



The objective of this AIMI survey of cereal growers in New Zealand (NZ) was to determine, as at July 1, 2020:

- *the final size of the 2020 NZ harvest of wheat, barley and oats (divided into milling/malting and feed crops)*
- *sales channels and level of on-farm storage, both sold and unsold, of the 2020 harvest of these six crops*
- *autumn/winter sowings of wheat, barley and oats (both milling/malting and feed), and sowing intentions for the spring of 2020*

Survey details

The data from 138 NZ survey farms as at July 1, 2020 were scaled up to the national level using the most recent, 2019, final 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 on July 1, 2020 and there will have been changes since this time. Note that unsold and sold grain carried over from the 2019 harvest was not estimated in this survey; however, on April 1, 2020 this carry-over grain was only 2.1% of the 2019 harvest, so adding any grain remaining on farms from 2019 would do little to change the complete picture.

Key Points at July 1, 2020 *(figures have been rounded to the nearest 100):*

- The final harvest data showed that yields were up over all (by 17% over all six crops) compared to last season for a reduced number of hectares (6% down). The net result was a 10% increase in total tonnage compared to last season.
- Unsold stocks of feed wheat are up compared to this time last year (up 27,600 tonnes), while unsold feed barley stocks are down (down 6,200 tonnes) on last year. Unsold stocks of milling oats are also down on last year.
- Weather conditions for autumn/winter sowing and establishment have been judged to be very good in most regions. Sowings and intentions are similar to last season with the exception of malting barley (down 10%), milling oats (up 32%) and feed oats (down 14%), although less than half of these three crops had actually been sown by July 1, 2020.

Final estimated average yields were, overall six crops, up by 17% this season compared to last season. Feed wheat yields were up an estimated 26%, feed barley yields up 12%, milling wheat yields up 11%, malting barley yields up 1%, milling oats yields up 5% and feed oats yields up 6% compared to last season. The tonnages of unsold feed grain were estimated at 94,200 t of feed wheat and 96,300 t of feed barley, as at 1 July 2020; in addition, there was an estimated 20,400 t of unsold milling wheat and 6,200 t of

unsold malting barley. The predicted 2021 harvest hectares, when totalled over all six cereal crops, are 1% up on the 2020 harvest hectares (from 99,300 hectares to 100,000 hectares).

Milling wheat: Estimated final total tonnage (106,400 t) was up 36% compared to last year's harvest. Of this total, 81% has been sold (86,000 t), although a large amount of the sold grain is still stored on farm (72%). The amount of unsold grain is 20,400 tonnes (19%), which is slightly higher than at the same time last year, 1 July 2019 (17,700 t). The amount of unsold grain decreased between 1 April and 1 July 2020 by 14,300 t (or 41%).

Feed wheat: Estimated final total tonnage (373,600 t) was up 17% compared to last year's harvest. Of this total, 75% has been sold (279,400 t), with 53% of the sold grain still stored on farm. The amount of unsold grain is 94,200 tonnes (25%), which is higher than at the same time last year, 1 July 2019 (66,500 t). The amount of unsold grain decreased between 1 April and 1 July 2020 by 25,500 t (or 21%).

Feed barley: Estimated final total tonnage (291,100 t) was down 5% compared to last year. Of this total tonnage 67% has been sold (194,800 t), with 41% of the sold grain still stored on farm. The amount of unsold grain is 96,300 tonnes (33%), which is slightly down on the same time last year, 1 July 2019 (102,500 t). The amount of unsold grain decreased between 1 April and 1 July 2020 by 34,700 t (or 26%).

For other cereals: Compared to last year, estimated final total tonnage for malting barley (97,900 t) was up by 29%, milling oats (13,500 t) was down by 31%, and feed oats (7,300 t) was up by 3%. Malting barley had 6% of the total harvest unsold (6,200 t) while milling oats and feed oats had 1% (100 t) and 15% (1,100 t) unsold, respectively, as at 1 July, 2020. Of the sold grain, 53% of malting barley was still on farm, as compared to 87% of milling oats and 62% of feed oats. Between 1 April and 1 July 2020, the amount of unsold grain *increased* by 21% for malting barley, decreased by 60% for milling oats, and decreased by 14% for feed oats.

Sowings and sowing intentions: The actual area sown in autumn/winter wheat or barley, as at 1 July 2020, was down 10% overall on autumn/winter sowings plus intentions as at 1 April 2020. When autumn/winter sowings were combined with spring sowing intentions, the area sown or to be sown in wheat or barley was predicted to be identical overall as compared to the area harvested in 2020, or down by 5% on the area harvested in 2019.

Over the two-year period (2019 harvest to predicted 2021 harvest), the harvest area for feed barley is predicted to decrease by 14% and the harvest area for feed wheat is predicted to decrease by 6%. Conversely, the harvest area for milling wheat is predicted to increase by 26%, and the harvest area for malting barley is predicted to increase by 14%. Over this same two-year period, the harvest area for milling oats is predicted to decrease by 13%, and the harvest area for feed oats is predicted to decrease by 17%.

When totalled over all six cereal crops (including oats), the 2021 harvest hectares are predicted to be 1% up on the 2020 harvest hectares (from 99,300 hectares to 100,000 hectares).

Milling wheat (tonnes)

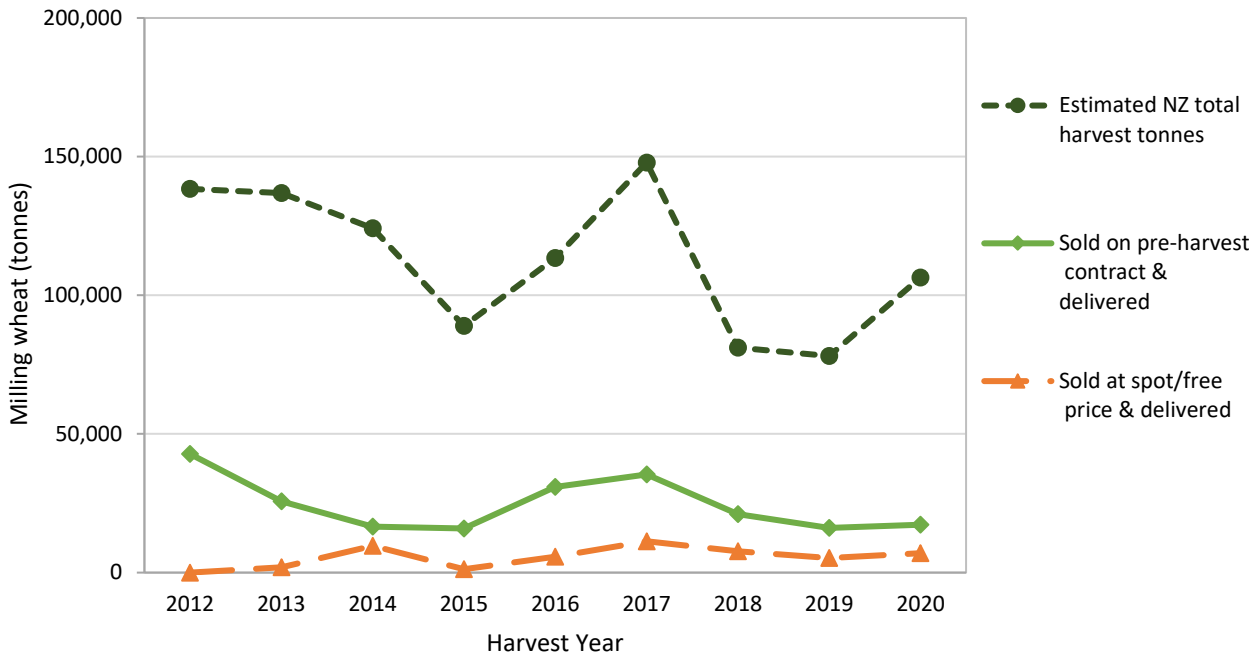


Figure 1a. NZ harvest tonnage and sales channels for milling wheat (tonnes) as estimated on July 1 each year. (Note: All categories relate to that season’s harvest, excluding carryover stock. “Sold at spot/free price and delivered” includes grain sold for feed. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report. In 2012 “Sold at spot/free price and delivered” was zero since the question was simply “sold and delivered”, with responses reported as “Sold on pre-harvest contract and delivered”; also, there was no question on “grain sold for feed”.)

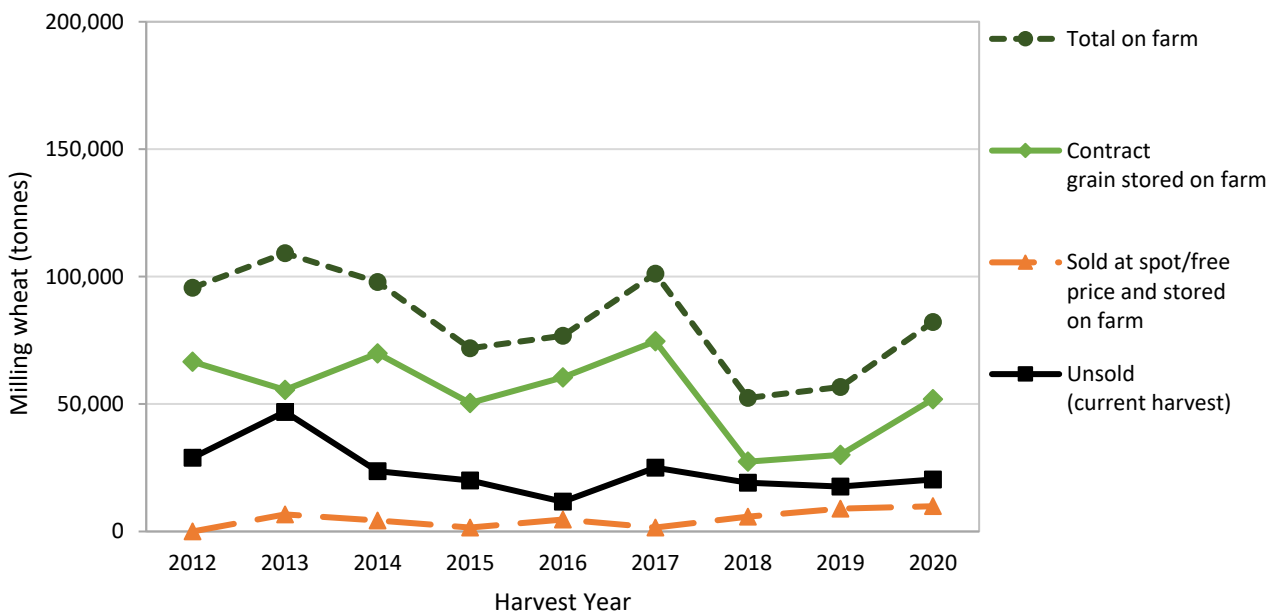


Figure 1b. NZ stocks on farm for milling wheat (tonnes) as estimated on July 1 each year. (Note: Carryover stock from the previous season is excluded. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report. In 2012 “Sold at spot/free price and stored on farm” was zero since the question was simply “sold and stored on farm”, with responses reported as “Contract grain stored on farm”.)

Feed wheat (tonnes)

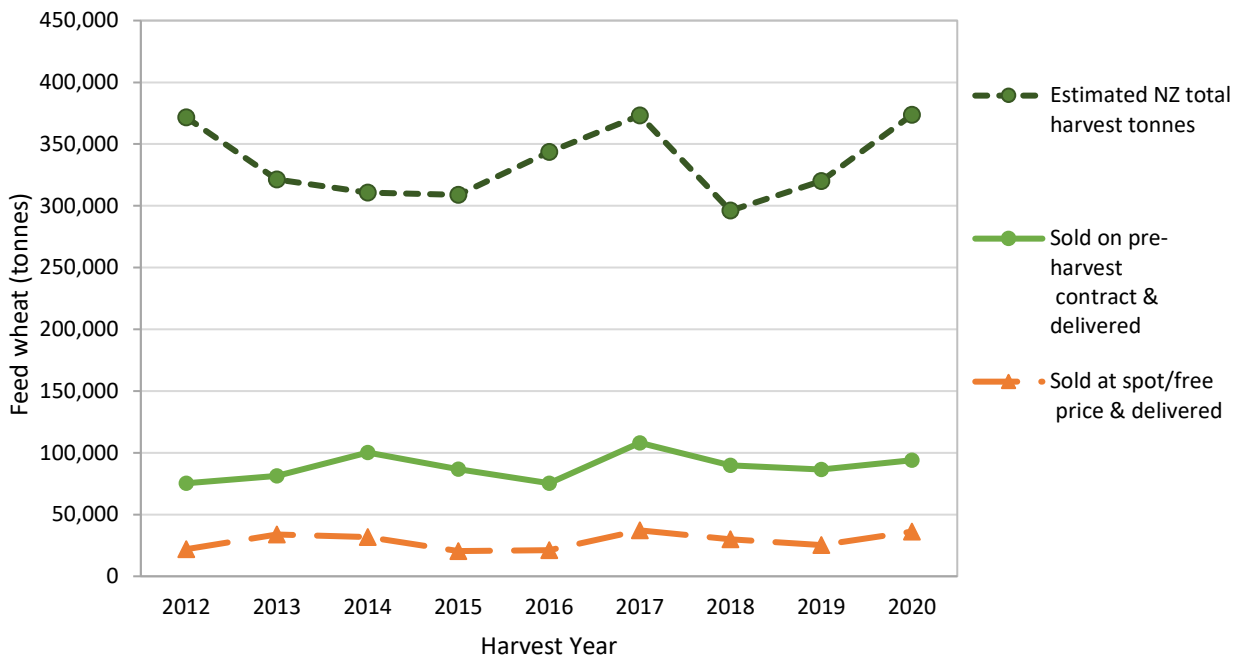


Figure 2a. NZ harvest tonnage and sales channels for feed wheat (tonnes) as estimated on July 1 each year.

(Note: All categories relate to that season’s harvest, excluding carryover stock. “Sold at spot/free price and delivered” includes grain used on own farm. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report.)

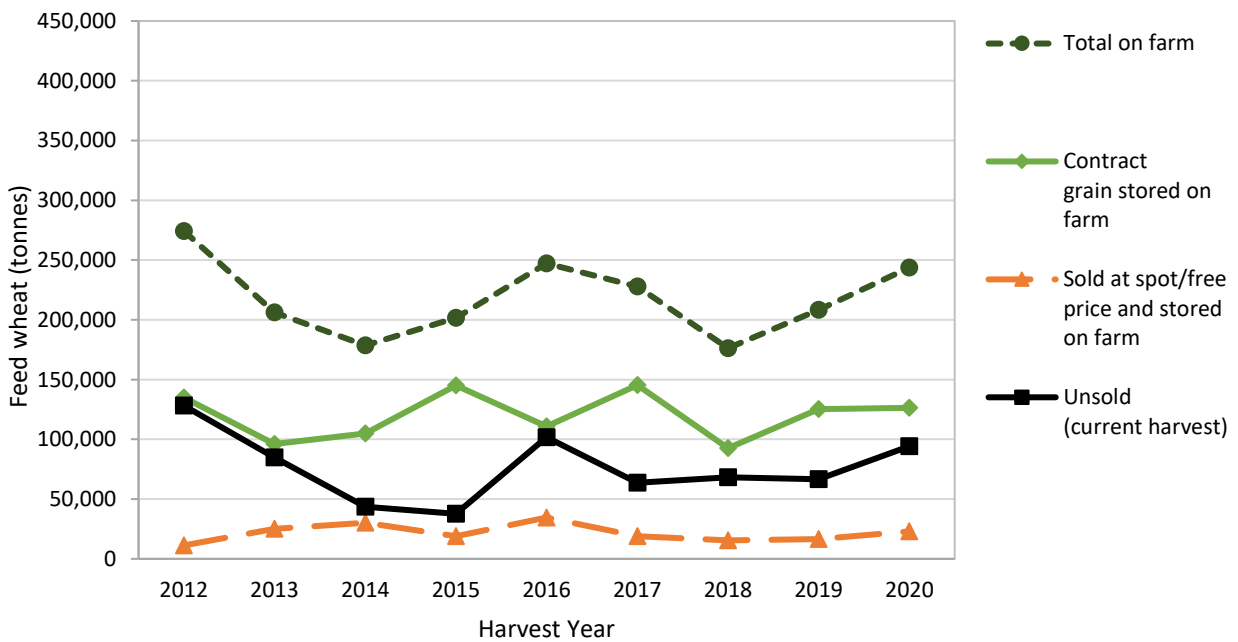


Figure 2b. NZ stocks on farm for feed wheat (tonnes) as estimated on July 1 each year.

(Note: Carryover stock from the previous season is excluded. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report.)

Feed barley (tonnes)

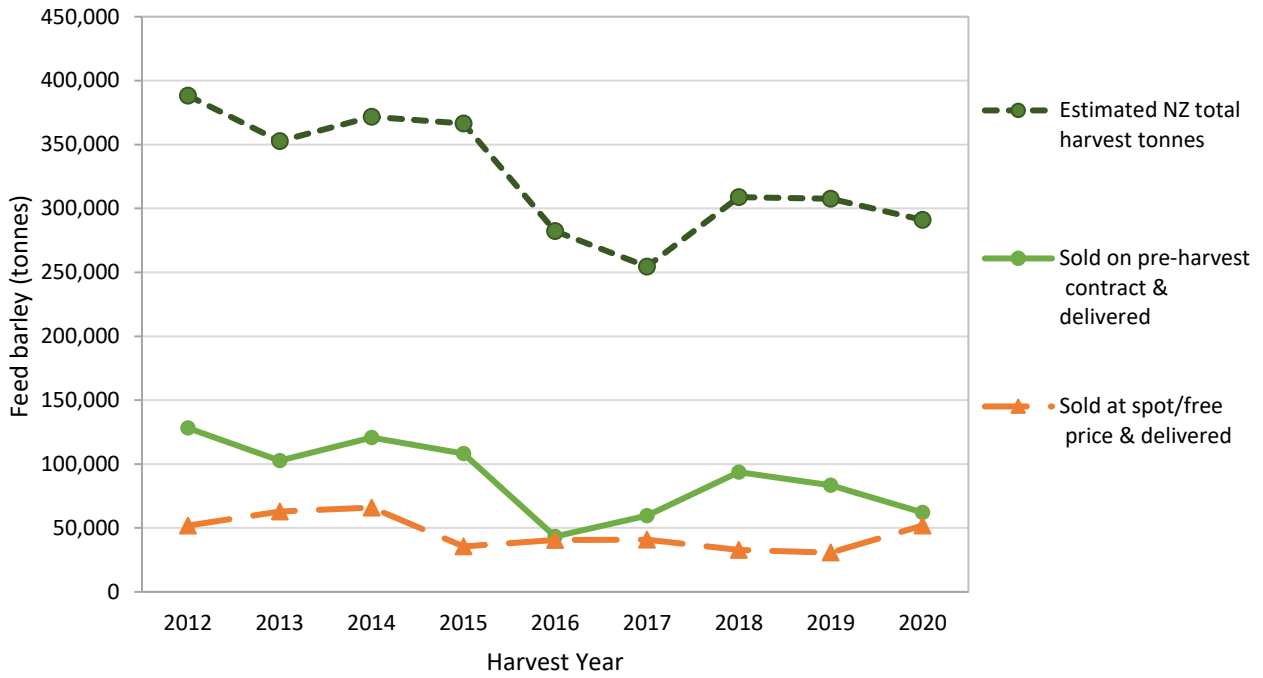


Figure 3a. NZ harvest tonnage and sales channels for feed barley (tonnes) as estimated on July 1 each year.

(Note: All categories relate to that season’s harvest, excluding carryover stock. “Sold at spot/free price and delivered” includes grain used on own farm. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report.)

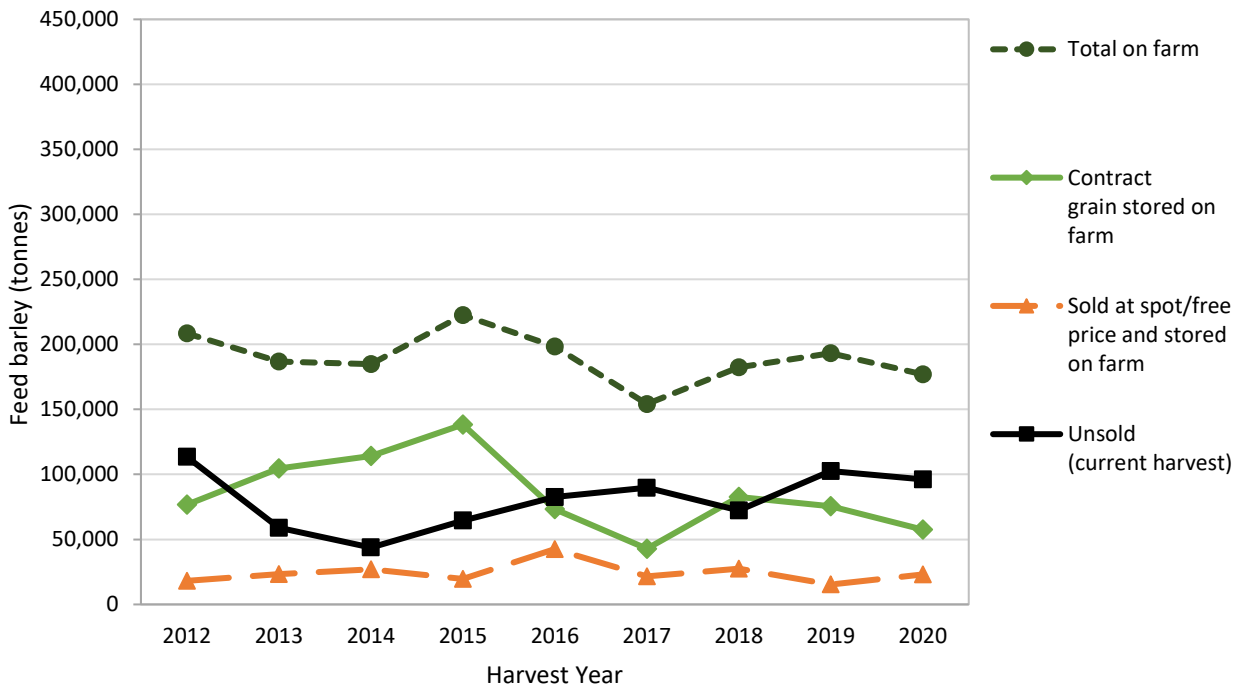


Figure 3b. NZ stocks on farm for feed barley (tonnes) as estimated on July 1 each year.

(Note: Carryover stock from the previous season is excluded. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report.)

Comparison of estimated NZ-wide yield (tonnes per hectare) between harvests

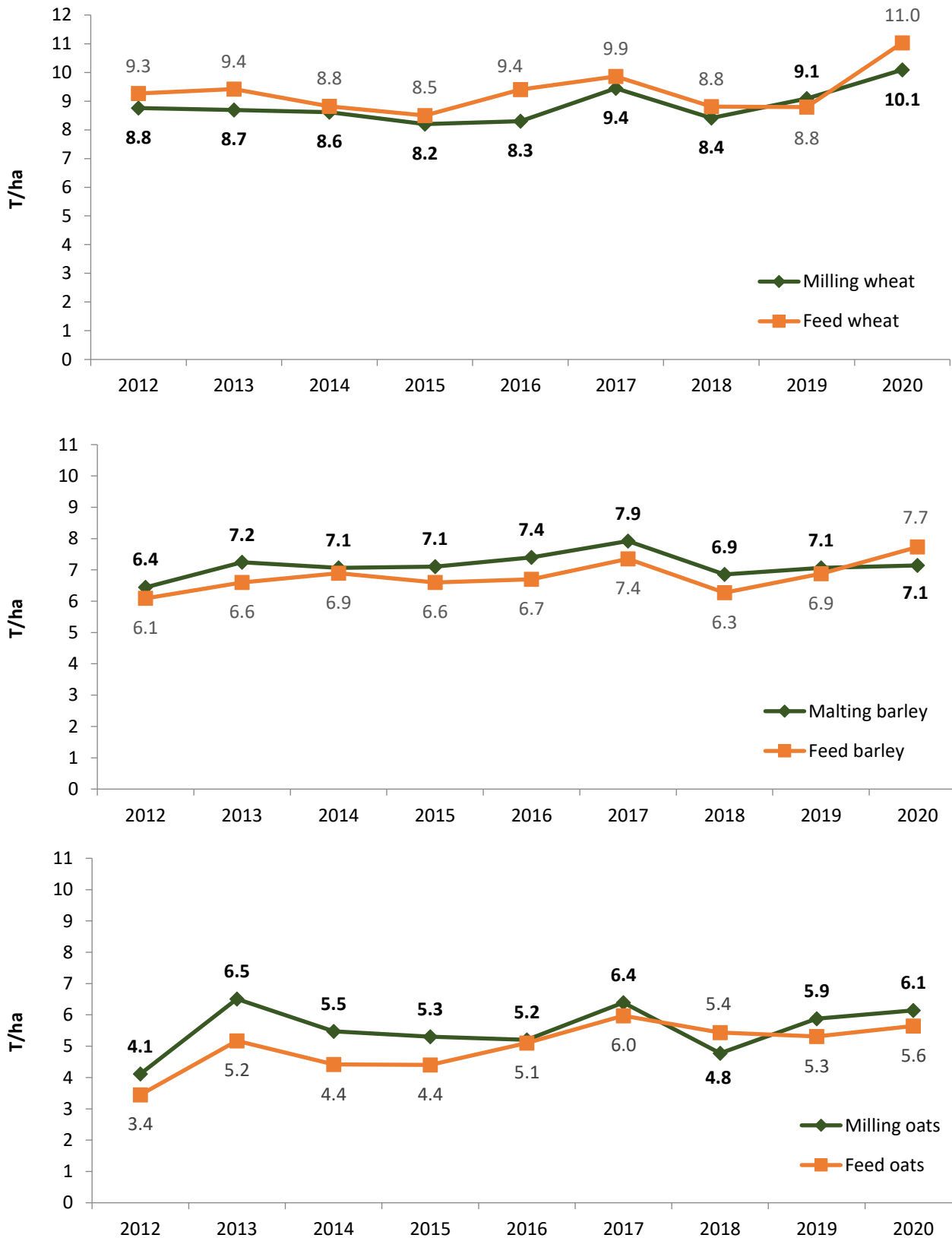


Figure 4. Comparison of NZ-wide yield (tonnes per ha) as estimated on July 1 each year, from 2012 to 2020 for six cereal crops.

(Note: Milling wheat contains biscuit and gristing varieties. Historical data are from July AIMI Reports for 2012 to 2018, while 2019 and 2020 data are matched data from the current report.)

Autumn/winter sowings and spring sowing intentions (combined) as at July 1 each year

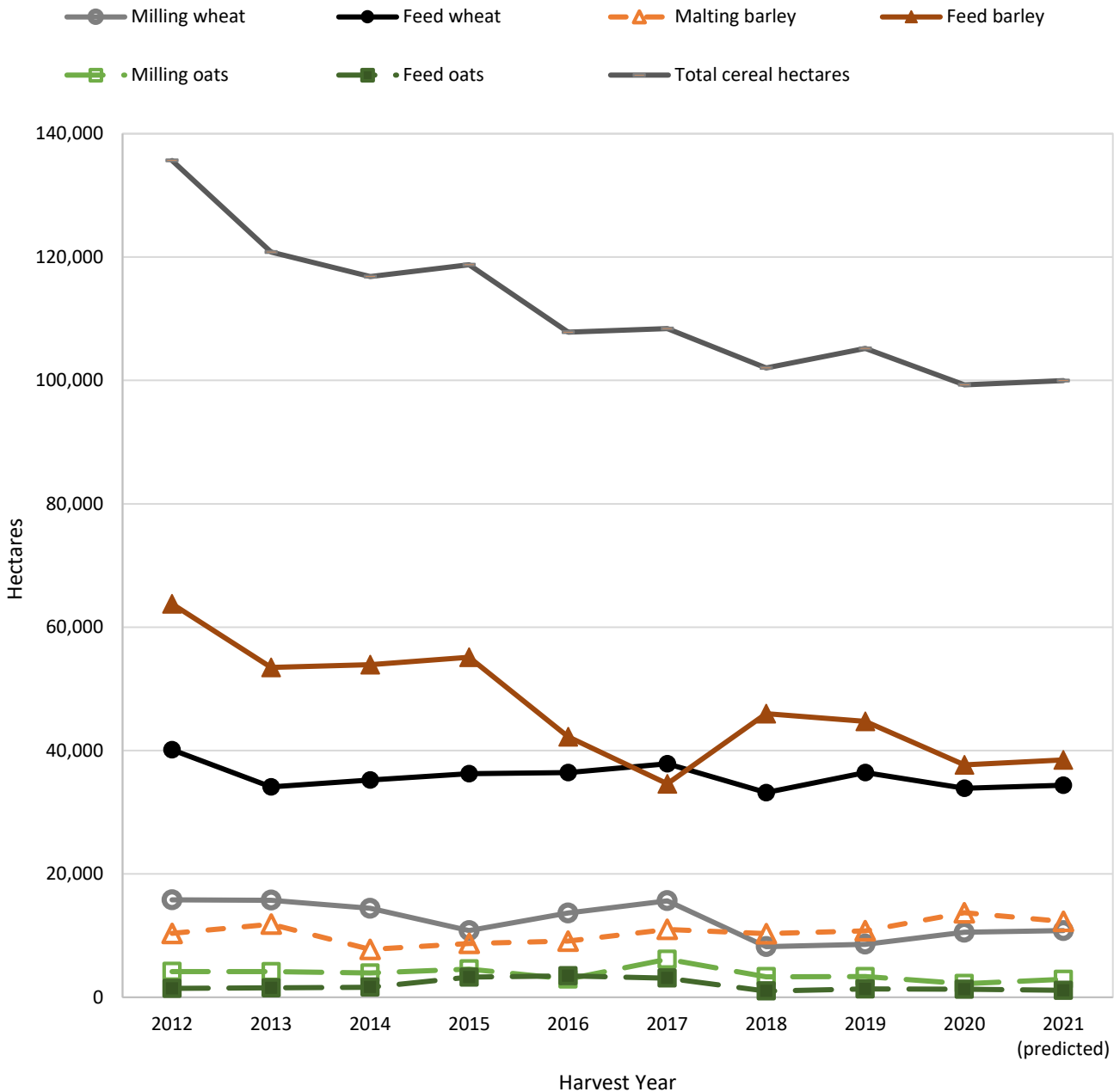


Figure 5. NZ harvest hectares for six cereal crops (and the total over the six crops) as estimated on July 1 each year, from 2012 to 2020 and predicted harvest hectares for 2021.

(Note: All figures represent final harvest hectares except for 2021 which is made up of hectares already sown and hectares intended to be sown for harvest in 2021. Refer to Fig. 6 for hectares already sown. Figures for 2019, 2020 and 2021 (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 AIMI July reports for 2012 – 2018.)

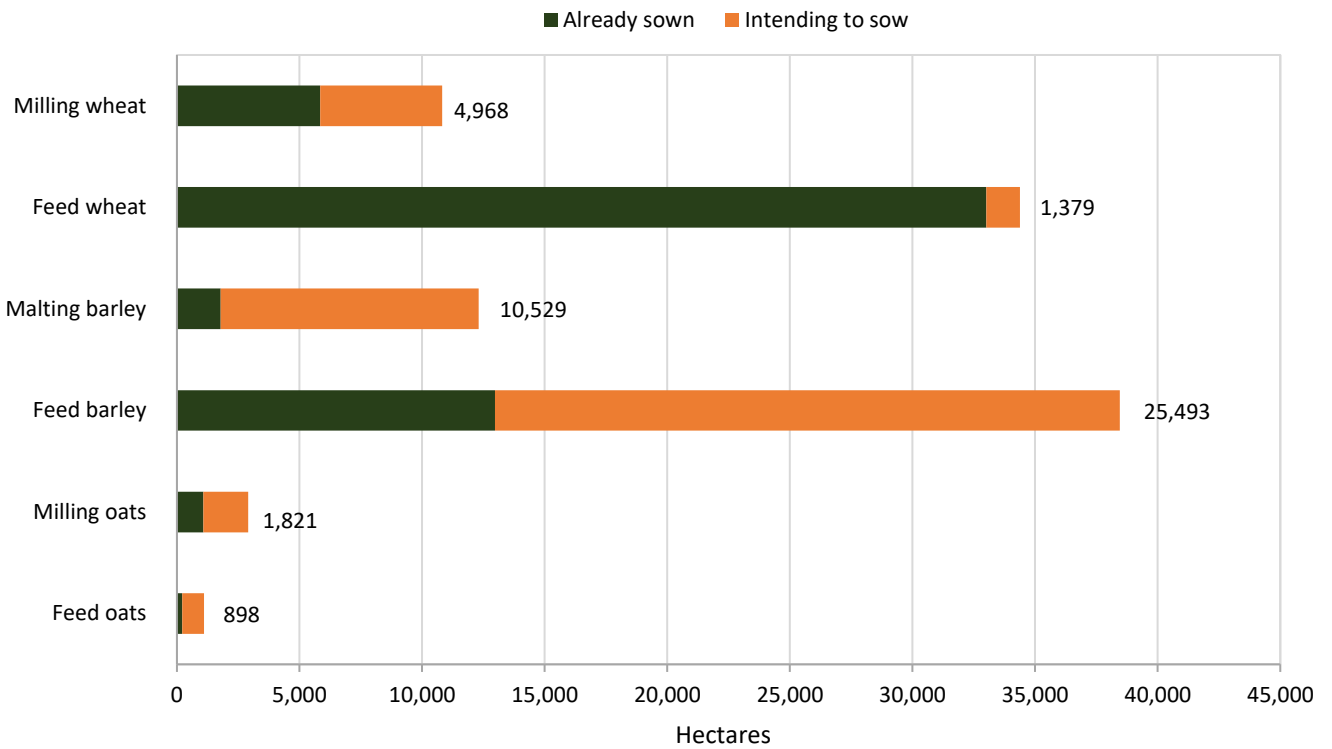


Figure 6. NZ autumn/winter 2020 sowings and spring 2020 sowing intentions (hectares) for harvest in 2021, for six cereal crops as estimated on July 1, 2020.
 (Note: Numbers at the end of each bar are sowing intentions.)

Table 1. Detailed estimated national figures for the 2020 harvest, plus sold and delivered tonnages, for six cereal crops as at July 1, 2020.

	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 2020		49	92	35	91	13	19	135
2019 harvest								
Estimated NZ total hectares, 2019 harvest	ha	8,594	36,406	10,780	44,720	3,351	1,343	105,194
Estimated NZ total tonnes, 2019 harvest	tonnes	78,109	319,991	76,170	307,530	19,689	7,135	808,624
2020 harvest								
Estimated NZ total hectares, 2020 harvest (final figures)	ha	10,546	33,862	13,711	37,666	2,204	1,295	99,283
Estimated NZ total tonnes, 2020 harvest (final figures)	tonnes	106,415	373,574	97,936	291,114	13,535	7,314	889,888
Sold under pre-harvest contract and delivered by July 1, 2020	tonnes	17,247	93,900	42,254	62,115	1,546	1,967	219,028
Pre-harvest contract grain stored on farm on July 1, 2020	tonnes	51,903	126,344	48,494	57,572	11,700	3,855	299,867
Sold at spot/free price and delivered by July 1, 2020	tonnes	6,816	32,817	0	46,837	161	243	86,874
Sold at spot/free price and stored on farm on July 1, 2020	tonnes	9,901	23,063	281	23,157	0	0	56,403
(For milling or malting only) Sold for feed by July 1, 2020	tonnes	147	-	724	-	57	-	928
(For feed only) Used on own farm (2020 harvest only) by July 1, 2020	tonnes	-	3,281	-	5,146	-	157	8,584
Unsold stocks on hand (2020 harvest only) on July 1, 2020	tonnes	20,400	94,170	6,183	96,288	71	1,092	218,204
Sales channels (2020 harvest)								
"Sold" under pre-harvest contract (total) by July 1, 2020	tonnes	69,150	220,244	90,748	119,686	13,246	5,822	518,895
Sold at spot/free price (total) by July 1, 2020 (includes sold for feed and used on farm)	tonnes	16,865	59,161	1,005	75,141	218	400	152,788
Delivery status of sold grain (2020 harvest)								
Sold and delivered (total) by July 1, 2020 (includes sold for feed and used on farm)	tonnes	24,211	129,997	42,978	114,098	1,763	2,367	315,413
"Sold" and stored on farm (total) on July 1, 2020	tonnes	61,804	149,407	48,775	80,729	11,700	3,855	356,270
Total sales (2020 harvest)								
Sold (grand total) by July 1, 2020 (includes sold for feed and used on farm)	tonnes	86,014	279,404	91,753	194,827	13,464	6,221	671,683
Unsold stocks on hand (2020 harvest only) on July 1, 2020	tonnes	20,400	94,170	6,183	96,288	71	1,092	218,204
Comparison of hectares and tonnages between last two harvests								
Estimated % change in hectares, 2019 to 2020 harvest	%	23%	-7%	27%	-16%	-34%	-4%	-6%
Estimated % change in tonnes, 2019 to 2020 harvest	%	36%	17%	29%	-5%	-31%	3%	10%
Comparison of yields (t/ha) between last two harvests								
NZ-wide estimated yield, 2019 harvest	t/ha	9.1	8.8	7.1	6.9	5.9	5.3	7.7
NZ-wide estimated yield, 2020 harvest	t/ha	10.1	11.0	7.1	7.7	6.1	5.6	9.0

Table 1 continued.

	Units	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
Comparison of unsold grain as at July 1, 2020, with unsold grain as at April 1, 2020 (based upon matched data)								
Unsold (2020 harvest only) as at April 1, 2020 (including unharvested grain) (new matched estimate, based upon scaling up data from exact same 138 survey farms as above)	tonnes	34,720	119,626	5,098	131,003	178	1,267	291,892
Unsold (2020 harvest only) on July 1, 2020 (as above)	tonnes	20,400	94,170	6,183	96,288	71	1,092	218,204
Estimated drop in tonnes of Unsold grain, April 1, 2020 to July 1, 2020	tonnes	14,319	25,456	-1,085	34,716	107	175	73,688
Estimated % drop in tonnes of Unsold grain, April 1, 2020 to July 1, 2020	%	41%	21%	-21%	26%	60%	14%	25%
Note: A negative drop means that the tonnage of unsold grain from the 2020 harvest has increased since the last survey date (1 April, 2020).								
Recalculated July 1, 2019 survey breakdown to enable more precise comparisons between July 1, 2019 and July 1, 2020 (based upon matched data)								
Sold under pre-harvest contract and delivered by July 1, 2019	tonnes	16,124	86,531	40,389	83,492	2,402	2,745	231,682
Pre-harvest contract grain stored on farm on July 1, 2019	tonnes	30,036	125,201	27,162	75,486	16,119	3,195	277,200
Sold at spot/free price and delivered by July 1, 2019	tonnes	3,222	22,112	0	27,564	32	810	53,740
Sold at spot/free price and stored on farm on July 1, 2019	tonnes	8,989	16,457	1,608	15,301	0	0	42,356
(For milling or malting only) Sold for feed by July 1, 2019	tonnes	2,084	-	981	-	0	-	3,065
(For feed only) Used on own farm by July 1, 2019	tonnes	-	3,163	-	3,168	-	21	6,352
Unsold stocks on hand (2019 harvest only) on July 1, 2019	tonnes	17,654	66,526	6,031	102,519	1,135	364	194,229
Comparison of unsold grain between last July and this July (based upon matched data)								
Unsold (2019 harvest only) as at July 1, 2019 (as above)	tonnes	17,654	66,526	6,031	102,519	1,135	364	194,229
Unsold (2020 harvest only) on July 1, 2020 (as above)	tonnes	20,400	94,170	6,183	96,288	71	1,092	218,204
Change in tonnes of unsold grain, July 1, 2019 to July 1, 2020	tonnes	2,746	27,643	153	-6,232	-1,064	728	23,975
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 2019 NZ Agricultural Production Statistics data on total hectares and tonnes for wheat, barley and oats.

In Table 2, feed wheat sowings/intentions, as at July 1, 2020, show a 2% increase as compared to the last harvest (2020), and a 6% decrease as compared to the previous (2019) harvest. Feed barley sowings/intentions also show an estimated 2% increase compared to the last harvest (2020), and an estimated 14% decrease over the previous harvest (2019). Milling wheat sowings/intentions have increased by a total of 26% over two years. As a total over all six cereal crops, sowings/intentions are 1% up on the last harvest (2020), and 5% down on the previous harvest (2019). Autumn/winter actual sowings, as at July 1, 2020, were down 11% on autumn/winter sowings/intentions as at April 1, 2020.

Table 2. Sowings and sowing intentions for six cereal crops as at July 1, 2020.

	Milling wheat	Feed wheat	Malting barley	Feed barley	Milling oats	Feed oats	Total (all crops)
	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)
Number of farmers in the survey who have sown this crop in the autumn or winter or intend to sow in the spring, as at July 1, 2020	50	89	33	99	13	20	135
Estimated NZ total hectares, 2019 harvest	8,594	36,406	10,780	44,720	3,351	1,343	105,194
Estimated NZ total hectares, 2020 harvest	10,546	33,862	13,711	37,666	2,204	1,295	99,283
Estimated NZ total autumn/winter 2020 sowings as at July 1, 2020 (hectares, for harvest in 2021)	5,846	33,007	1,778	12,965	1,084	211	54,891
Estimated NZ total spring 2020 sowing intentions at at July 1, 2020 (hectares, for harvest in 2021)	4,968	1,379	10,529	25,493	1,821	898	45,088
Predicted NZ total hectares, 2021 harvest (autumn/winter sowings 2020 and spring 2020 sowing intentions combined)	10,814	34,386	12,306	38,459	2,905	1,109	99,979
Comparison of hectares between 2019, 2020 and 2021 (predicted) harvests							
Estimated % change in NZ total harvest hectares, 2019 to 2020 harvest	23%	-7%	27%	-16%	-34%	-4%	-6%
Estimated % change in NZ total harvest hectares, 2020 to 2021 harvest (predicted)	3%	2%	-10%	2%	32%	-14%	1%
Estimated % change in NZ total harvest hectares over two seasons, 2019 to 2021 harvest (predicted)	26%	-6%	14%	-14%	-13%	-17%	-5%
Comparison of autumn/winter 2020 actual sowings (as at July 1, 2020) with autumn/winter sowings plus intended sowings as at April 1, 2020 (based upon matched data)							
Estimated NZ total autumn/winter 2020 sowings and sowing intentions as at April 1, 2020 (date of previous survey) (hectares, for harvest in 2021)	7,347	32,922	4,315	15,190	1,116	530	61,420
Change in autumn/winter 2020 actual sowings (as at July 1, 2020) compared to autumn/winter sowings and sowing intentions as at April 1, 2020 (ha)	-1,501	85	-2,537	-2,225	-32	-319	-6,529
Percentage change in autumn/winter 2020 actual sowings (as at July 1, 2020) compared to autumn/winter sowings and sowing intentions as at April 1, 2020	-20%	0%	-59%	-15%	-3%	-60%	-11%
Note: The matched comparison in the last three rows was based upon scaling up data from the exact same survey farms for both survey dates.							

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