



The objective of this AIMI survey of New Zealand (NZ) cereal growers was to determine, as at October 10, 2019:

- *sales of the 2019 NZ harvest of wheat, barley and oats since July 1, 2019*
- *levels of on-farm storage, both sold and unsold, of the 2019 harvest*
- *spring 2019 sowings and sowing intentions of wheat, barley and oats*

Survey details

Data from 142 NZ survey farms who completed all of the last four cereal surveys (October 2018 and April, July and October 2019) were scaled up to the national level using the most recent, 2018, NZ Agricultural Production Statistics (APS). 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 2019 and there will have been changes since this time. The maize survey is currently underway and details will be released in the near future.

Key Points at 10 October 2019 (figures have been rounded to nearest 100):

- For the 2018/2019 season, cereal grain production (wheat, barley and oats) in NZ totaled an estimated 799,900 tonnes, while maize grain production was estimated at 195,400 tonnes. Total production of grain in NZ was therefore estimated to be 995,300 tonnes.
- Unsold stocks of cereal grain, summed over all six crops, are estimated to have reduced by 44% between 1 July 2019 and 10 October 2019.
- When compared to the same time last year, unsold stocks of cereal grain, summed over all six crops, are estimated to be up by 95% (or 52,700 tonnes), with an increase in unsold stocks of all crops except for feed oats. As at 10 October 2019, unsold stocks of feed wheat were estimated at 38,000 tonnes (up 21,800 tonnes on last year), and of feed barley at 57,300 tonnes (up 24,000 tonnes).
- On-farm storage of sold grain, overall, is up 17% (or 33,900 tonnes) on this time last year. Total on-farm storage, including both sold and unsold grain, summed over all six crops, is up 35% (or 86,600 tonnes) compared to the same time last year.
- The total area sown or intended to be sown in cereals is estimated to be 96,900 hectares, which is down 5% (or down 5,300 ha) on last season. At the date of the survey (10 October 2019), 84% of this total area had been sown, with 16% still left to sow. Some spring sowings have been delayed by wet conditions, but growers on lighter soils have reported very good conditions for sowing. Moisture levels are generally very good.

In summary, the tonnages of unsold feed grain were estimated at 38,000 t of feed wheat and 57,300 t of feed barley, as at 10 October 2019; in addition, there was an estimated 8,800 t of unsold milling wheat. For feed wheat and feed barley, the 2020 harvest hectares are predicted to be 7% down and 12% down, respectively, on the 2019 harvest hectares. When totalled over all six cereal crops, the 2020 harvest hectares are predicted to be down 5% on the 2019 harvest hectares (down from an estimated 102,200 hectares to 96,900 hectares).

Milling wheat: The estimated tonnage of unsold grain is 8,800 tonnes, which is up on the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 27,800 tonnes, which is also up on the tonnage at the same time last year. Overall, on-farm storage is 55% up on the same time last year. Almost all milling wheat crops (99.6%) had been sown by October 10, and the area sown is estimated to be up 20% on last season.

Feed wheat: The estimated tonnage of unsold grain is 38,000 tonnes, which is up on the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 100,800 tonnes, which is also up on the tonnage at the same time last year. Overall, on-farm storage is up 26% on the same time last year. Almost all feed wheat crops (99.2%) had been sown by October 10, and the area sown (including yet to be sown) is estimated to be down 7% on last season.

Feed barley: The estimated tonnage of unsold grain is 57,300 tonnes, which is up on the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 58,700 tonnes, which is down on the tonnage at the same time last year. Overall, on-farm storage is up 16% on the same time last year. Feed barley crops were 73% sown by October 10, and the area sown (including yet to be sown) is estimated to be down 12% on last season.

Malting barley: The estimated tonnage of unsold grain is 2,900 tonnes, which is higher than at the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 20,600 tonnes, which is very much higher than the tonnage at the same time last year. Overall, on-farm storage (of 23,500 t) is very much higher than at the same time last year. Malting barley crops were 75% sown by October 10, and the area sown (including yet to be sown) is estimated to be 23% up on last season.

Milling oats: The estimated tonnage of unsold grain is 1,400 tonnes, which is up on the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 17,700 tonnes, which is also up on the same time last year. Overall, on-farm storage is up 64% on the same time last year. Milling oats crops were only 48% sown by October 10, and the area sown (including yet to be sown) is estimated to be 41% down on last season.

Feed oats: The estimated tonnage of unsold grain is 180 tonnes, which is similar to the same time last year. The estimated tonnage of “sold” grain that is still stored on farm is 2,100 tonnes, which is higher than at the same time last year. Overall, on-farm storage is 32% higher than at the same time last year. Feed oats crops were only 65% sown by October 10, and the area sown (including yet to be sown) is estimated to be 11% up on last season.

Overall: As a total over all six crops, estimated unsold tonnage of wheat, barley and oats (108,500 t in total) was up by 95% compared to the same time last year, while estimated tonnage “sold” but still stored on farm (227,700 t in total) was up by 17% compared to the same time last year. This meant that the total tonnage on farm on October 10, 2019 (336,200 t in total) was estimated to be up by 35% on the amount on October 10, 2018. The total on-farm storage was made up of 138,700 tonnes of feed wheat, 116,000 tonnes of feed barley, 36,600 tonnes of milling wheat, 23,500 tonnes of malting barley, 19,100 tonnes of milling oats and 2,300 tonnes of feed oats.

The total area sown plus intended to be sown in wheat, barley or oats, as at 10 October 2019, was estimated to be down 5,300 ha, or 5%, on the area harvested in 2019. There were decreases in sowings of feed wheat, feed barley and milling oats which were only partially offset by increases in sowings of milling wheat and malting barley.

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 2019, was estimated to be 5% down on the area harvested in 2018. Feed barley area was down 18%, feed wheat area was largely unchanged (down 2%), milling wheat was up 27% and malting barley was up 16% over the two year period.

The percentage of hectares that have been “forward sold” was estimated to be 59% for milling wheat, 97% for malting barley and 77% for milling oats. For the feed crops, the percentages that have been forward sold were 45% of feed wheat, 34% of feed barley and 70% of feed oats hectares.

Estimated NZ National Figures as at October each year – Cereals

Table 1. Detailed estimated NZ national figures for the 2019 harvest, plus sold and delivered tonnages, for six cereal crops as at October 10, 2019.

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Number of farmers in the survey who harvested this crop in 2019		39	98	34	109	11	14	140
2018 harvest								
Estimated NZ total hectares, 2018 harvest	Ha	7,816	33,584	10,665	45,635	3,362	970	102,032
Estimated NZ total tonnes, 2018 harvest	Tonnes	65,096	305,904	73,208	306,492	18,701	5,585	774,986
2019 harvest								
Estimated NZ total hectares, 2019 harvest	Ha	8,301	35,427	10,078	42,890	3,922	1,571	102,190
Estimated NZ total tonnes, 2019 harvest	Tonnes	74,495	310,215	74,961	304,791	26,393	9,019	799,873
Sold under pre-harvest contract and delivered by Oct 10 2019	Tonnes	27,795	125,309	48,448	117,160	7,268	5,409	331,389
Pre-harvest contract grain stored on farm on Oct 10 2019	Tonnes	20,150	78,677	18,021	37,722	17,676	2,098	174,345
Sold at spot/free price and delivered by Oct 10 2019	Tonnes	8,098	41,573	1,244	67,523	41	1,250	119,728
Sold at spot/free price and stored on farm on Oct 10 2019	Tonnes	7,677	22,087	2,614	21,024	0	0	53,402
(For milling or malting only) Sold for feed by Oct 10 2019	Tonnes	1,988	-	1,743	-	0	-	3,731
(For feed only) Used on own farm by Oct 10 2019	Tonnes	-	4,594	-	4,111	-	81	8,787
Unsold stocks on hand (2019 harvest only) on Oct 10 2019	Tonnes	8,786	37,975	2,891	57,251	1,408	180	108,492
Sales channels (2019 harvest)								
Sold on pre-harvest contract (total) by Oct 10 2019	Tonnes	47,945	203,986	66,469	154,883	24,945	7,507	505,734
Sold at spot/free price (total) by Oct 10 2019	Tonnes	15,776	63,659	3,858	88,546	41	1,250	173,129
On farm storage (2019 harvest)								
Sold and delivered (total) by Oct 10 2019	Tonnes	35,893	166,881	49,691	184,683	7,309	6,659	451,117
Sold and stored on farm (total) on Oct 10 2019	Tonnes	27,827	100,764	20,635	58,746	17,676	2,098	227,747
Total sales (2019 harvest)								
Sold (grand total) by Oct 10 2019 (includes sold for feed & used on farm)	Tonnes	65,709	272,240	72,070	247,540	24,985	8,838	691,381
Unsold stocks on hand (2019 harvest only) on Oct 10 2019	Tonnes	8,786	37,975	2,891	57,251	1,408	180	108,492
Comparison of hectares and tonnes between last two harvests								
Estimated % change in hectares, 2018 to 2019 harvest	%	6%	5%	-5%	-6%	17%	62%	0%
Estimated % change in tonnes, 2018 to 2019 harvest	%	14%	1%	2%	-1%	41%	61%	3%
Comparison of yields (t/ha) between last two harvests								
NZ-wide estimated yield, 2018 harvest	T/ha	8.3	9.1	6.9	6.7	5.6	5.8	7.6
NZ-wide estimated yield, 2019 harvest	T/ha	9.0	8.8	7.4	7.1	6.7	5.7	7.8

Table 1 (continued).

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Comparison of on-farm storage between July 1 2019 and Oct 10 2019 (based upon matched data)								
Sold and stored on farm (total) on July 1 2019 (2019 harvest)	Tonnes	37,231	136,643	28,343	88,412	20,374	4,038	315,041
Sold and stored on farm (total) on Oct 10 2019 (2019 harvest)	Tonnes	27,827	100,764	20,635	58,746	17,676	2,098	227,747
Unsold stocks on hand (from 2019 harvest) on July 1 2019	Tonnes	16,842	66,930	5,941	103,248	1,435	460	194,857
Unsold stocks on hand (from 2019 harvest) on Oct 10 2019 (as above)	Tonnes	8,786	37,975	2,891	57,251	1,408	180	108,492
% decrease in total grain stored on-farm from July 2019 to Oct 2019	%	32%	32%	31%	39%	12%	49%	34%
Recalculated Oct 10 2018 survey breakdown to enable more precise, matched comparisons between Oct 10 2018 and Oct 10 2019								
Sold under pre-harvest contract and delivered by Oct 10 2018	Tonnes	24,159	131,768	64,269	126,126	3,316	2,522	352,161
Pre-harvest contract grain stored on farm on Oct 10 2018	Tonnes	11,369	63,140	1,545	47,988	11,464	1,475	136,981
Sold at spot/free price and delivered by Oct 10 2018	Tonnes	8,332	59,103	871	65,537	189	975	135,007
Sold at spot/free price and stored on farm on Oct 10 2018	Tonnes	7,364	31,149	0	18,378	0	0	56,891
(For milling or malting only) Sold for feed by Oct 10 2018	Tonnes	8,983	-	5,493	-	32	-	14,507
(For feed only) Used on own farm by Oct 10 2018	Tonnes	-	1,661	-	5,545	-	365	7,571
Unsold stocks on hand (2018 harvest only) on Oct 10 2018	Tonnes	4,889	16,150	1,030	33,278	149	248	55,744
Comparison of on-farm storage between last October and this October (based upon matched data)								
Sold and stored on farm (total) on Oct 10 2018 (2018 harvest)	Tonnes	18,732	94,289	1,545	66,366	11,464	1,475	193,872
Sold and stored on farm (total) on Oct 10 2019 (2019 harvest)	Tonnes	27,827	100,764	20,635	58,746	17,676	2,098	227,747
Unsold stocks on hand (from 2018 harvest) on Oct 10 2018	Tonnes	4,889	16,150	1,030	33,278	149	248	55,744
Unsold stocks on hand (from 2019 harvest) on Oct 10 2019 (as above)	Tonnes	8,786	37,975	2,891	57,251	1,408	180	108,492
% increase in total grain stored on-farm from Oct 2018 to Oct 2019	%	55%	26%	814%	16%	64%	32%	35%
Increase in total grain (in TONNES) stored on-farm from Oct 2018 to Oct 2019	Tonnes	12,992	28,300	20,952	16,353	7,471	555	86,623

Note: The matched comparisons in the last three sections were based upon scaling up data from the exact same survey farms for the last four AIMI surveys (not accounting for any carry-over from previous years).

Statistics NZ is gratefully acknowledged for supplying final 2018 NZ Agricultural Production Statistics data on total hectares and tonnes for wheat, barley and oats.

In Table 1, the tonnages of the 2019 harvest of six grain crops still stored on farm have reduced by between 12% and 49% in the period between the AIMI surveys dated July 1, 2019 and October 10, 2019. When totalled over all six crops, the reduction is 34%.

When the on-farm storage on October 10, 2019 is compared to that at the same time last year (October 10, 2018), the total tonnage of grain on farms from the most recent harvest has increased by 35% (when summed over all six crops). This corresponds to a 17% increase in the tonnage of grain “sold” and stored on farm, and a 95% increase in unsold stocks on hand, as compared to a year ago.

Table 2. NZ sowings and sowing intentions for six cereal crops as at October 10, 2019.

	Units	Milling wheat (ha)	Feed wheat (ha)	Malting barley (ha)	Feed barley (ha)	Milling oats (ha)	Feed oats (ha)	Total (all crops)
Number of farmers in survey who have sown or intend to sow this crop as at Oct 10 2019		48	94	35	95	12	17	140
Estimated NZ total hectares, 2018 harvest	Ha	7,816	33,584	10,665	45,635	3,362	970	102,032
Estimated NZ total hectares, 2019 harvest	Ha	8,301	35,427	10,078	42,890	3,922	1,571	102,190
Sowings and intentions for the current season's crop (2019/20)								
Estimated NZ total autumn/winter 2019 sowings (hectares; for harvest in 2020)	Ha	6,493	30,702	1,451	14,893	751	302	54,592
Estimated NZ total spring 2019 sowings already sown by Oct 10 2019 (hectares; for harvest in 2020)	Ha	3,412	1,945	7,797	12,509	368	834	26,865
Estimated NZ total spring 2019 sowings still to sow (intentions) as at Oct 10 2019 (hectares; for harvest in 2020)	Ha	35	272	3,158	10,194	1,203	606	15,469
Estimated NZ total spring 2019 sowings plus intentions as at Oct 10 2019 (hectares; for harvest in 2020)	Ha	3,448	2,217	10,955	22,703	1,571	1,440	42,334
Predicted NZ total hectares, 2020 harvest (Autumn/winter 2019 sowings and Spring 2019 sowings & intentions, all combined)	Ha	9,941	32,919	12,406	37,596	2,322	1,742	96,926
"Forward sales" of 2019/20 crop								
Predicted NZ total hectares that are "forward sold" (2020 harvest) as at Oct 10 2019	Ha	5,832	14,895	11,977	12,809	1,791	1,226	48,530
Estimated percentage of NZ total hectares that are "forward sold" (2020 harvest) as at Oct 10 2019	%	59%	45%	97%	34%	77%	70%	50%
Comparison of sowings/intentions between the 2017/18, 2018/19 and 2019/20 seasons (NZ totals) (based upon matched data)								
Estimated % change in NZ total sowings, 2018 to 2019 harvests	%	6%	5%	-5%	-6%	17%	62%	0%
Estimated % change in NZ total sowings, 2019 to 2020 (predicted) harvests	%	20%	-7%	23%	-12%	-41%	11%	-5%
Estimated % change in NZ total sowings, 2018 to 2020 (predicted) harvests (TOTAL over TWO seasons)	%	27%	-2%	16%	-18%	-31%	80%	-5%
Estimated change in NZ total sowings, 2019 to 2020 (predicted) harvests (in HECTARES)	Ha	1,640	-2,509	2,328	-5,294	-1,599	170	-5,264
Comparison of spring sowing intentions as at July 1 2019 with spring sowings plus intentions as at Oct 10 2019 (based upon matched data)								
Estimated NZ total spring 2019 sowing intentions as at July 1 2019 (hectares; for harvest in 2020)	Ha	3,923	2,720	9,141	23,744	1,329	1,469	42,325
Estimated NZ total spring 2019 sowings plus intentions as at Oct 10 2019 (hectares, for harvest in 2020) (as above)	Ha	3,448	2,217	10,955	22,703	1,571	1,440	42,334
Change in estimated NZ total spring 2019 sowings/intentions between July 1 2019 and Oct 10 2019 (hectares; for harvest in 2020)	Ha	-475	-504	1,815	-1,041	242	-29	9

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.

The number out of the 142 survey growers who have sown or intend to sow each crop this season can be compared with the number who harvested last season (2018/2019) by comparing the top rows of Tables 1 and 2. For milling wheat, grower numbers increased from 39 to 48 between the last two seasons, while feed wheat grower numbers decreased from 98 to 94. Note that for wheat, almost all sowing had been completed by October 10, so these are firm figures. For malting barley, grower numbers increased marginally from 34 to 35, while feed barley grower numbers decreased considerably from 109 to 95. Milling oats grower numbers increased marginally from 11 to 12, while feed oats grower numbers increased from 14 to 17 between the last two seasons.

In Table 2, sowings plus sowing intentions for feed barley (for harvest in 2020) are an estimated 12% down on the area harvested in 2019, and as a change over two seasons, they are 18% down on the area harvested in 2018. For feed wheat, sowings plus sowing intentions (for harvest in 2020) are an estimated 7% down on the area harvested in 2019, and 2% down on the area harvested in 2018. Conversely, for milling wheat, sowings (for harvest in 2020) are an estimated 20% up on the area harvested in 2019, and 27% up on the area harvested in 2018. Malting barley sowings and intentions are up 23% on last year, and up 16% on two years ago. Milling oats sowings and intentions are down 41% on last year, and down 31% on two years ago. Feed oats sowings and intentions are up 11% on last year, and up 80% on two years ago.

As a sum over the six cereal crops, the estimated change between the area harvested in 2019 and the sowings plus sowing intentions for the current season (for harvest in 2020) is a decrease of 5,300 hectares. In total, sowings plus sowing intentions for the current season (for harvest in 2020) sum to 96,900 hectares, as compared to 102,200 hectares for the 2019 harvest.

At the bottom of Table 2 is the estimated change between the spring sowing intentions on July 1, 2019 and the actual sowings plus updated intentions on October 10, 2019. In total, there is no essentially change in the spring hectares sown plus intended to be sown between the two survey dates. However, there has been an increase in hectares for malting barley and milling oats, at the expense of feed barley, feed wheat, milling wheat and feed oats.

Milling wheat (Tonnes)

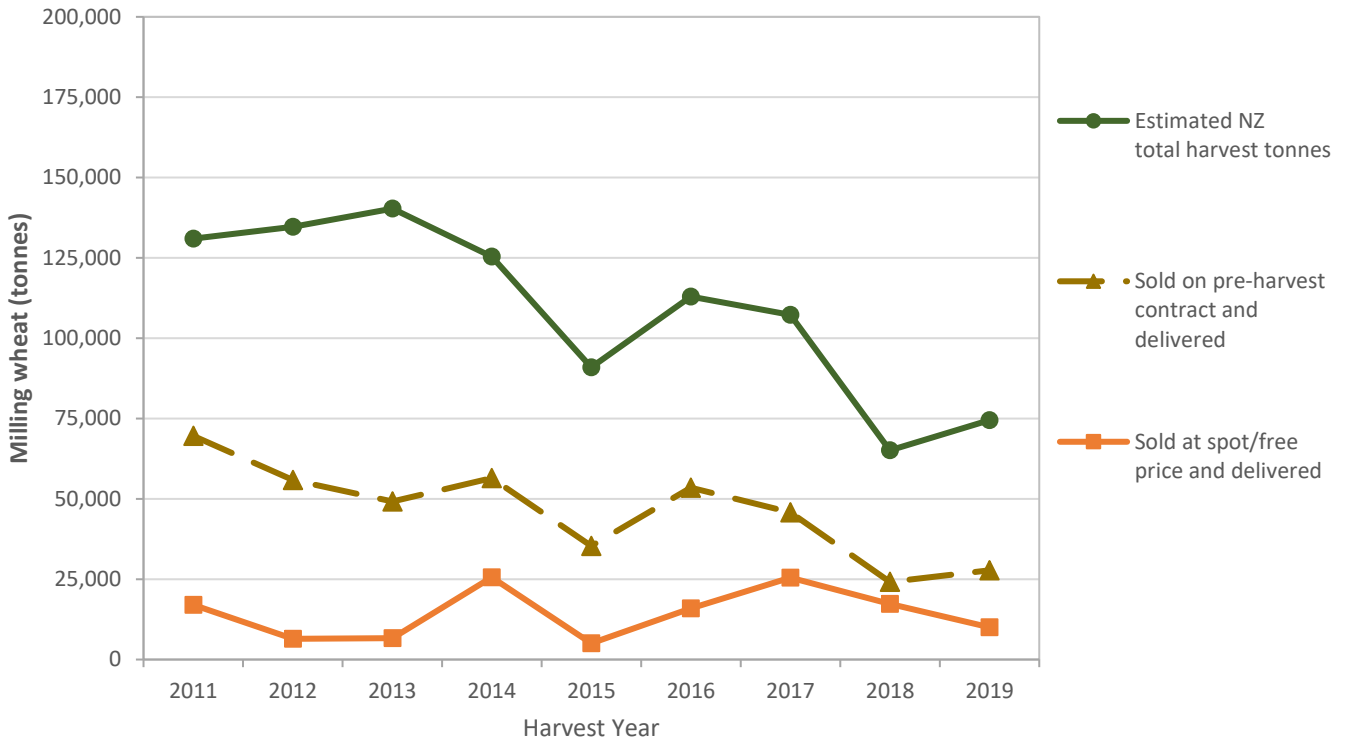


Figure 1a. NZ harvest tonnage and sales channels for Milling wheat (tonnes) as estimated in October each year. (Note: Both “sold and delivered” categories relate to the crop harvested that year, excluding carryover stock. “Sold at spot/free price and delivered” includes grain sold for feed. Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

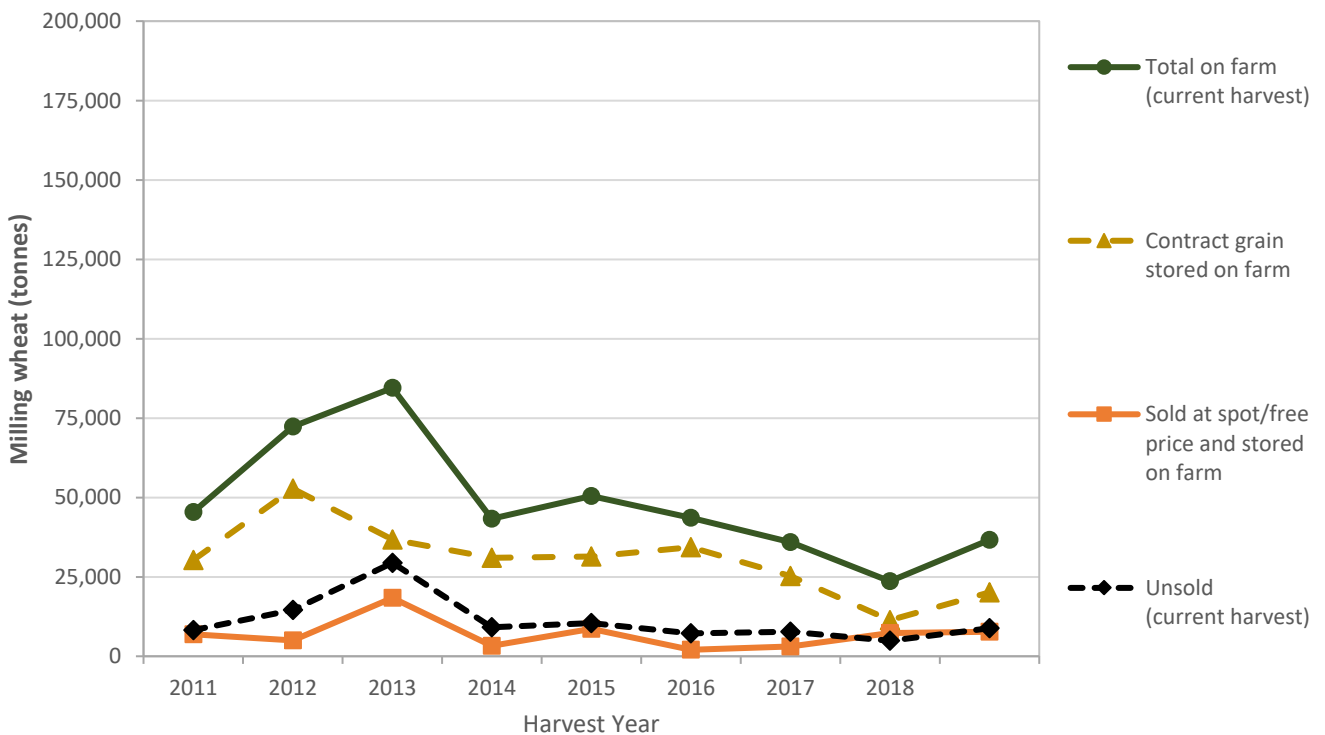


Figure 1b. NZ stocks on farm for Milling wheat (tonnes) as estimated in October each year. (Note: Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

Feed Wheat (Tonnes)

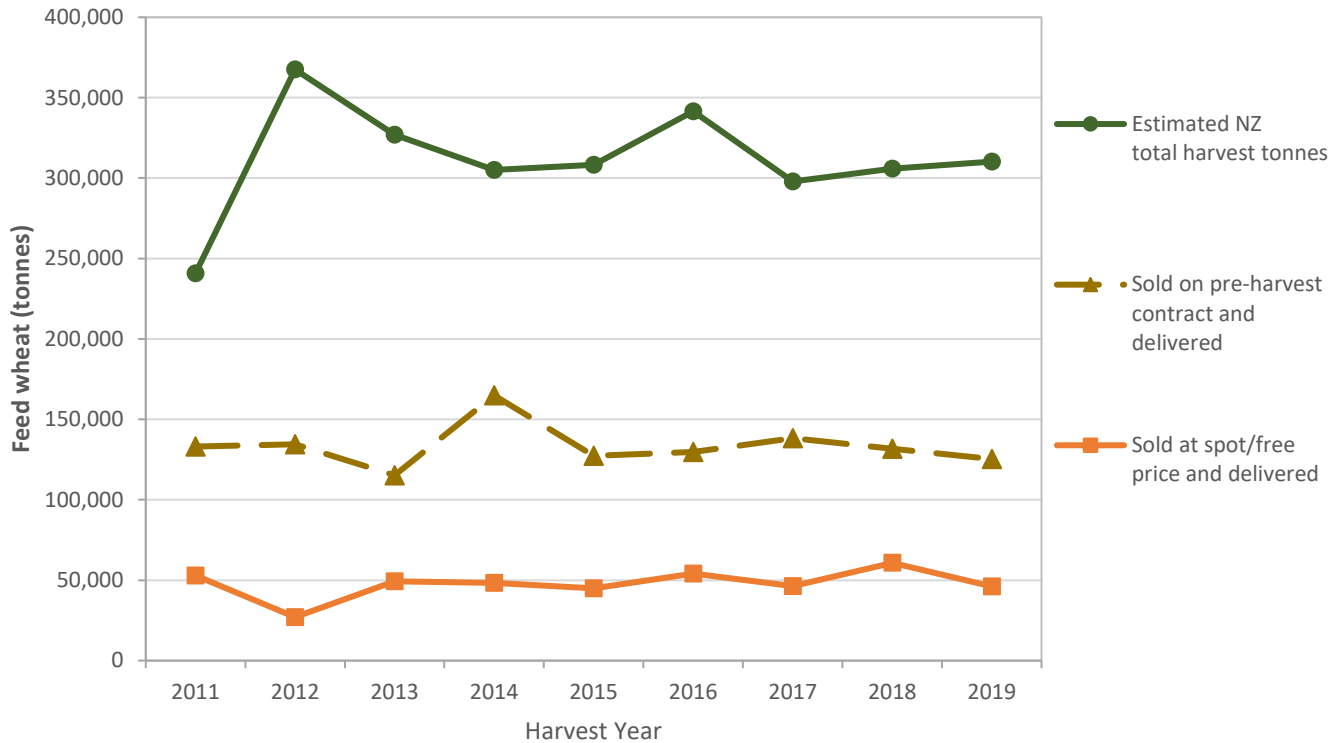


Figure 2a. NZ harvest tonnage and sales channels for Feed wheat (tonnes) as estimated in October each year. (Note: Both “sold and delivered” categories relate to the crop harvested that year, excluding carryover stock. “Sold at spot/free price and delivered” includes grain used on own farm. Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

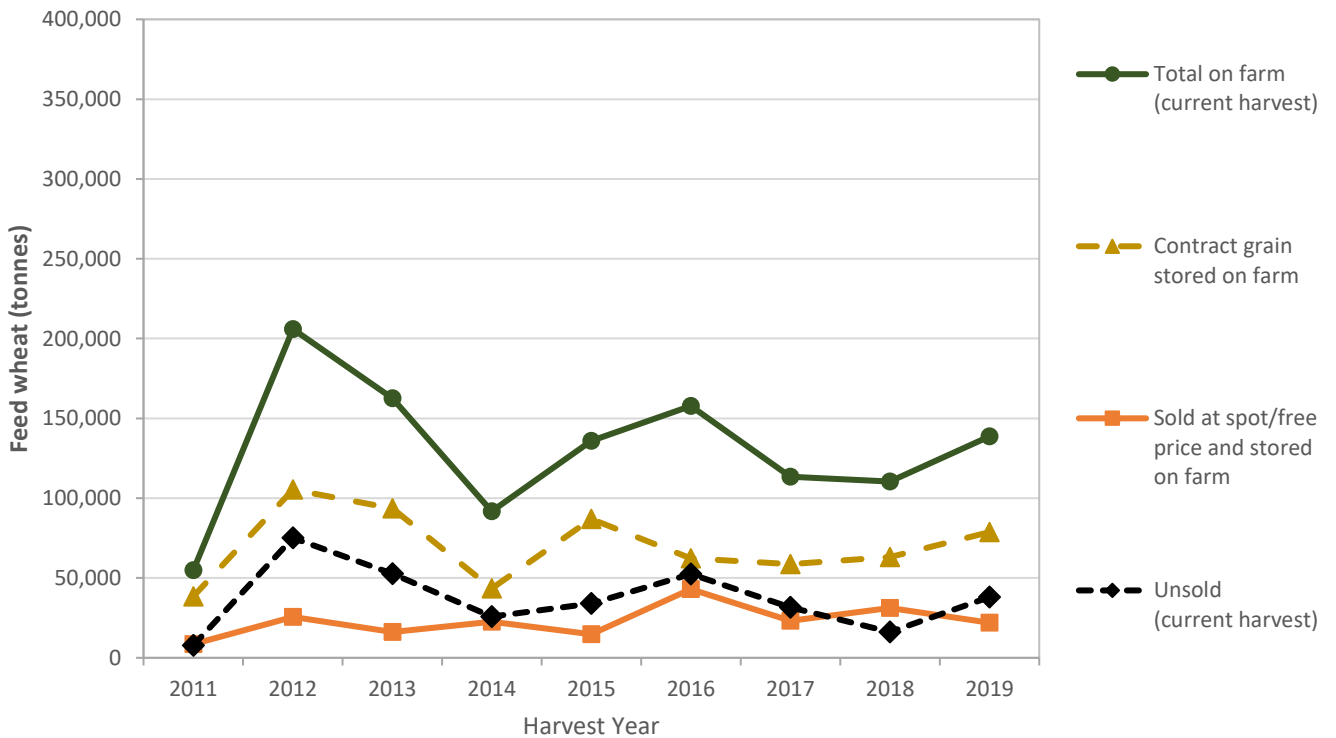


Figure 2b. NZ stocks on farm for Feed wheat (tonnes) as estimated in October each year. (Note: Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

Feed Barley (Tonnes)

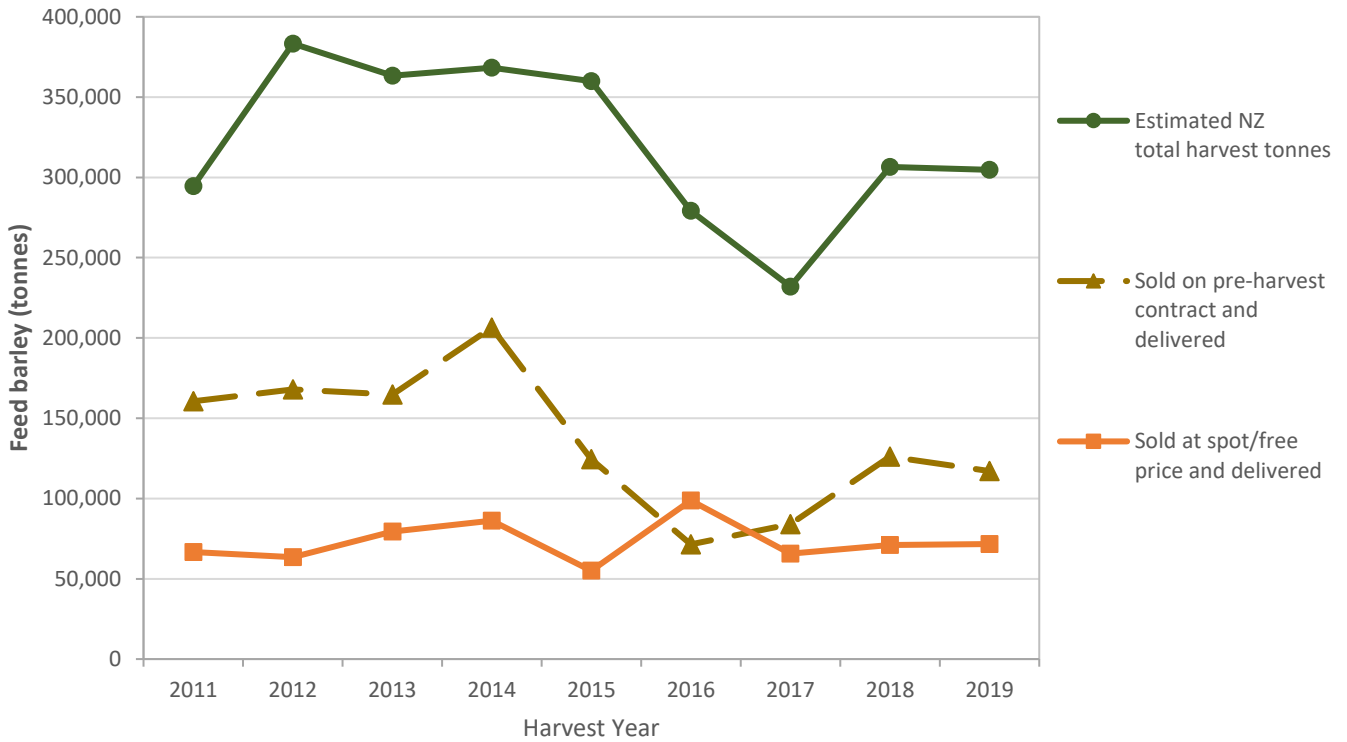


Figure 3a. NZ harvest tonnage and sales channels for Feed barley (tonnes) as estimated in October each year. (Note: Both “sold and delivered” categories relate to the crop harvested that year, excluding carryover stock. “Sold at spot/free price and delivered” includes grain used on own farm. Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

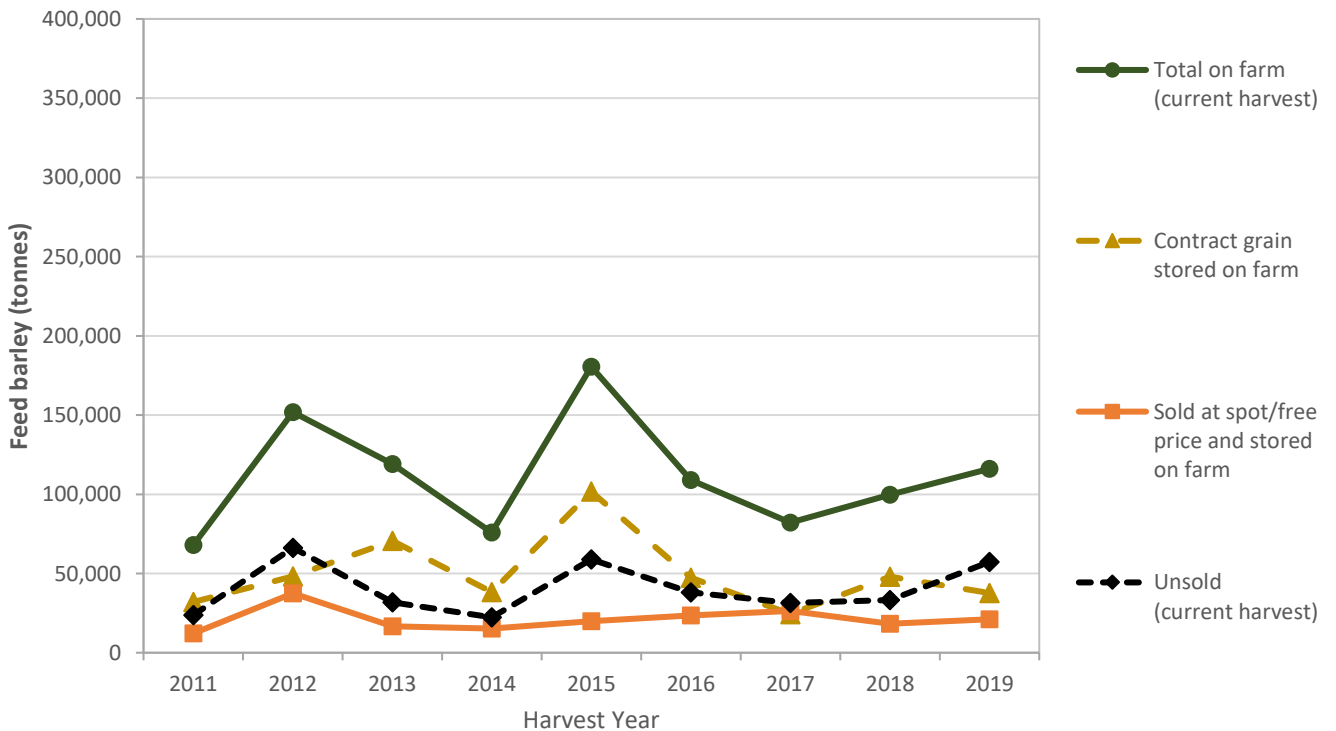


Figure 3b. NZ stocks on farm for Feed barley (tonnes) as estimated in October each year. (Note: Historical data for 2011 to 2017 are from October AIMI Reports for 2017 and earlier, while data for 2018 and 2019 are matched data from the current report.)

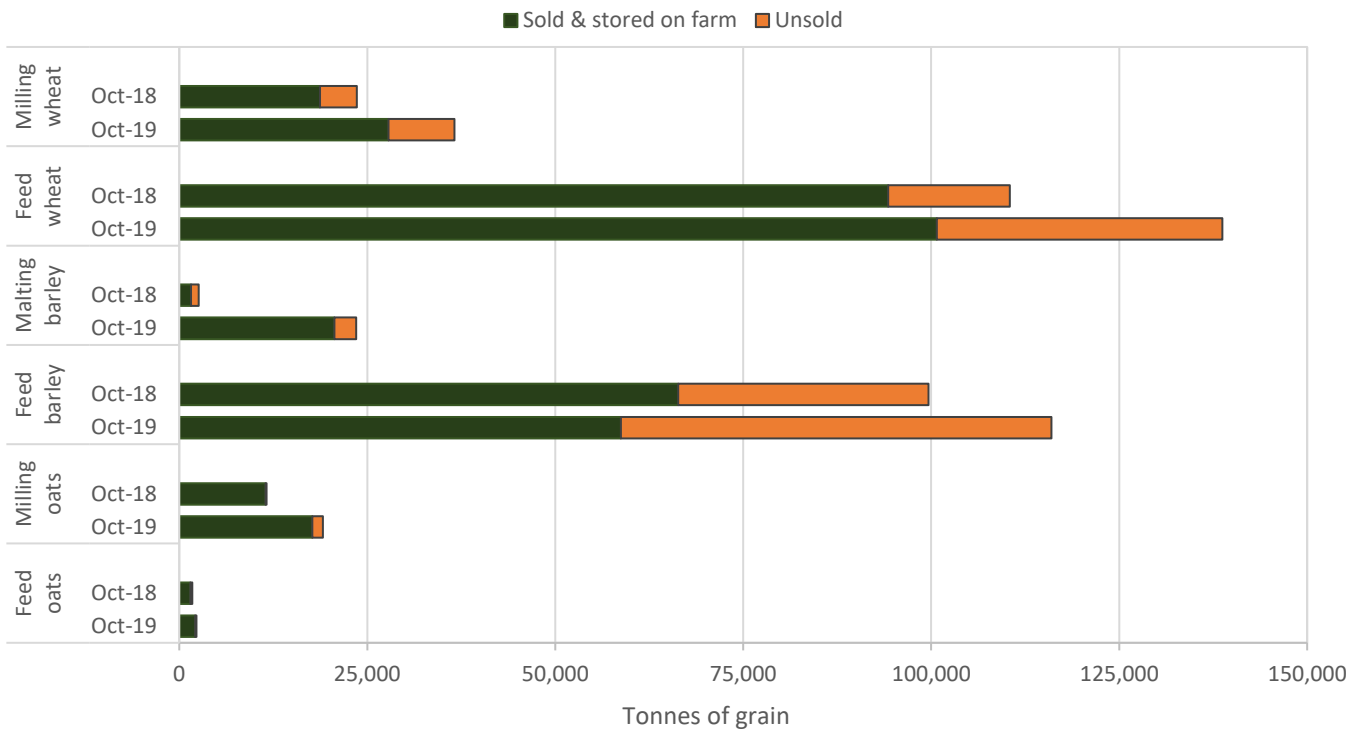


Figure 4. Changes in NZ stocks on farm for wheat, barley and oats between October 10, 2018 and October 10, 2019. These data are also reported in Figures 1b, 2b and 3b.

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.

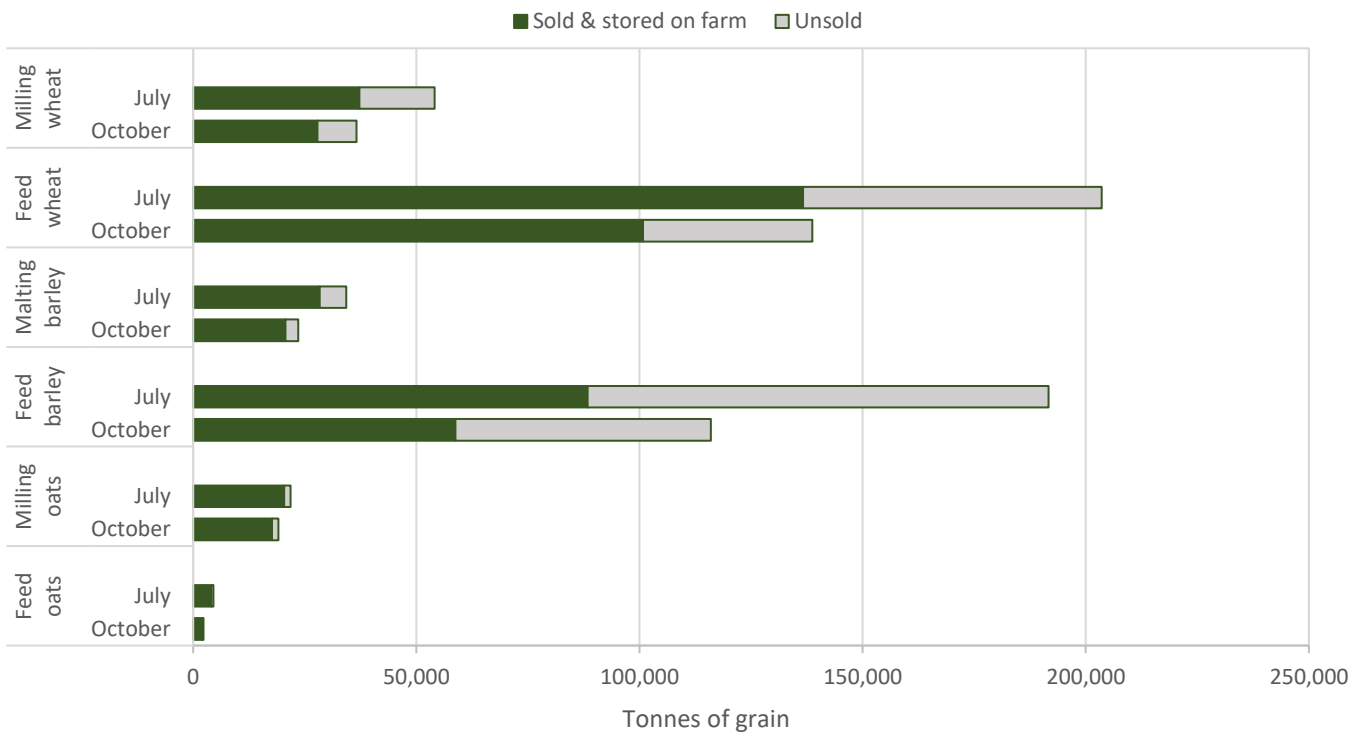


Figure 5. Changes in NZ stocks on farm for wheat, barley and oats between July 1 and October 10, 2019. As in Figure 4, this is a matched comparison.

NZ harvest hectares for 2011 to 2019 and predicted hectares for 2020 as estimated in October each year

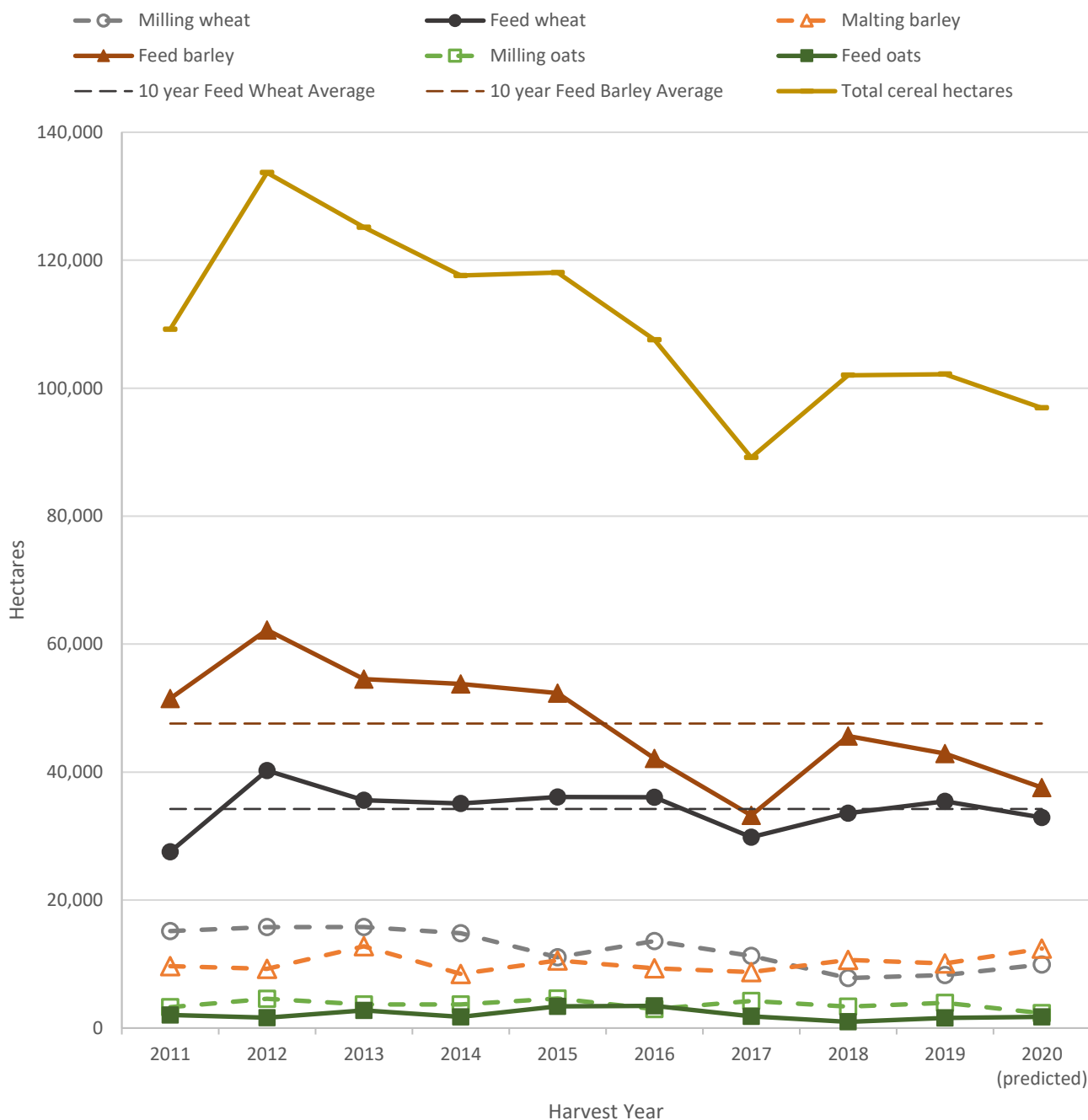


Figure 6. NZ harvest hectares for six cereal crops (and the total over the six crops) as estimated in October each year from 2011 to 2019, and predicted harvest hectares for 2020. For feed wheat and feed barley, “long-term” means (10-year averages) are included as dashed horizontal lines.

(Note: All figures represent final harvest hectares except for 2020 which is made up of hectares already sown and hectares intended to be sown for harvest in 2020. Refer to Fig. 7 for hectares already sown by October 10, 2019. Figures for 2018, 2019 and 2020 (predicted) are from the current report and are a matched comparison (scaled up from a common set of growers), while other figures are from previous October AIMI reports for 2011 – 2017.)

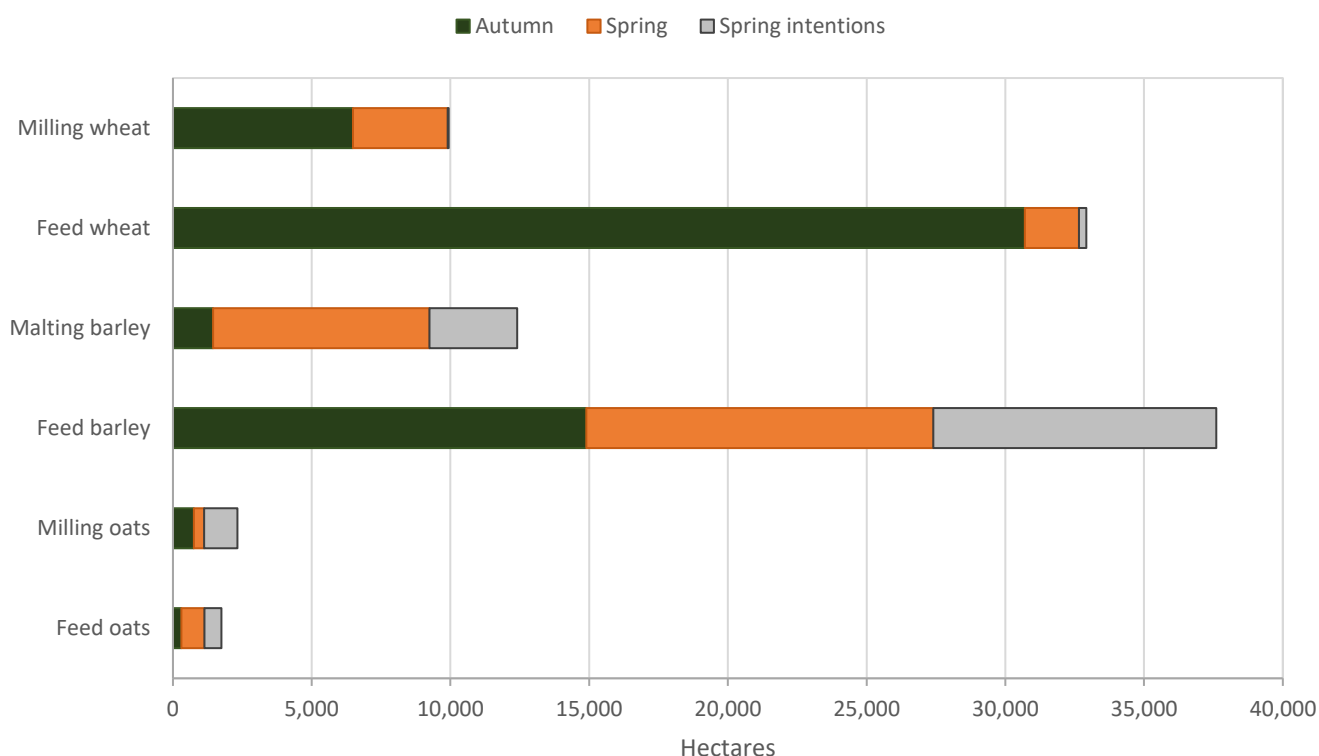


Figure 7. Estimated NZ hectares sown in autumn and spring 2019, plus NZ spring hectares yet to sow (spring intentions) for harvest in 2020, based on data collected on October 10, 2019.

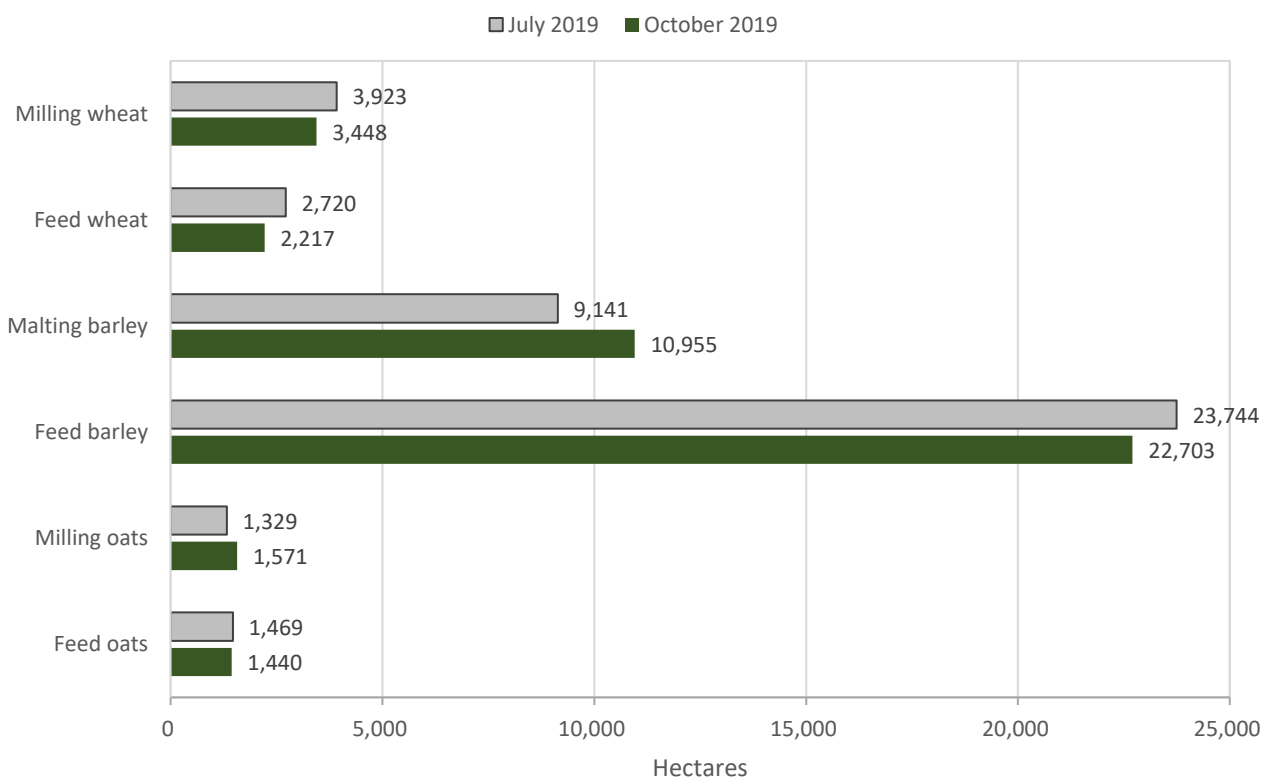


Figure 8. Comparison of NZ spring sowing intentions as at July 1 2019 with actual NZ spring sowings plus intentions as at October 10, 2019. As in Figures 4 and 5, this is a matched comparison.

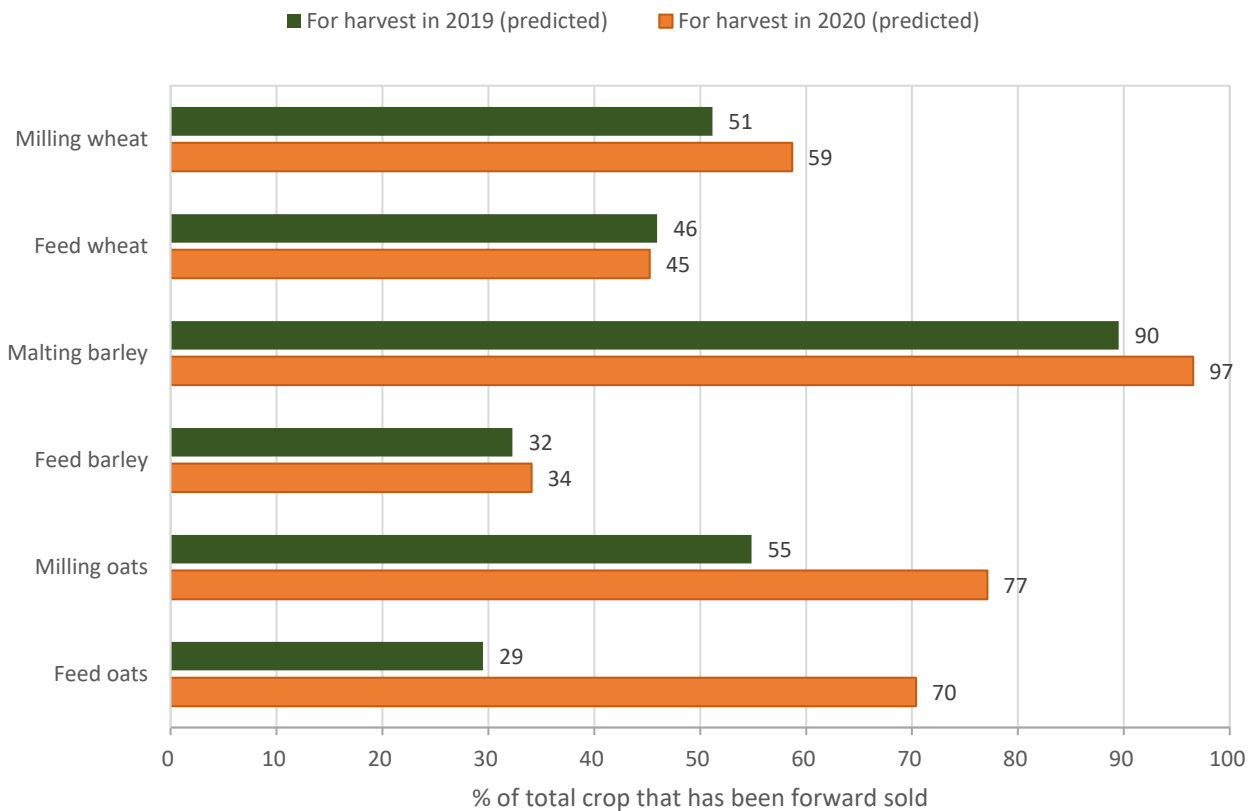


Figure 9. Comparison of percentage of total NZ crop sown (autumn and spring sowings plus spring intentions) that had been forward sold as at October 10, 2018 and 2019 for predicted 2019 and predicted 2020 harvests, respectively. As in Figures 4, 5 and 8, this is a matched comparison.

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