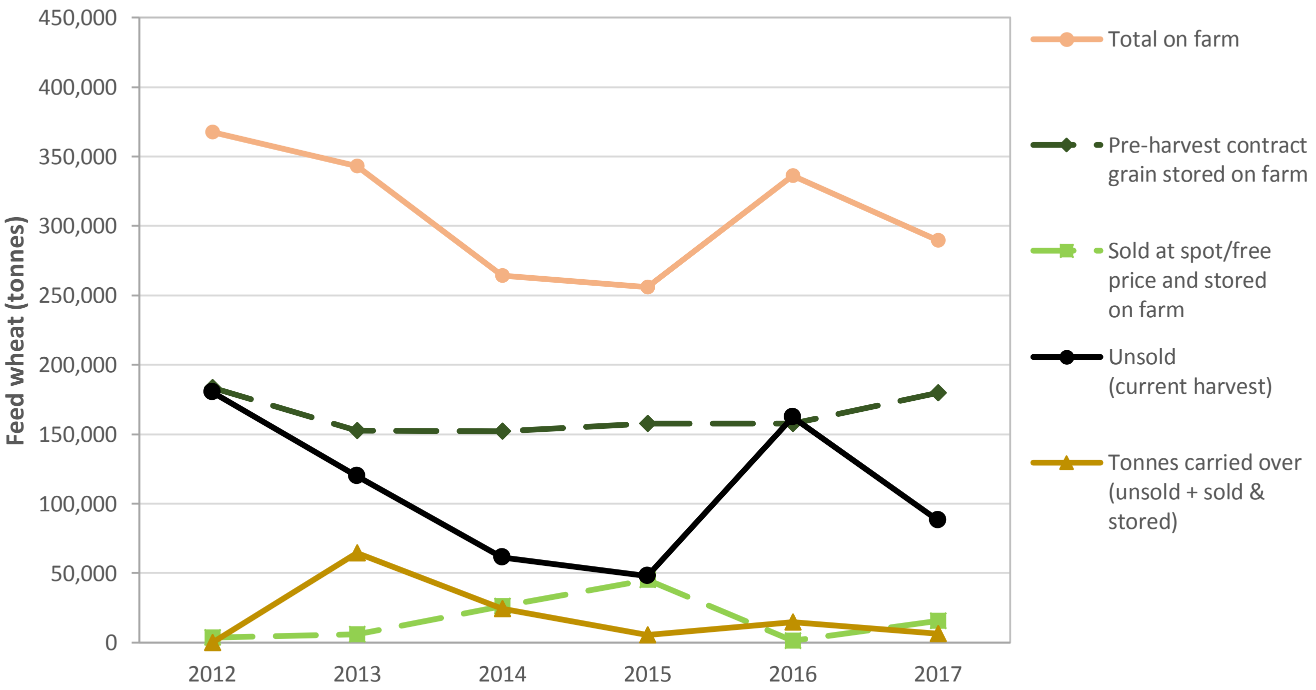

Figure 2b. NZ stock on farms for Feed Wheat (tonnes) as estimated on 1 April each year.
(Note: Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time the sales status of the unharvested grain was 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.)

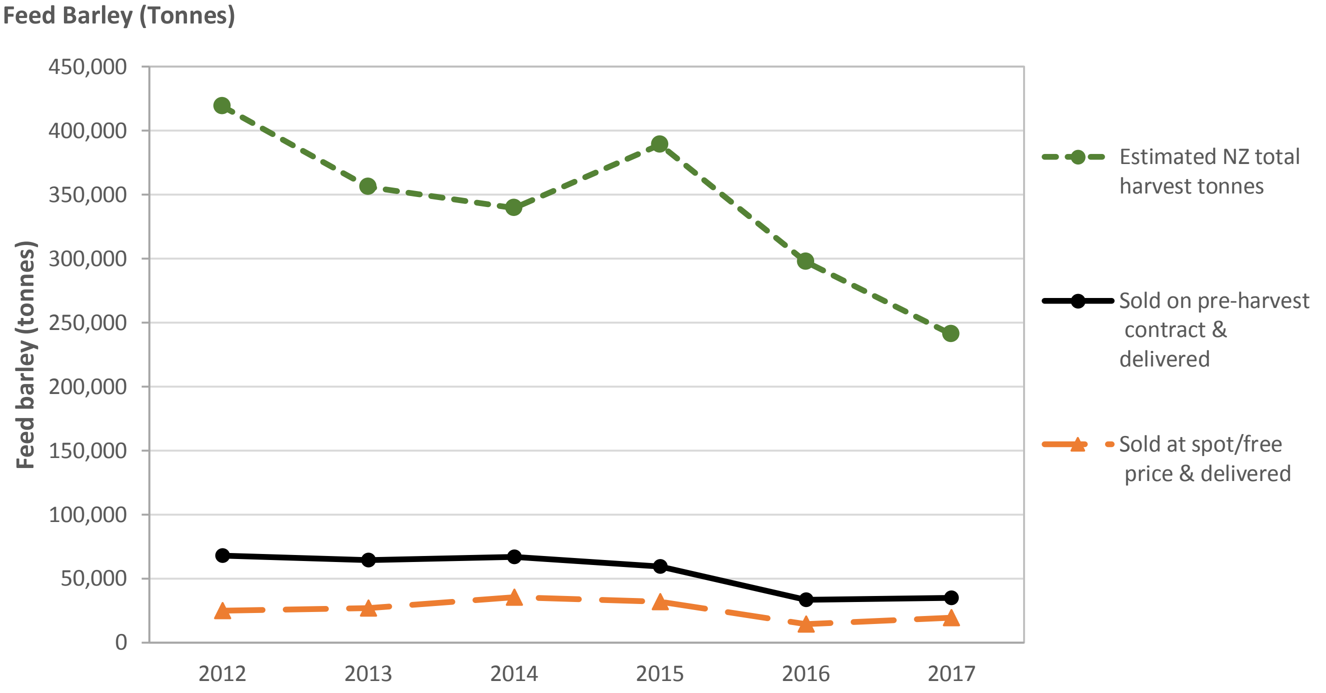

Figure 3a. NZ harvest tonnage and Sales channels for Feed Barley (tonnes) as estimated on 1 April each year. (Note: “Total harvest tonnes” includes harvested and unharvested grain for that season’s harvest. “Sold at spot/free price & delivered” includes stock used on own farm.)

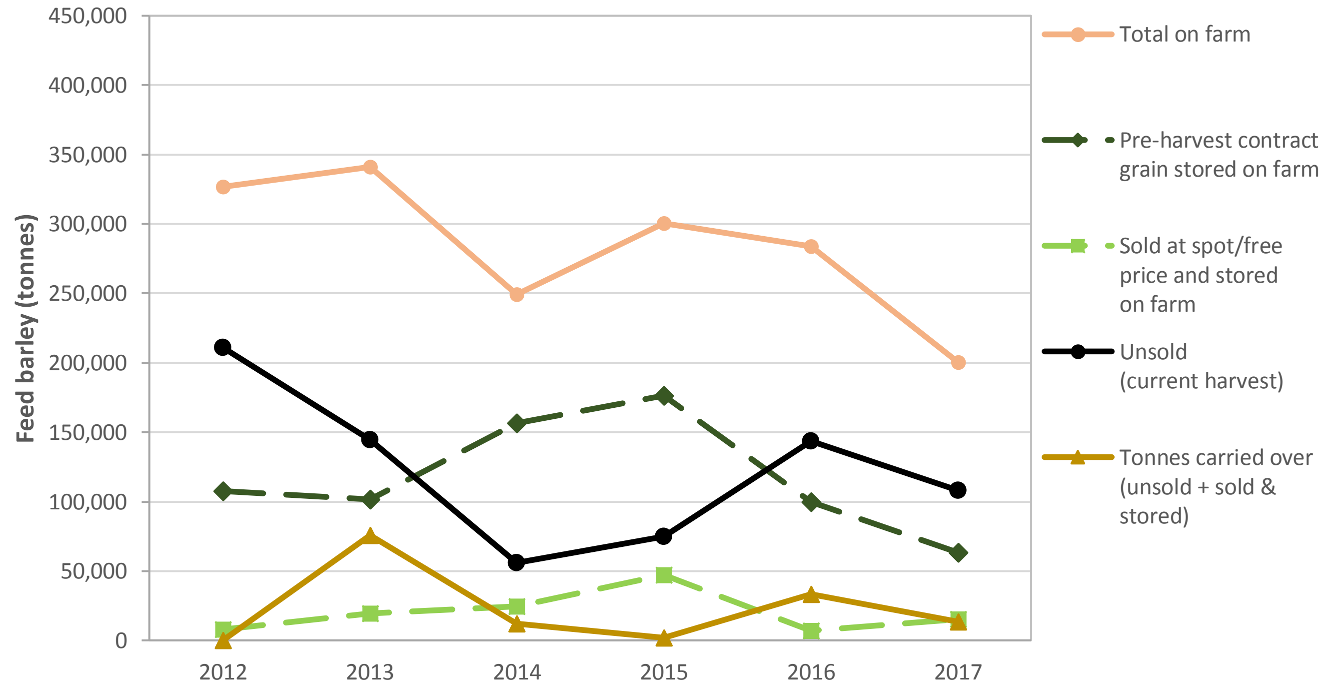

Figure 3b. NZ stock on farms for Feed Barley (tonnes) as estimated on 1 April each year. (Note: Unharvested grain is included. For the 2012 and 2013 harvests, the sales status of the unharvested grain was unknown, so it was assumed unsold. After this time the sales status of the unharvested grain was 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.)

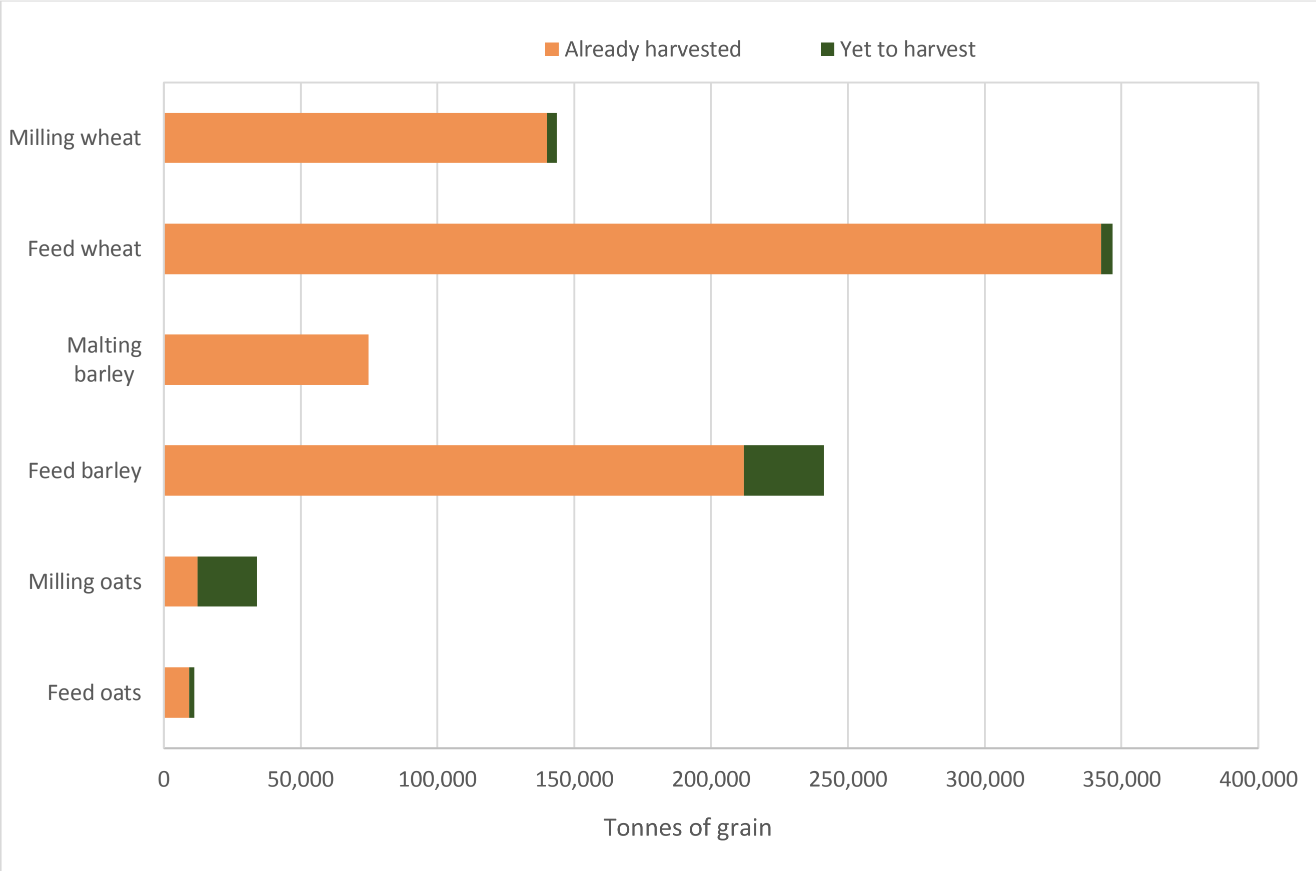

Figure 4. Estimated NZ tonnes harvested before 1April 2017, and yet to harvest as at 1 April 2017.

Autumn/winter sowings and sowing intentions as at 1 April each year

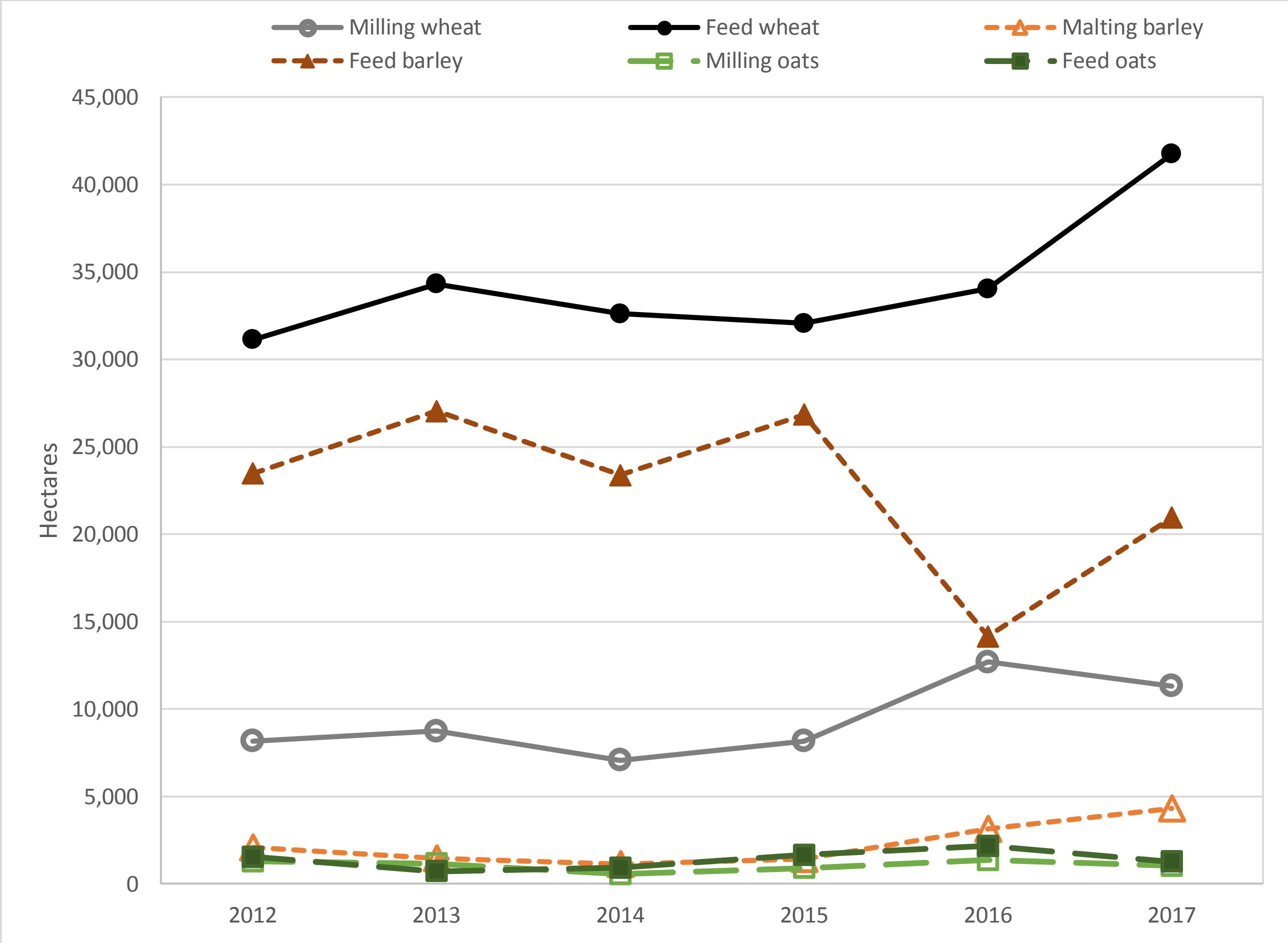

Figure 5. Estimated NZ total hectares sown or intended to be sown in autumn/winter 2017, along with the corresponding estimates from the five previous 1 April AIMI survey reports.
This information is also presented in Table 3 below.

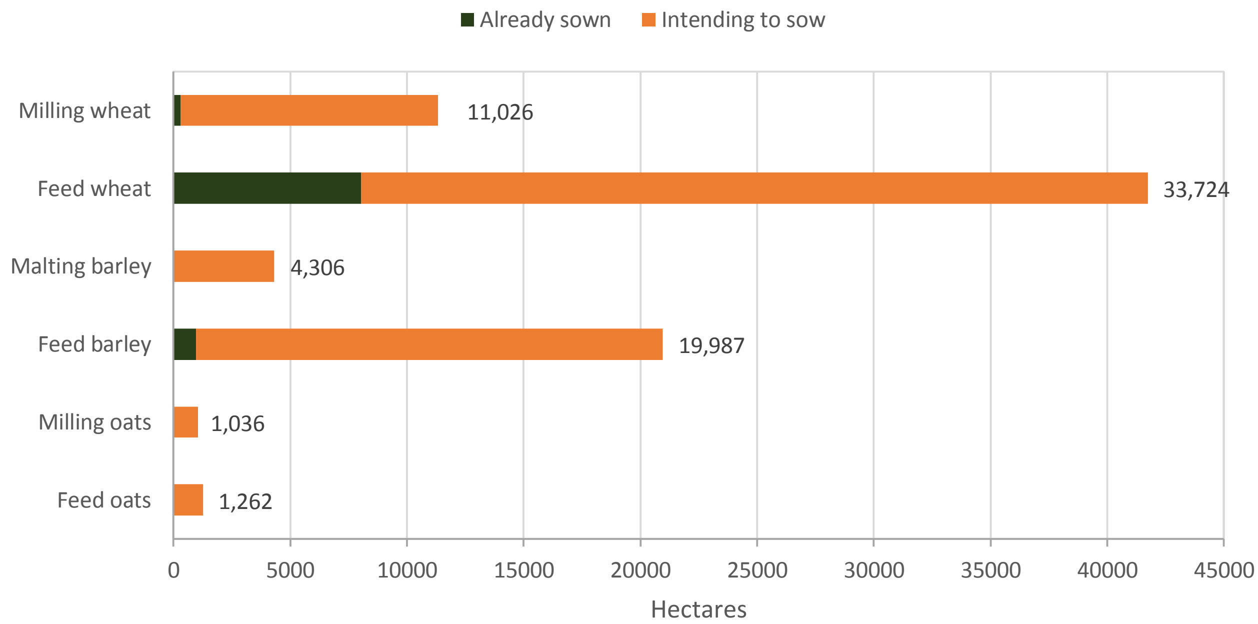

Figure 6. Estimated NZ Autumn/winter sowings and sowing intentions (hectares) as at 1 April 2017.
Note: Numbers at the end of the bars represent sowing intentions. These are estimated totals derived from the survey, and have an associated margin of error.

Comparison of yield (tonnes per ha) between harvests

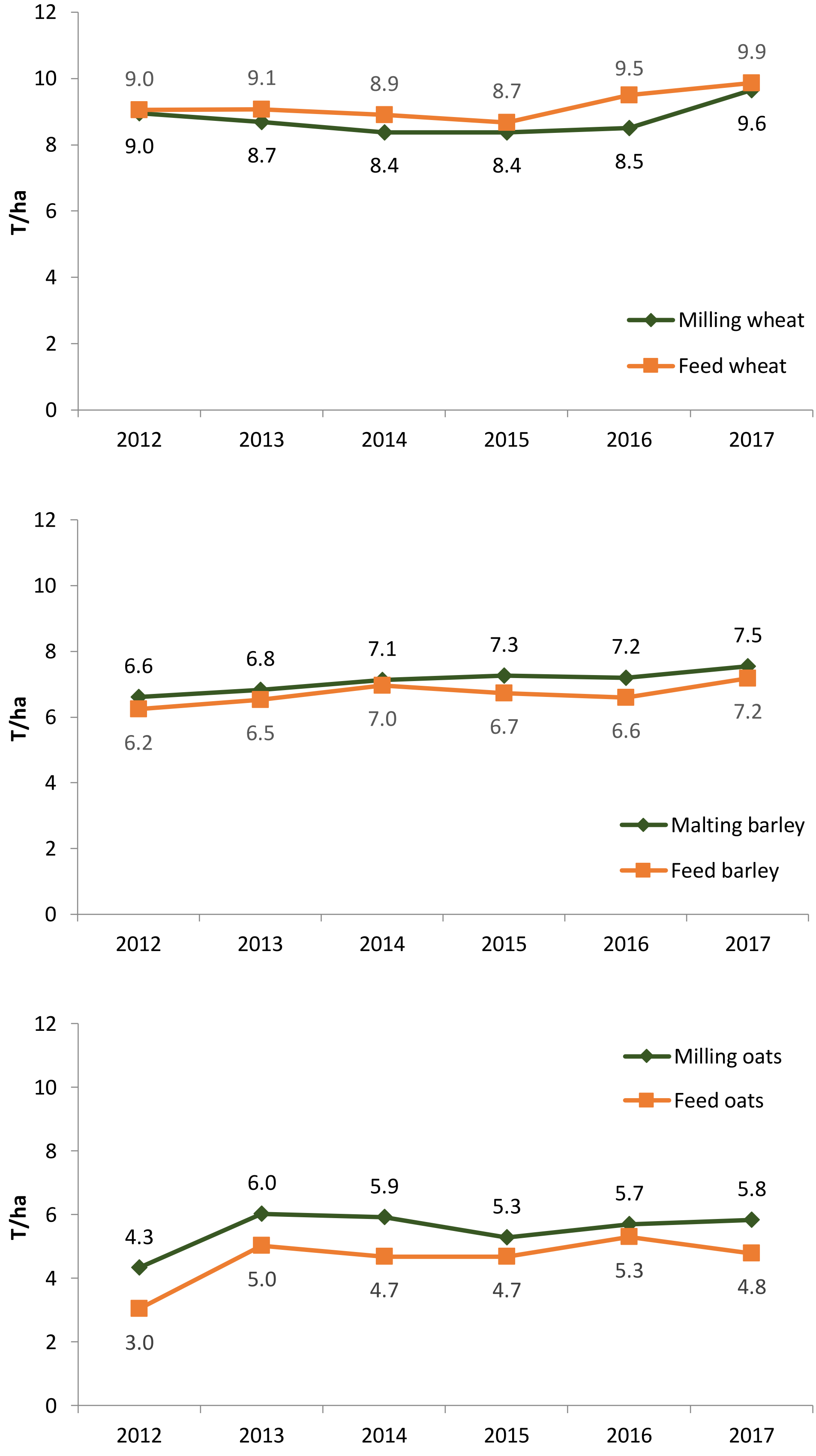

Figure 7. Comparison of yields (T/Ha) between the 2012 to 2017 harvests for the six cereal crops. Data are from the current survey and from previous April 1 AIMI reports for 2012 to 2016.
Note: Milling wheat includes biscuit and gristing varieties.

Table 1. Detailed estimated national figures for the 2017 harvest, plus sold and delivered tonnages, for six cereal crops as at April 1, 2017.

	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 2017		49	74	24	83	14	21
2016 harvest							
Estimated NZ total hectares, 2016 harvest	Ha	14,737	31,063	9,535	40,465	3,772	3,228
Estimated NZ total tonnes, 2016 harvest	Tonnes	123,736	293,864	71,460	273,640	20,155	16,345
2017 harvest							
Estimated NZ total hectares, 2017 harvest	Ha	14,893	35,165	9,904	33,561	5,829	2,347
Estimated NZ total tonnes, 2017 harvest	Tonnes	143,641	346,836	74,732	241,191	34,017	11,238
Estimated NZ total hectares already harvested by 1 April 2017	Ha	14,468	34,663	9,904	29,294	1,982	1,768
Estimated NZ total tonnes already harvested by 1 April 2017	Tonnes	140,099	342,426	74,732	212,045	12,341	9,160
Estimated NZ total hectares yet to harvest as at 1 April 2017	Ha	425	502	0	4,267	3,847	579
Estimated NZ total tonnes yet to harvest as at 1 April 2017	Tonnes	3,542	4,410	0	29,147	21,677	2,078
Percentage of estimated 2017 crop tonnage which had been harvested by 1 April 2017	%	98%	99%	100%	88%	36%	82%
2017 harvest so far							
Sold under pre-harvest contract and delivered by 1 April 2017	Tonnes	22,261	45,369	22,701	34,948	293	2,366
Pre-harvest contract grain stored on farm on 1 April 2017	Tonnes	86,682	178,895	44,373	53,848	11,248	4,097
Sold at spot/free price and delivered by 1 April 2017	Tonnes	0	17,025	1,099	19,419	0	151
Sold at spot/free price and stored on farm on 1 April 2017	Tonnes	826	15,525	0	15,296	0	0
(For milling or malting only) Sold for feed by 1 April 2017	Tonnes	159	-	2361	-	0	-
(For feed only) Used on own farm by 1 April 2017	Tonnes	-	1181	-	0	-	161
Unsold stocks on hand (2017 harvest only) on 1 April 2017	Tonnes	30,171	84,433	4,198	88,534	800	2,385
2017 yet to harvest							
Unharvested grain sold under pre-harvest contract by 1 April 2017	Tonnes	885	732	0	9,702	20,077	1,390
Unharvested grain unsold on 1 April 2017	Tonnes	2,656	3,678	0	19,444	1,600	688
Sales channels (2017 harvest): includes unharvested grain							
Sold under pre-harvest contract (total) by 1 April 2017 (includes sold, unharvested grain)	Tonnes	109,828	224,995	67,075	98,498	31,617	7,853
Sold at spot/free price (total) by 1 April 2017 (includes sold for feed and used on farm)	Tonnes	986	33,731	3,460	34,715	0	312
Delivery status of sold grain (2017 harvest): includes unharvested grain							
Sold and delivered (total) by 1 April 2017 (includes sold for feed and used on farm)	Tonnes	22,420	63,574	26,162	54,368	293	2,678
Sold and stored on farm (total) on 1 April 2017 (includes sold, unharvested grain)	Tonnes	88,394	195,152	44,373	78,846	31,325	5,487
Total sales (2017 harvest): includes unharvested grain							
Sold (of total crop) by 1 April 2017 (includes sold for feed, used on farm, and sold, unharvested grain)	Tonnes	110,814	258,726	70,535	133,214	31,617	8,165
Unsold (of total crop) on 1 April 2017 (includes unsold, unharvested grain)	Tonnes	32,827	88,110	4,198	107,978	2,400	3,073
Comparison of hectares and tonnes between last two harvests							
Estimated % change in hectares, 2016 to 2017 harvest (%)	%	1.1	13.2	3.9	-17.1	54.5	-27.3
Estimated % change in tonnes, 2016 to 2017 harvest (%)	%	16.1	18.0	4.6	-11.9	68.8	-31.2
Estimated change in tonnes, 2016 to 2017 harvest (tonnes)	Tonnes	19,905	52,972	3,272	-32,448	13,862	-5,107
Comparison of yields (t/ha) between last two harvests							
NZ-wide estimated yield, 2016 harvest	T/ha	8.4	9.5	7.5	6.8	5.3	5.1
NZ-wide estimated yield, 2017 harvest	T/ha	9.6	9.9	7.5	7.2	5.8	4.8

Table 1 (continued).

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Comparison of on-farm storage (including unharvested grain) between last April and this April							
Sold but not delivered (total) on 1 April 2016 (from 2016 harvest) (April 2016 Report)	Tonnes	76,606	159,197	45,670	106,682	15,202	11,157
Sold but not delivered (total) on 1 April 2017 (from 2017 harvest) (from above)	Tonnes	88,394	195,152	44,373	78,846	31,325	5,487
Unsold (from 2016 harvest) on 1 April 2016 (April 2016 AIMI Report)	Tonnes	30,253	162,389	5,923	143,580	2,063	1,632
Unsold (from 2017 harvest) on 1 April 2017 (as above)	Tonnes	32,827	88,110	4,198	107,978	2,400	3,073
Change in sold but not delivered (including unharvested grain) as at 1 April (for most recent harvest) between 2016 and 2017	Tonnes	11,788	35,955	-1,297	-27,836	16,122	-5,669
Change in unsold as at 1 April (from most recent harvest) between 2016 and 2017	Tonnes	2,574	-74,279	-1,725	-35,603	336	1,441
Change in total grain on farm (both sold and unsold, and including unharvested grain) as at 1 April (for most recent harvest) between 2016 and 2017	Tonnes	14,362	-38,324	-3,022	-63,439	16,459	-4,229
Note: The comparisons in the last seven rows do not include carryover stock from the previous season (as given in Table 2).							

In Table 1 (on the previous page), the estimated 2017 harvest tonnes of feed barley was 12% *lower* than for the 2016 harvest (down 32,400 tonnes). For feed wheat, the estimated 2017 harvest tonnes was 18% *up* on 2016 (up 53,000 tonnes), and for milling wheat, the estimated 2017 harvest tonnes was 16% *up* on 2016 (up 19,900 tonnes). Estimated 2017 harvest tonnes of malting barley and milling oats were *up* by 5% and 69% respectively (up 3,300 and 13,900 tonnes respectively), while feed oats was *down* by 31% (down 5,100 tonnes).

The last few rows of Table 1 (on this page) show the changes in on-farm storage between 1 April 2016 and 1 April 2017 for the 2016 and 2017 harvests respectively. 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. For feed barley, there is a drop (27,800 tonnes) in the tonnage of grain sold but not delivered by 1 April between the two seasons and a drop (35,600 tonnes) in the unsold tonnage. The nett effect is that there is *less* feed barley from the most recent harvest stored on farms (by an estimated 63,400 tonnes) on 1 April 2017 than on 1 April 2016. These figures do not include the grain carried over from the previous harvest (Table 2); this carry-over grain needs to be added to give the total picture.

For feed wheat, there is an increase (36,000 tonnes) in the tonnage of grain sold but not delivered by 1 April between the two seasons, and a large decrease (74,300 tonnes) in the unsold tonnage. The nett effect is that there is *less* feed wheat from the most recent harvest stored on farms (by an estimated 38,300 tonnes) on 1 April 2017 than on 1 April 2016. These figures do not include the grain carried over from the previous harvest (Table 2); again, this carry-over grain needs to be added to give the total picture.

Table 2. Carry-over stock on hand from the 2016 harvest, as at April 1, 2017.

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)
Number of survey farmers who harvested this crop in 2016	46	73	27	87	14	21
Number of survey farmers with carry-over grain from 2016 crop on 1 April 2017	2	12	0	15	3	6
Estimated NZ total sold and stored on farm (2016 crop) on 1 April 2017	354	2,538	0	9,851	463	819
Estimated NZ total unsold stocks on hand (2016 crop) on 1 April 2017	708	3,790	0	3,604	98	1,097
Estimated NZ Total 2016 harvest still on farms on 1 April 2017 (tonnes)	1,063	6,328	0	13,455	561	1,917
Estimated NZ unsold stocks on hand of 2016 harvest on 1 April 2017 as a percentage of tonnes harvested in 2016 (%)	0.6%	1.3%	0.0%	1.3%	0.5%	6.7%
Comparative figures from last year (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
Estimated NZ total unsold stocks on hand (2015 crop) on 1 April 2016	3,220	11,578	2,496	30,457	0	35
Comparative figures from year 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
Estimated NZ total unsold stocks on hand (2014 crop) on 1 April 2015	68	1,685	0	660	197	395
Comparative figures from two 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
Estimated NZ total unsold stocks on hand (2013 crop) on 1 April 2014	415	6,927	0	375	223	722
Comparative figures from three 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
Estimated NZ total unsold stocks on hand (bumper 2012 crop) on 1 April 2013	9,117	18,909	0	44,372	852	501
Change in unsold 2016 harvest grain between 10 Oct 2016 and 1 April 2017 (based upon matched data)						
Estimated NZ total unsold stocks on hand (2016 crop) on 10 October 2016	4,286	39,970	2,049	36,196	605	922
Estimated NZ total unsold stocks on hand (2016 crop) on 1 April 2017 (as above)	708	3,790	0	3,604	98	1,097
Reduction in estimated NZ total unsold stocks on hand (2016 crop) between 10 October 2016 and 1 April 2017 (tonnes)	3,577	36,180	2,049	32,592	507	-176
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 (Oct 2016 and April 2017).						

Table 2 above shows that for feed barley, unsold carry-over stocks on hand on 1 April 2017 from the previous (2016) harvest were much reduced as compared to the same time last year (3,600 versus 30,500 t). In the last three rows, Table 2 also tracks the movement of unsold grain from the 2016 harvest since 10 October 2016. 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, 2017 is 111,600 t for feed barley and 91,900 t for feed wheat; when summed over these two major feed crops, the total amount of unsold grain is estimated to be 203,500 t, which is well down on the amount on 1 April 2016, of 348,000 tonnes.

Table 3. Sowings and sowing intentions as at April 1, 2017, and comparisons with previous years' estimates.

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)
Number of farmers in the survey who have sown or intend to sow this crop in the autumn or winter, as at 1 April 2017	36	70	9	44	7	9
Estimated NZ total hectares, 2016 harvest (autumn/winter plus spring sown crops, combined)	14,737	31,063	9,535	40,465	3,772	3,228
Estimated NZ total hectares, 2017 harvest (autumn/winter plus spring sown crops, combined)	14,893	35,165	9,904	33,561	5,829	2,347
Estimated NZ total hectares already sown, as at 1 April 2017	304	8,027	0	962	0	0
Estimated NZ total hectares intending to sow in autumn or winter, as at 1 April 2017	11,026	33,724	4,306	19,987	1,036	1,262
Estimated percentage of autumn/ winter 2017 sowings already sown by 1 April 2017	2.7%	19.2%	0.0%	4.6%	0.0%	0.0%
Estimated NZ total autumn/ winter 2017 sowings and/or sowing intentions as at April 1 2017 (hectares, for harvest in 2018)	11,330	41,751	4,306	20,949	1,036	1,262
Comparative figures from the same time in six previous years (1 April AIMI surveys)						
Estimated NZ total autumn/ winter 2016 sowings & intentions (from the April 2016 AIMI Survey Report)	12,688	34,048	3,133	14,167	1,369	2,159
Estimated NZ total autumn/ winter 2015 sowings & intentions (from the April 2015 AIMI Survey Report)	8,171	32,070	1,434	26,849	909	1,658
Estimated NZ total autumn/ winter 2014 sowings & intentions (from the April 2014 AIMI Survey Report)	7,078	32,607	1,148	23,380	554	926
Estimated NZ total autumn/ winter 2013 sowings & intentions (from the April 2013 AIMI Survey Report)	8,733	34,325	1,461	27,041	1,155	719
Estimated NZ total autumn/ winter 2012 sowings & intentions (from the April 2012 AIMI Survey Report)	8,173	31,136	2,101	23,485	1,286	1,540
Estimated NZ total autumn/ winter 2011 sowings & intentions (from the April 2011 AIMI Survey Report)	9,960	32,020	1,650	24,510	1,120	430
Estimated change in autumn/ winter sowings & intentions, 2015 to 2016 (hectares)	4,517	1,978	1,699	-12,681	459	502
Estimated change in autumn/ winter sowings & intentions, 2016 to 2017 (hectares)	-1,358	7,703	1,173	6,782	-332	-897
Estimated % change in autumn/ winter sowings & intentions, 2016 to 2017 (%)	-11%	23%	37%	48%	-24%	-42%

Table 3 above shows that most autumn/winter cereal crops had not been sown by 1 April 2017. For feed wheat, 19% had been sown, while for the other five crops, either none or less than 5% had been sown. Therefore the estimates in the table are primarily sowing *intentions*. For feed barley, autumn/winter sowings plus sowing intentions for 2017, as at 1 April 2017, are *higher* (up 48%) than at the same time last year (2016), and suggest a partial resurgence in feed barley sowings following the dramatic decline of last year. Similarly, autumn/winter sowings plus sowing intentions for feed wheat and malting barley are substantially higher than sowings plus sowing intentions at the same time in 2016, while reductions are predicted for milling wheat, milling oats and feed oats (though these may not be real reductions, as they are within the margin of error of the survey). When the autumn/winter sowings plus sowing intentions are summed over the four wheat and barley crops, the prediction is for a 22% increase in autumn/winter sowings (a 14,300 hectare increase in area sown).