SUMMARY - SURVEY OF CEREAL AREAS AND VOLUMES - OCTOBER 10, 2016

The objective of this AIMI survey of cereal growers was to determine, as at October 10, 2016:

- sales of the 2016 harvest of wheat, barley and oats since July 1, 2016
- levels of on-farm storage, both sold and unsold, of the 2016 harvest
- spring 2016 sowings and sowing intentions of wheat, barley and oats

Data from 118 survey farms who completed all of the last four cereal surveys (October 2015 and April, July and October 2016) 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 10th October 2016 and there will have been changes since this time. The maize survey is currently underway and details will be released later this month.

Key Points at 10 October 2016 (figures have been rounded to nearest 100)**:**

- Between July 1, 2016, and October 10, 2016, the total tonnage of unsold grain reduced by 48% (when totalled over all six crops), from an estimated 194,000 to 101,300 tonnes. Unsold stocks of feed barley reduced by 52% (to 38,000 t), and of feed wheat by 46% (to 52,500 t) between July and October 2016.
- Compared to the same time last season, unsold grain was down by 15% (when totalled over all six crops). Unsold stocks of feed barley were 37% down, and of feed wheat were up by 27% compared to October 10, 2015. Spot sales were up on last year for feed wheat and feed barley, but offset by reductions in contract sales.
- Sold grain stored on farm, as at October 10, 2016, totalled 238,900 tonnes (totalled over the six crops), which was 11% down on the same time last year.
- Total grain on farm, both sold and unsold, was 12% down on the same time last year (including feed barley, which was down by 34%).
- Hectares for harvest in 2017 are 7% down on last season (when totalled over all six crops), to an estimated total of 99,800 hectares. This includes reductions in hectares sown in feed barley (21% down) and malting barley (18% down), and an increase for milling wheat (14% up).

Milling wheat: The estimated tonnage of unsold grain is 7,200 tonnes, which is similar to the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 36,400 tonnes, which is similar to the tonnage at the same time last year. Overall, on-farm storage is identical to the same time last year. All milling wheat crops had been sown by October 10, and the area sown is estimated to be up 14% on last season.

Feed wheat: The estimated tonnage of unsold grain is 52,500 tonnes, which is up on the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 105,300 tonnes, which is slightly up on the tonnage at the same time last year. Overall, on-farm storage is up 13% on the same time last year. Feed wheat crops had all been sown by October 10, and the area sown is estimated to be very similar to last season (up 1%).

Feed barley: The estimated tonnage of unsold grain is 38,000 tonnes, which is lower than at the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 71,000 tonnes, which is also lower than the tonnage at the same time last year. Overall, on-farm storage is down 34% on the same time last year. Feed barley crops were 80% sown by October 10, and the area sown is estimated to be 21% down on last season.

Malting barley: The estimated tonnage of unsold grain is 2,200 tonnes, which is lower than at the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 13,600 tonnes, which is also lower than the tonnage at the same time last year. Overall, on-farm storage is down 39% on the same time last year. Malting barley crops were 92% sown by October 10, and the area sown is estimated to be 18% down on last season.

Milling oats: The estimated tonnage of unsold grain is 600 tonnes, which is slightly up on the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 8,600 tonnes, which is down on the same time last year. Overall, on-farm storage is down 11% on the same time last year. Milling oats crops were 88% sown by October 10, and the area sown is estimated to be 3% up on last season.

Feed oats: The estimated tonnage of unsold grain is 800 tonnes, which is higher than at the same time last year. The estimated tonnage of "sold" grain that is still stored on farm is 4,100 tonnes, which is also higher than at the same time last year. Overall, on-farm storage is 195% higher than at the same time last year (about three times as high, though volumes are low compared to those of other crops). Feed oats crops were 90% sown by October 10, and the area sown is estimated to be identical to last season.

Overall: As a total over all six crops, estimated unsold tonnage of wheat, barley and oats (101,300 t in total) was down by 15% compared to the same time last year, while estimated tonnage "sold" but still stored on farm (238,900 t in total) was down by 11%. This meant that the total tonnage on farm on October 10, 2016 (340,200 t in total) was estimated to be down by 12% on the amount on October 10, 2015. The total on farm storage was made up of 157,700 tonnes of feed wheat, 109,000 tonnes of feed barley, 43,600 tonnes of milling wheat, 15,800 tonnes of malting barley, 9,200 tonnes of milling oats and 4,900 tonnes of feed oats.

The total area sown plus intended to be sown in wheat, barley or oats, as at 10 October 2016, was estimated to be down 7,800 ha, or 7%, on the area harvested in 2016. This decrease was due to an 8,600 ha (21%) drop in sowings and intentions for feed barley and a 1700 ha (18%) drop for malting barley, partly offset by increases in areas of milling wheat (up 1900 ha), feed wheat (up 500 ha) and milling oats (up 100 ha).

Data on forward sales of these sown hectares was collected for the first time in the current survey. The percentage of hectares that had been "forward sold" was estimated to be 96% for milling oats and 76% for both milling wheat and malting barley. Much lower percentages of the feed crops had been forward sold: 57% of feed oats, 40% of feed wheat and 28% of feed barley hectares.

The results presented in this report show a continuation of the trend described in last year's October 10 (2015) AIMI report. As a comparison over the last two years, the total area sown plus intended to be sown in wheat, barley or oats, as at 10 October 2016, was estimated to be 15% down on the area harvested in 2015. This decrease was due to a 37% drop in sowings/intentions for feed barley over the last two years and a 28% drop for malting barley, partly offset by an increase in the area of milling wheat (up 45%).

Estimated National Figures as at October each year – Cereals

Table 1. Detailed estimated national figures for the 2016 harvest, plus sold and delivered tonnages, for six cereal crops as at October 10, 2016.

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Number of farmers in the survey who harvested this crop in 2016		43	71	28	87	13	22
2015 harvest							
Estimated NZ total hectares, 2015 harvest	Ha	10,706	36,994	10,628	53,572	3,111	2,692
Estimated NZ total tonnes, 2015 harvest	Tonnes	88,936	324,564	76,684	360,416	17,023	12,096
2016 harvest							
Estimated NZ total hectares, 2016 harvest	Ha	13,586	36,052	9,359	42,154	2,960	3,469
Estimated NZ total tonnes, 2016 harvest	Tonnes	112,933	341,532	68,876	279,206	15,424	17,606
Sold under pre-harvest contract and delivered by Oct 10 2016	Tonnes	53,462	129,677	45,416	71,451	6,018	12,214
Pre-harvest contract grain stored on farm on Oct 10 2016	Tonnes	34,308	62,267	13,057	47,427	8,063	4,136
Sold at spot/ free price and delivered by Oct 10 2016	Tonnes	10,967	53,184	526	90,599	203	412
Sold at spot/ free price and stored on farm on Oct 10 2016	Tonnes	2,047	43,020	526	23,534	509	10
(For milling or malting only) Downgraded and sold for feed by Oct 10 2016	Tonnes	4,920	-	7,171	-	0	-
(For feed only) Used on own farm by Oct 10 2016	Tonnes	-	927	-	8,171	-	46
Unsold stocks on hand (2016 harvest only) on Oct 10 2016	Tonnes	7,229	52,458	2,180	38,024	631	788
Sales channels (2016 harvest)							
Sold on pre-harvest contract (total) by Oct 10 2016	Tonnes	87,770	191,944	58,473	118,877	14,081	16,350
Sold at spot/ free price (total) by Oct 10 2016	Tonnes	13,014	96,204	1,053	114,134	712	422
On farm storage (2016 harvest)							
Sold and delivered (total) by Oct 10 2016	Tonnes	64,429	182,861	45,942	162,050	6,221	12,626
Sold and stored on farm (total) on Oct 10 2016	Tonnes	36,354	105,286	13,584	70,961	8,572	4,146
Total sales (2016 harvest)							
Sold (grand total) by Oct 10 2016 (includes downgraded and sold for feed, and used on farm)	Tonnes	105,704	289,074	66,696	241,182	14,793	16,818
Unsold stocks on hand (2016 harvest only) on Oct 10 2016	Tonnes	7,229	52,458	2,180	38,024	631	788
Comparison of hectares and tonnes between last two harvests							
Estimated % change in hectares, 2015 to 2016 harvest	%	27	-3	-12	-21	-5	29
Estimated % change in tonnes, 2015 to 2016 harvest	%	27	5	-10	-23	-9	46
Comparison of yields (t/ha) between last two harvests							
NZ-wide estimated yield, 2015 harvest	T/ha	8.3	8.8	7.2	6.7	5.5	4.5
NZ-wide estimated yield, 2016 harvest	T/ha	8.3	9.5	7.4	6.6	5.2	5.1

Table 1 (continued).

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats
Comparison of on-farm storage between July 1 2016 and Oct 10 2016 (based upon matched data)							
Sold and stored on farm (total) on July 1 2016 (from 2016 harvest)	Tonnes	66,244	147,217	40,972	116,387	10,962	6,639
Sold and stored on farm (total) on Oct 10 2016 (from 2016 harvest)	Tonnes	36,354	105,286	13,584	70,961	8,572	4,146
Unsold stocks on hand (from 2016 harvest) on July 1 2016	Tonnes	12,056	97,231	5,286	78,827	631	799
Unsold stocks on hand (from 2016 harvest) on Oct 10 2016 (as above)	Tonnes	7,229	52,458	2,180	38,024	631	788
% decrease in total grain stored on-farm from July 2016 to Oct 2016	%	44	35	66	44	21	34
Comparison of on-farm storage between last October and this October (based upon matched data)							
Sold and stored on farm (total) on Oct 10 2015 (from 2015 harvest)	Tonnes	35,111	98,680	17,164	105,604	10,043	1,536
Sold and stored on farm (total) on Oct 10 2016 (from 2016 harvest)	Tonnes	36,354	105,286	13,584	70,961	8,572	4,146
Unsold stocks on hand (from 2015 harvest) on Oct 10 2015	Tonnes	8,295	41,321	8,477	60,066	270	137
Unsold stocks on hand (from 2016 harvest) on Oct 10 2016 (as above)	Tonnes	7,229	52,458	2,180	38,024	631	788
% increase in total grain stored on-farm from Oct 2015 to Oct 2016	%	0	13	-39	-34	-11	195
Note: The matched comparisons in the last two sections were based upon scaling up data from the exact same survey farms for the last four AIMI surveys.							

In Table 1, the tonnages of the 2016 harvest of six grain crops still stored on farm have reduced by between 21% and 66% in the period between the AIMI surveys dated July 1, 2016 and October 10, 2016. When totalled over all six crops, the total tonnage of 2016 harvest grain still on farms has reduced by 42% during this period (July 1 to October 10, 2016).

When the on-farm storage on October 10, 2016 is compared to that at the same time last year (October 10, 2015), the total tonnage of grain on farms from the most recent harvest has decreased by 12% (when summed over all six crops). This corresponds to an 11% decrease in grain “sold” and stored on farm, and a 15% decrease in unsold stocks on hand, as compared to a year ago. Feed barley is a major contributor to this overall decrease, with feed barley on-farm being estimated as 34% less than a year ago. Malting barley on-farm was a secondary contributor to the decrease (39% less), while feed wheat stored on farm was 13% up on the same time last year.

Table 2. Sowings and sowing intentions for six cereal crops as at October 10, 2016.

	Units	Milling wheat (ha)	Feed wheat (ha)	Malting barley (ha)	Feed barley (ha)	Milling oats (ha)	Feed oats (ha)
Number of farmers in survey who have sown or intend to sow this crop as at Oct 10 2016		44	68	22	81	9	25
Estimated NZ total hectares, 2015 harvest	Ha	10,706	36,994	10,628	53,572	3,111	2,692
Estimated NZ total hectares, 2016 harvest	Ha	13,586	36,052	9,359	42,154	2,960	3,469
Sowings and intentions for the current season's crop (2016/17)							
Estimated NZ total autumn / winter 2016 sowings (hectares; for harvest in 2017)	Ha	11,727	35,221	2,636	13,142	805	1,664
Estimated NZ total spring 2016 sowings already sown by Oct 10 2016 (hectares; for harvest in 2017)	Ha	3,766	1,366	4,417	13,703	1,868	1,437
Estimated NZ total spring 2016 sowings still to sow (intentions) as at Oct 10 2016 (hectares; for harvest in 2017)	Ha	0	0	620	6,661	377	359
Estimated NZ total spring 2016 sowings plus intentions as at Oct 10 2016 (hectares; for harvest in 2017)	Ha	3,766	1,366	5,037	20,364	2,245	1,796
Predicted NZ total hectares, 2017 harvest (Autumn /winter 2016 sowings and Spring 2016 sowings & intentions, all combined)	Ha	15,493	36,587	7,673	33,505	3,051	3,459
"Forward sales" of 2016/17 crop							
Predicted NZ total hectares that are "forward sold" (2017 harvest)	Ha	11,838	14,765	5,866	9,435	2,924	1,966
Estimated percentage of NZ total hectares that are "forward sold" (2017 harvest)	%	76	40	76	28	96	57
Comparison of sowings/ intentions over the 2014/15, 2015/16 and 2016/17 seasons (NZ totals) (based upon matched data)							
Estimated % change in NZ total sowings, 2015 to 2016 harvests	%	27	-3	-12	-21	-5	29
Estimated % change in NZ total sowings, 2016 to 2017 (predicted) harvests	%	14	1	-18	-21	3	0
Estimated % change in NZ total sowings, 2015 to 2017 (predicted) harvests (TOTAL over TWO seasons)	%	45	-1	-28	-37	-2	29
Estimated change in NZ total sowings, 2016 to 2017 (predicted) harvests (in HECTARES)	Ha	1907	535	-1686	-8648	91	-9
Comparison of spring sowing intentions as at July 1 2016 with spring sowings plus intentions as at Oct 10 2016 (based upon matched data)							
Estimated NZ total spring 2016 sowing intentions as at July 1 2016 (hectares; for harvest in 2017)	Ha	4,661	2,277	7,901	19,036	2,434	2,544
Estimated NZ total spring 2016 sowings plus intentions as at Oct 10 2016 (hectares, for harvest in 2017) (as above)	Ha	3,766	1,366	5,037	20,364	2,245	1,796
Change in estimated NZ total spring 2016 sowings/ intentions between July 1 2016 and Oct 10 2016 (hectares; for harvest in 2017)	Ha	-895	-911	-2,864	1,327	-189	-748
Note: The matched comparisons in the last two sections were based upon scaling up data from the exact same survey farms for the last four AIMI surveys.							

In Table 2, sowings plus sowing intentions for feed barley (for harvest in 2017) are an estimated 21% down on the area harvested in 2016, while malting barley is 18% down and milling wheat is 14% up. These figures continue the trends observed last year. As a result, when compared to the area harvested in 2015 (a year earlier), sowings plus sowing intentions for feed barley (for harvest in 2017) are an estimated 37% down on the area harvested in 2015, while malting barley is 28% down and milling wheat is 45% up.

At the bottom of Table 2 is the estimated change between the spring sowing intentions on July 1, 2016 and the actual sowings plus updated intentions on October 10, 2016. The largest change is a reduction of about 2,900 hectares of malting barley (a 36% drop in sowings); several survey respondents commented that they had not sown malting barley because they had not been given a contract to do so. There were also smaller reductions (about 900 ha) for both milling wheat and feed wheat, and a reduction of 700 ha for feed oats. On the other hand, feed barley sowings were estimated to increase by 1,300 ha as compared to the July 1, 2016 estimate. As a sum over the six cereal crops, the estimated change between the spring sowing intentions on July 1, 2016 and the actual sowings plus updated intentions on October 10, 2016 was a reduction of 4,300 hectares (or 11%). These estimated changes are included in the year to year changes discussed above, and are presented simply for further insight.

Milling wheat (Tonnes)

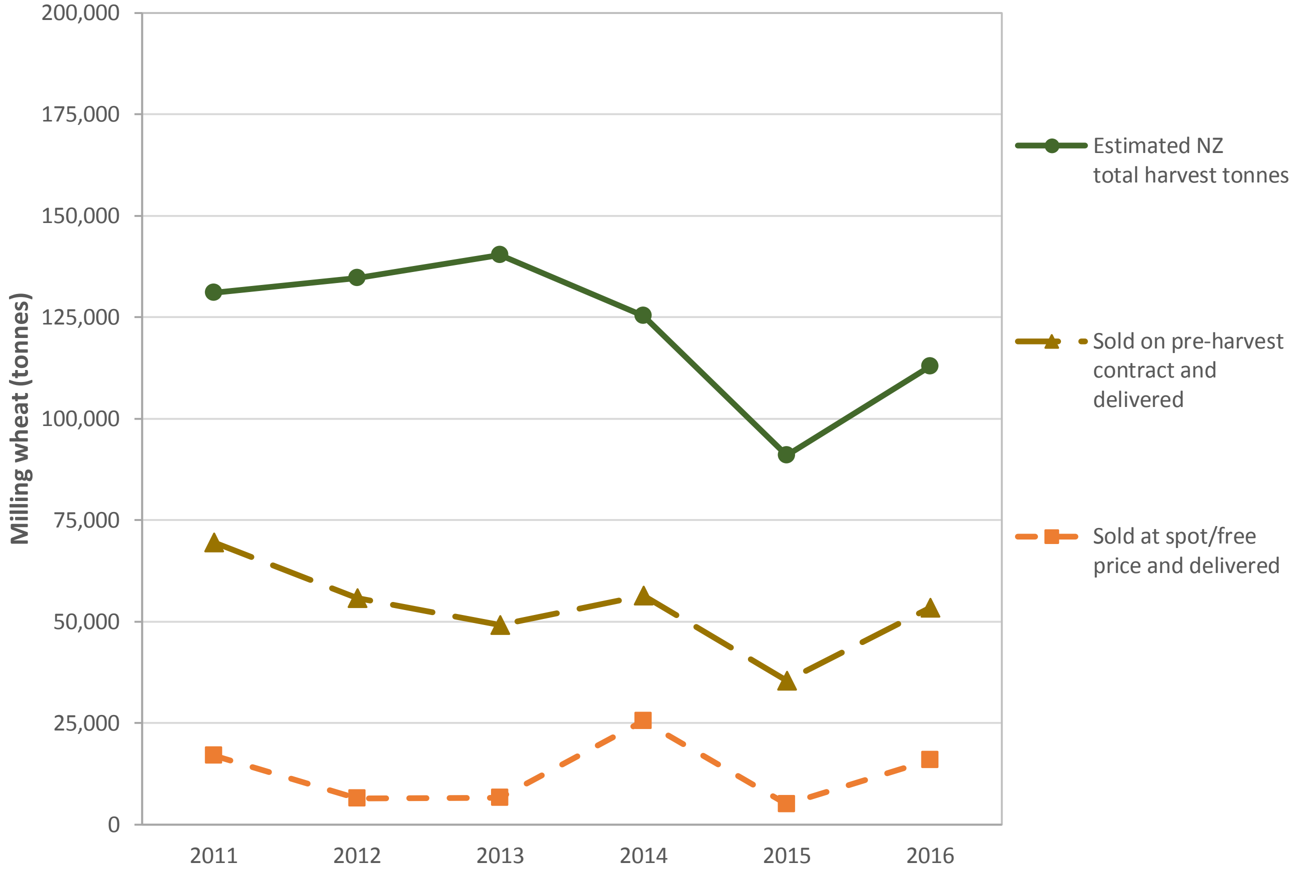

Figure 1a. NZ harvest tonnage and sales channels for Milling wheat (tonnes) as estimated in October each year. (Note: Both "sold and delivered" categories relate to the crop harvested that year, excluding carryover stock. "Sold at spot/free price and delivered" includes grain sold for feed. Historical data are sourced from previous AIMI October Reports.)

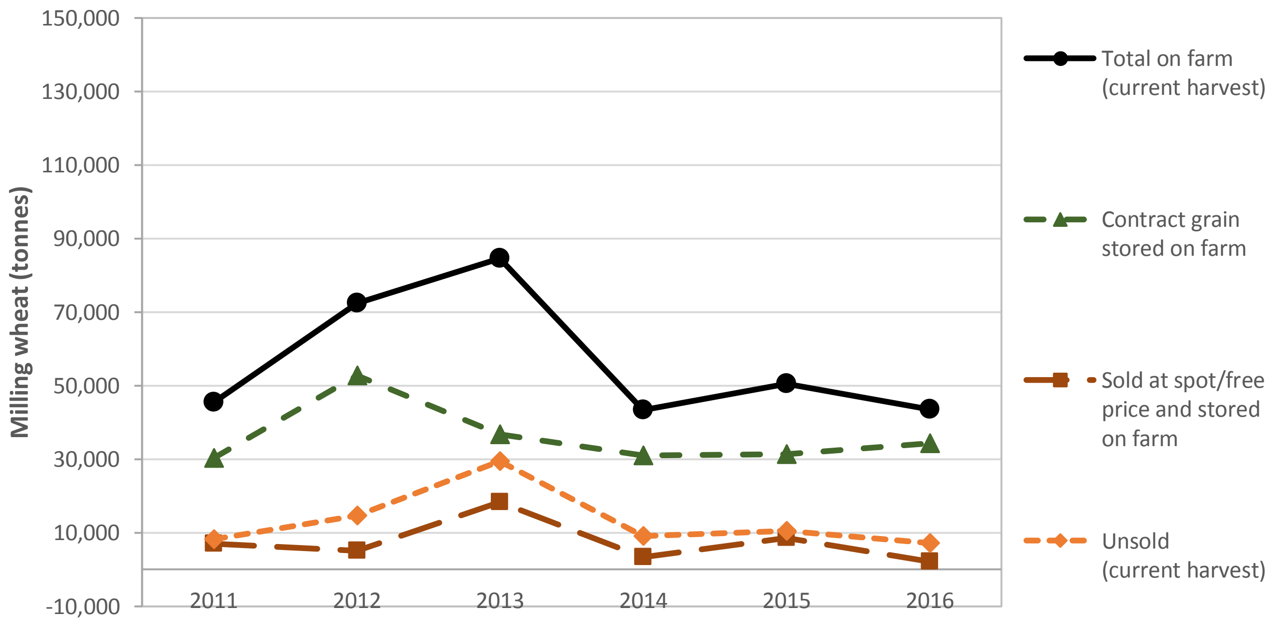

Figure 1b. NZ stocks on farm for Milling wheat (tonnes) as estimated in October each year. (Note: Historical data are sourced from previous AIMI October Reports.)

Feed Wheat (Tonnes)

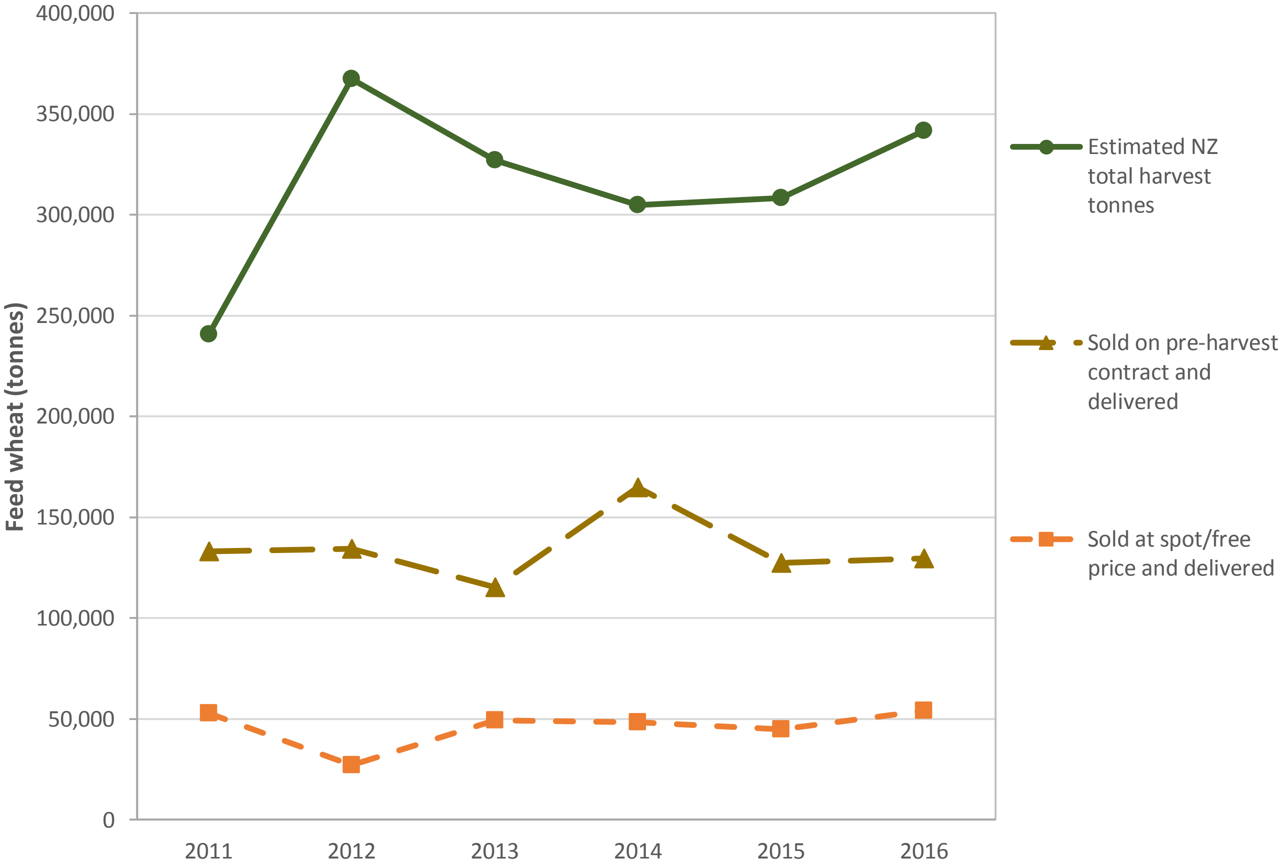

Figure 2a. NZ harvest tonnage and sales channels for Feed wheat (tonnes) as estimated in October each year. (Note: Both "sold and delivered" categories relate to the crop harvested that year, excluding carryover stock. "Sold at spot/free price and delivered" includes grain used on own farm. Historical data are sourced from previous AIMI October Reports.)

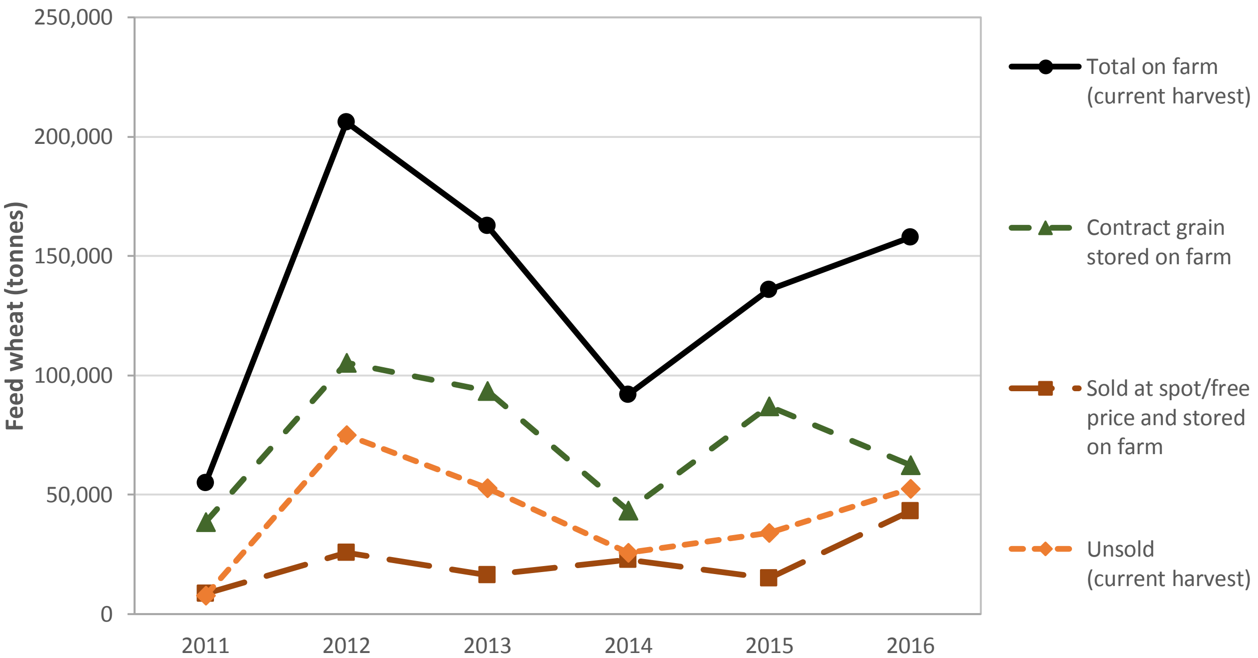

Figure 2b. NZ stocks on farm for Feed wheat (tonnes) as estimated in October each year. (Note: Historical data are sourced from previous AIMI October Reports.)

Feed Barley (Tonnes)

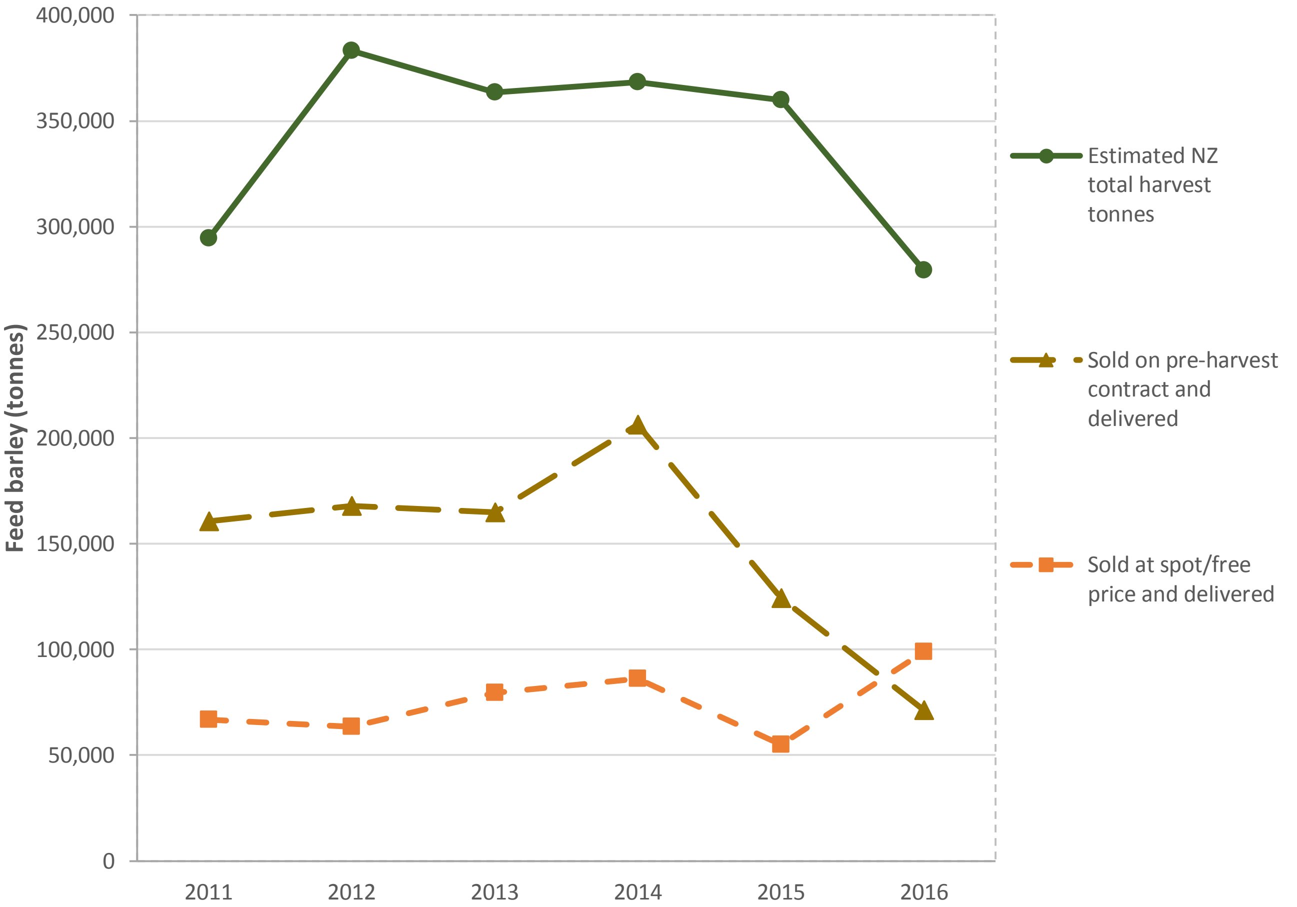

Figure 3a. NZ harvest tonnage and sales channels for Feed barley (tonnes) as estimated in October each year. (Note: Both "sold and delivered" categories relate to the crop harvested that year, excluding carryover stock. "Sold at spot/free price and delivered" includes grain used on own farm. Historical data are sourced from previous AIMI October Reports.)

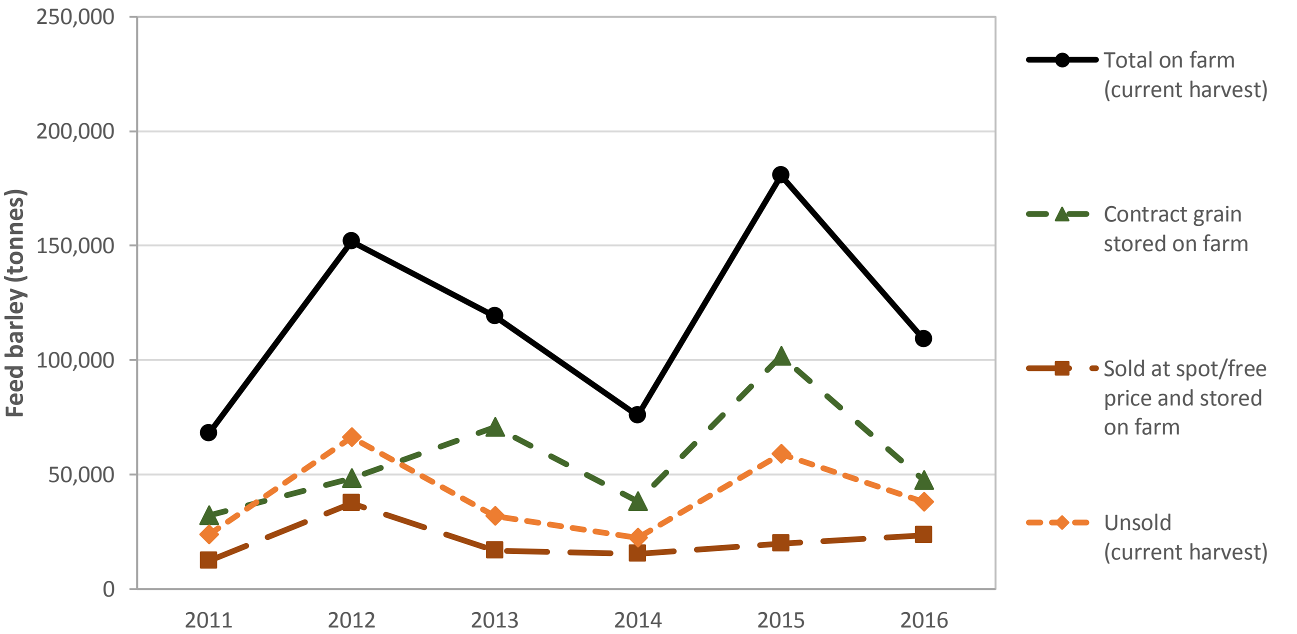

Figure 3b. NZ stocks on farm for Feed barley (tonnes) as estimated in October each year. (Note: Historical data are sourced from previous AIMI October Reports.)

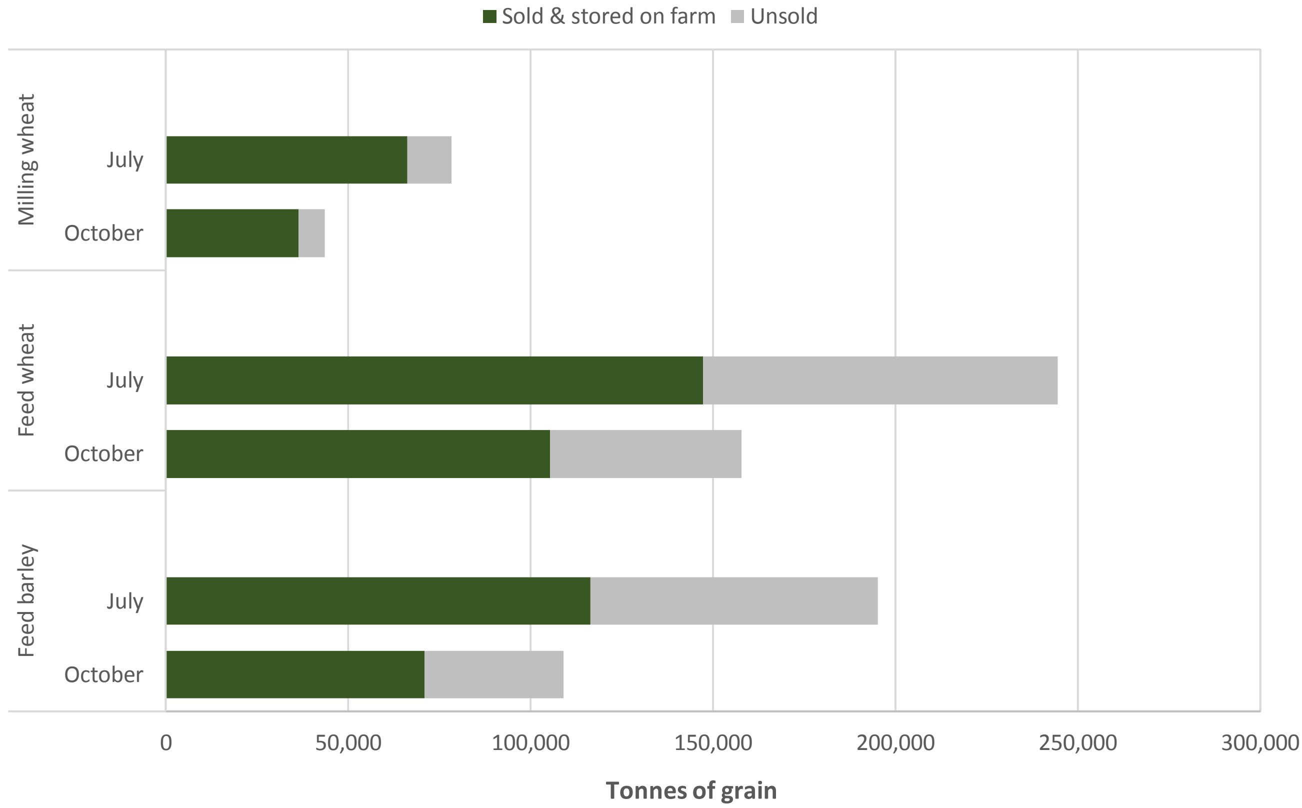

Figure 4. Changes in NZ stocks on farm for milling wheat, feed wheat and feed barley between July 1 and October 10, 2016.
All estimates are based upon scaling up from the current survey sample, which consists of only those growers who responded to all of the last four AIMI surveys; these estimates therefore provide more precise, matched comparisons.

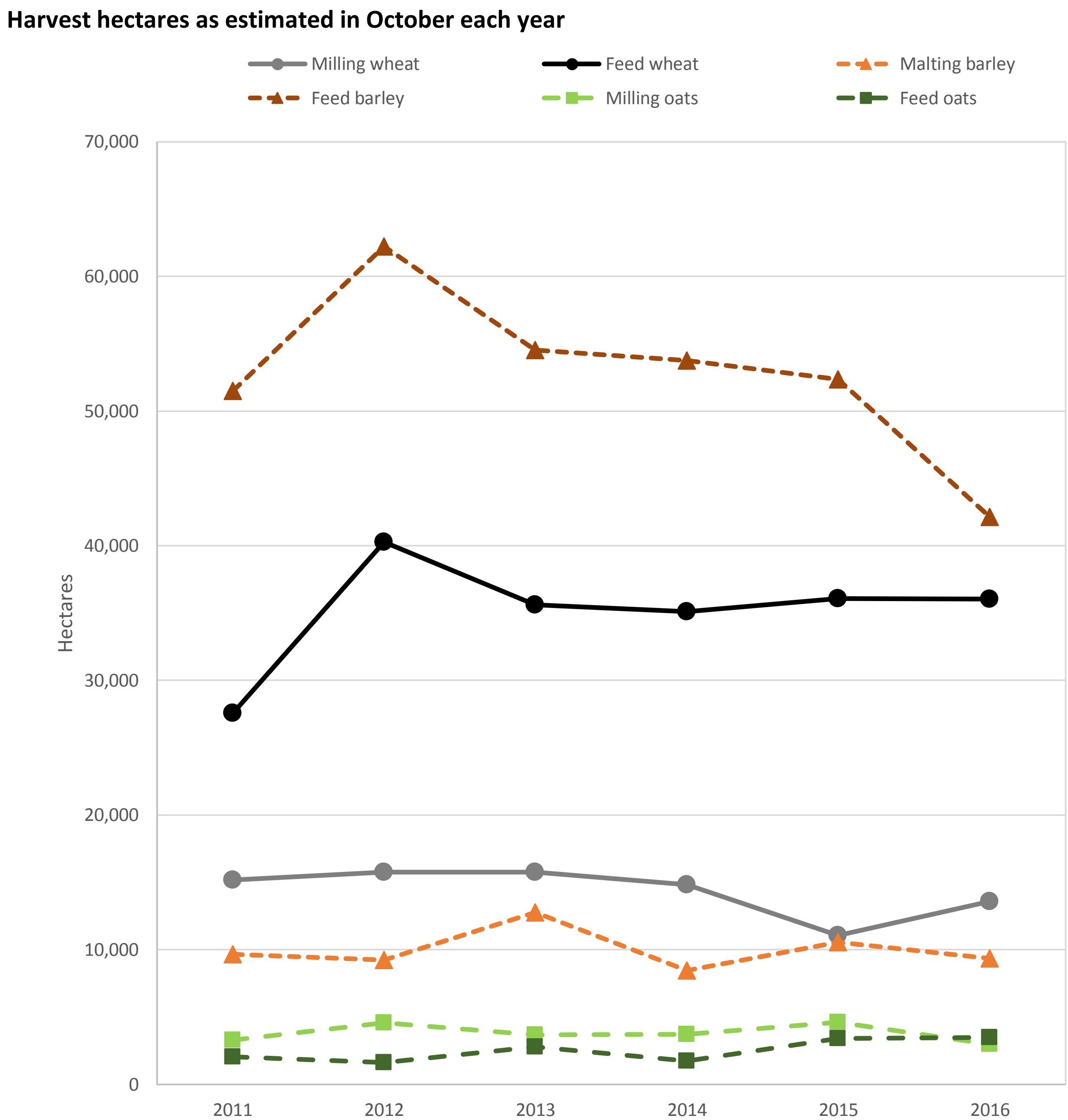

Figure 5. NZ harvest hectares for six cereal crops as estimated in October each year, from 2011 to 2016.

(Note: Figures for 2016 are from the current report, while other figures are from previous AIMI October reports.)

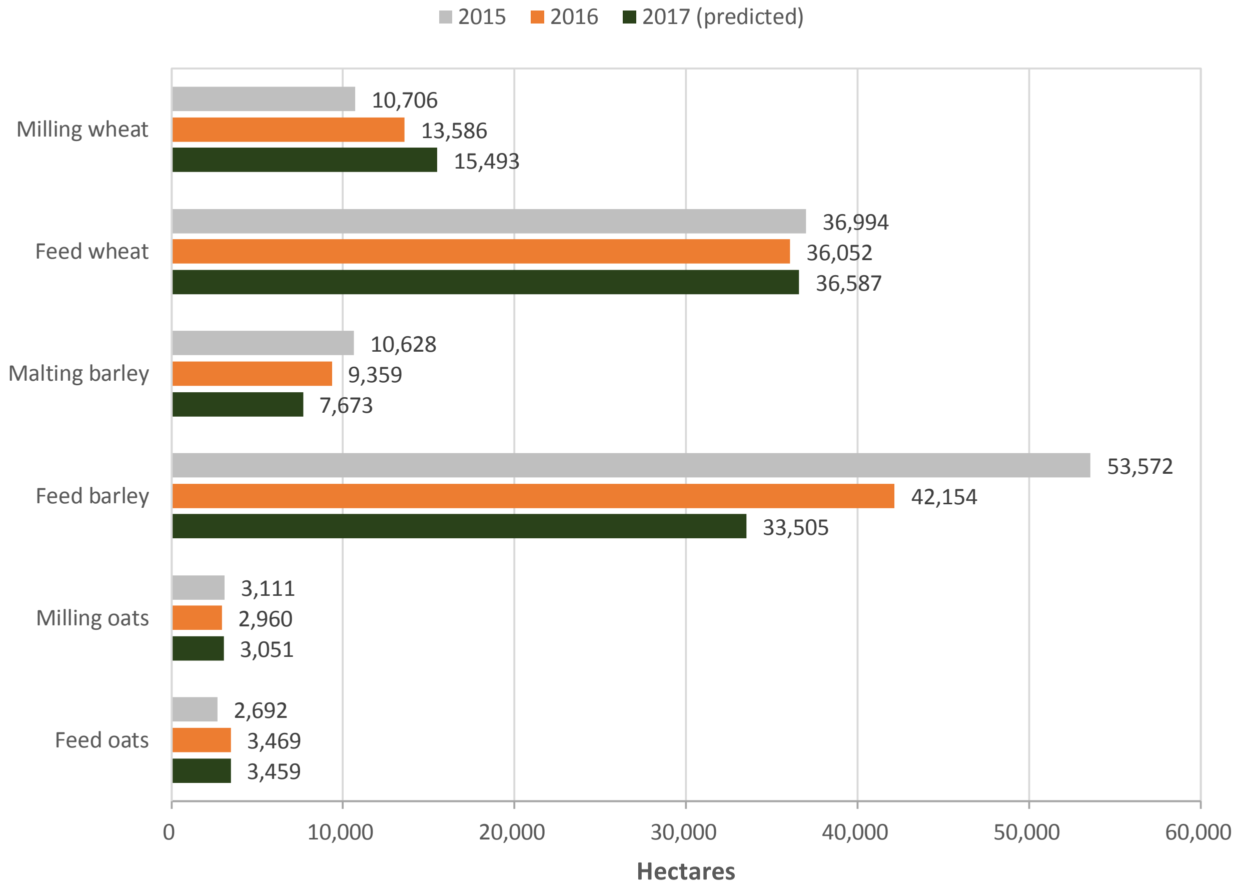

Figure 6. Estimated total hectares sown or intended to be sown in 2016 (for harvest in 2017) as compared to total hectares harvested in 2015 and 2016, based on data collected in October for both autumn and spring 2016 sowings and 2016 spring sowing intentions. As in Figure 4, this is a more precise matched comparison based only on the current sample of growers.

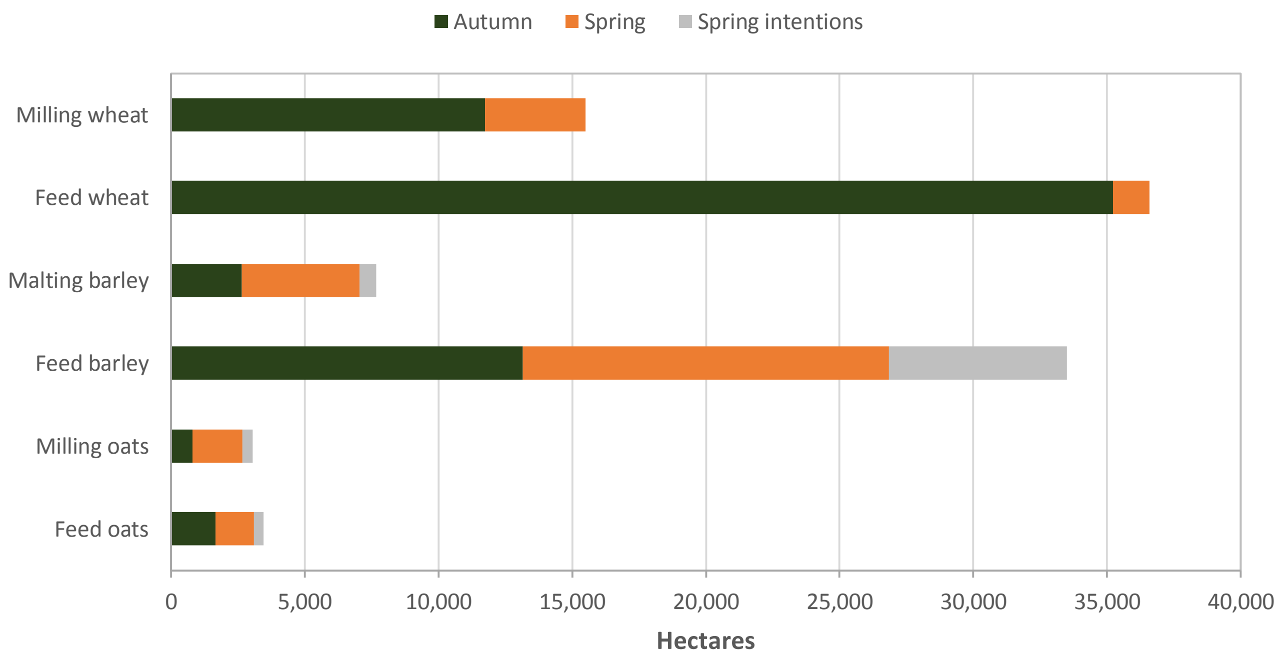

Figure 7. Estimated hectares sown in autumn and spring 2016, plus spring hectares yet to sow (spring intentions) for harvest in 2017, based on data collected on October 10, 2016.

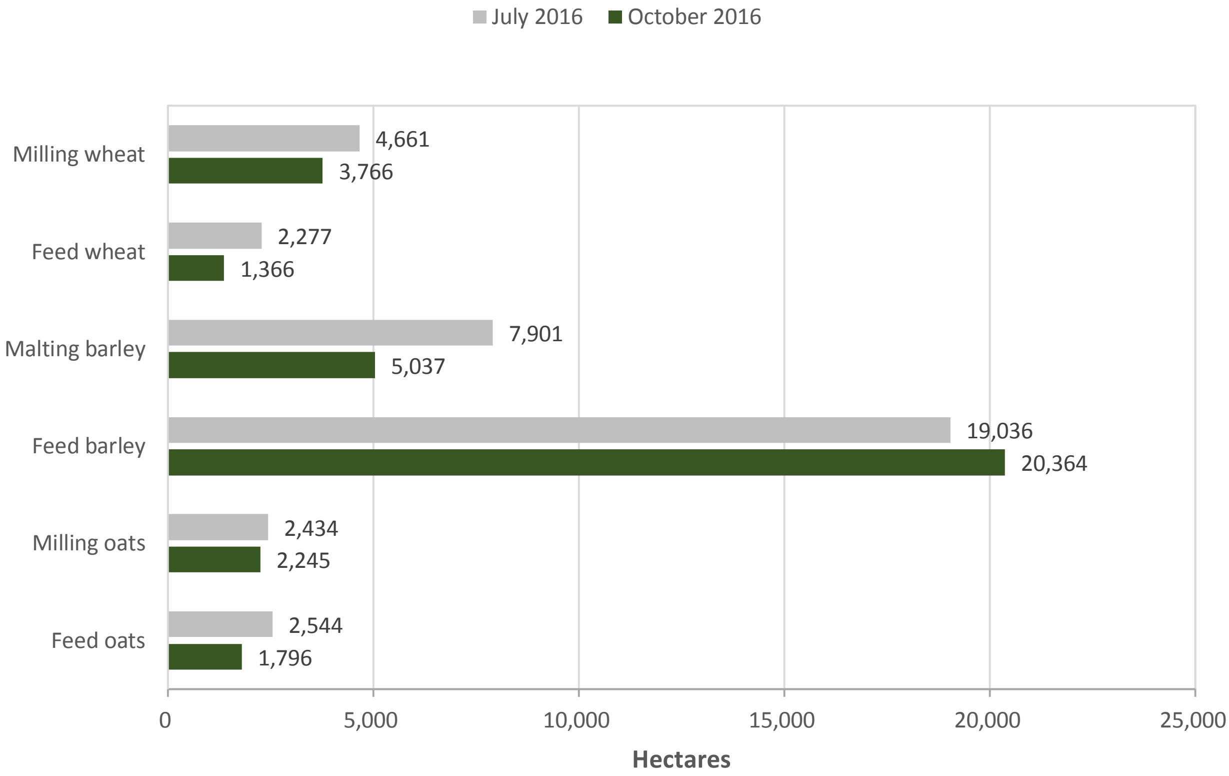

Figure 8. Comparison of spring sowing intentions as at July 1 2016 with actual spring sowings plus intentions as at October 10, 2016. As in Figures 4 and 6, this is a matched comparison.

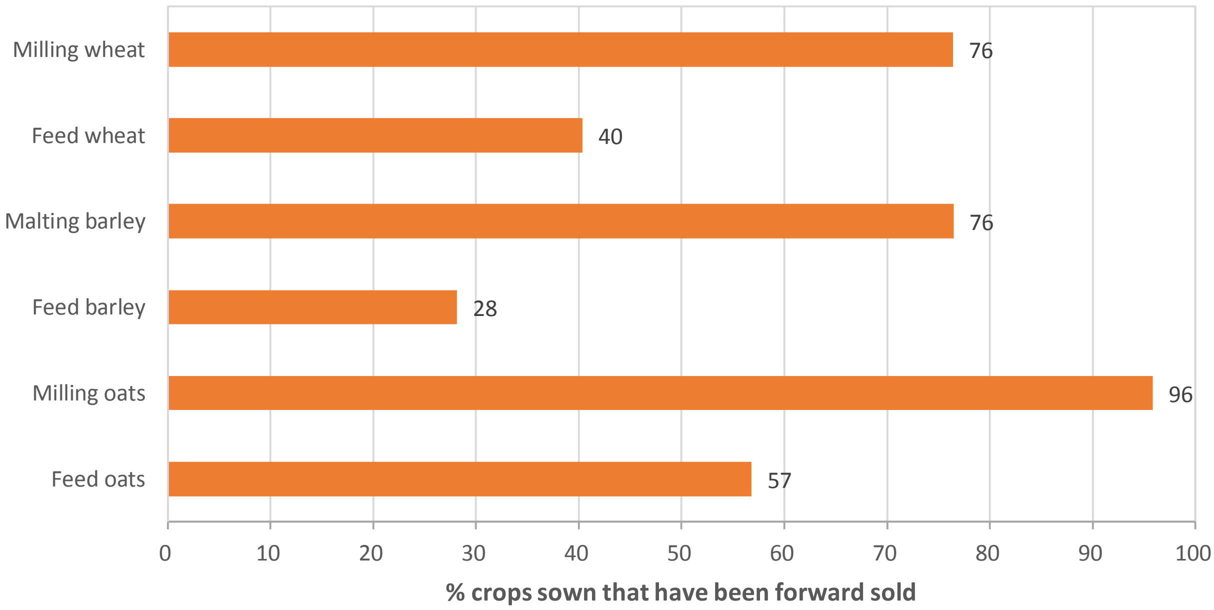

Figure 9. Percentage of total crop sown (autumn and spring sowings plus spring intentions) that has been forward sold as at October 10, 2016.