

KEY POINTS

- While down on year earlier levels, total cereals animal feed demand is estimated up from November, due to continuing on-farm livestock backlog increasing demand.
- Despite a rise in wheat production, the tightest opening stocks this century limits availability. Imports are forecast to slow, with strong freight costs and logistical issues proving challenging.
- Barley production is down, following an area decline. Demand recovery is projected in the H&I sector, although declines in barley inclusion rates for animal feed are estimated to offset this.
- Maize imports are substantially lower, with the grain currently not price competitive.

INTRODUCTION

1. This release covers the second estimates made of UK cereal supply and demand for 2021/22 (Appendix 1).

2. The UK Cereals Supply and Demand Estimates include the official production figures for all cereals published by Defra in the results of the Cereal and Oilseed Rape Production Survey. Please note that the Defra cereal production estimates are standardised to 14.5% moisture content, with production tonnages being adjusted accordingly.

3. **Total cereals demand for animal feed is estimated at 13.006Mt, 16Kt more than the November estimate, but 231Kt less than 2020/21 levels.** Backlogs on farm in the livestock sectors are taking longer than initial expectations to clear and could last into the second quarter of 2022. As such, total cereals use in animal feed has been revised up from November estimates. However, herd reductions in the ruminants and pork sector are forecast as the year progresses. Therefore, animal feed production as a whole is expected to decline on the year. Barley usage by the brewing, malting and distilling (BMD) sector is expected to recover above the previous two seasons, but still behind 2018/19 volumes. Bolstered demand as the country continues its pandemic recovery is expected, although labour challenges and rising inflation may restrict the size and pace of this. Flour milling usage is anticipated to stabilise in the second half of the season, following liquidity and logistical hurdles impeding volumes during the first half of the marketing year

WHEAT

4. **In 2021/22 total availability of wheat is estimated at 16.854Mt, 2.327Mt more than in 2020/21.** This is driven by a rebound in production. The final Defra wheat production figure for 2021 is 13.988Mt, 4.330Mt more year-on-year, but 35Kt lower than the previous estimate. This increase in production has only partially offset the decrease in opening stocks. Estimated at 1.416Mt for 2021/22, opening stocks are 1.022Mt down on the year and the lowest level this century. From July to November 2021, the UK imported 840Kt of wheat compared to 1,112Kt over the same period in 2020. Logistical challenges and strong freight rates have been consistent issues for trade this season to date, with import volumes falling back from a historically strong start as the season has progressed. UK wheat imports

are currently forecast at 1.450Mt, 981Kt down on the year.

5. **At 7.245Mt, human and industrial (H&I) consumption of wheat in 2021/22 is 658Kt higher than 2020/21 levels.** The increase on the year is largely driven by a rise in usage by the bioethanol and starch sectors, as a result of the introduction of E10 in September 2021. It is assumed that the bioethanol industry will be fully on-line during the first half of 2022, with greater use of home-grown wheat rather than maize. While total usage of wheat by flour millers is expected to remain relatively stable on the year, the proportion of home-grown wheat is estimated to increase on last season. Despite quality concerns at harvest, the functionality of UK wheat is proving better than anticipated. While challenges sourcing sea freight may limit some imports, transport logistics within the UK could see imports favoured in some regions if more readily available.

6. **Wheat usage in animal feed is expected to increase by 1.276Mt on the year, to 7.275Mt.** This returns volumes more in line with the 2018/19 and 2019/20 seasons. The 2021/22 estimate has been increased from the first official estimate in November due to the continued backlog issues facing the livestock sectors. These backlogs are expected to extend into 2022, with herd reductions not being realised until the second half of the season. Due to the greater availability of wheat this season, it is expected that animal feed producers will increase the wheat inclusions in their rations, at the expense of barley and maize. Much of this will depend on the discount barley achieves relative to wheat, which has reduced after the peaks recorded during July and August. Wheat usage in integrated poultry unit (IPU) feed production is also forecast to increase this season, driven by an increase in wheat inclusion in rations, rather than an increase in overall demand.

7. **The balance of total availability and domestic consumption of wheat is estimated at 1.986Mt, just 370Kt more than 2020/21 levels and the second lowest this century.** With tight opening stocks this season, coupled with a rebound in consumption to 2018/19 and 2019/20 levels, the picture remains relatively tight. Operating stocks have been estimated at 1.500Mt, in line with last year. This results in a surplus available for either free stock or export of 486Kt. From July to November 2021, the UK exported 157Kt of wheat, which leaves a total surplus of 329Kt to date. Commercial end-season stocks are

estimated at 1.736Mt, 319Kt more than 2020/21. These are an estimate at this stage until further data is released.

BARLEY

8. **Total availability of barley is estimated at 8.104Mt in 2021/22, 1.458Mt lower than year earlier levels, driven by a forecast decrease in production and opening stocks.** The final Defra production figure for 2021 is 6.961Mt, 1.156Mt less than 2020/21 and 147Kt lower than the provisional estimate. With improved winter drilling conditions in 2020, a return to winter cropping was seen last season. As a result, the spring barley area, inflated by the previous season's weather challenges, reduced. However, production reductions were softened slightly, due an increase in area to higher yielding winter barley and above average yields this season for both winter and spring varieties.

9. **In 2021/22 H&I usage of barley is estimated to rise by 147Kt on the year to 1.869Mt.** With the country continuing to recover post pandemic lockdowns, barley demand by the BMD sector is expected to grow to meet this recovering demand. However, labour shortages within the hospitality industry may limit growth back to pre-pandemic levels. Additionally, rising inflation may limit consumer spending and therefore growth for the hospitality sector.

10. **At 4.085Mt, barley usage in animal feed is estimated to be 1.222Mt lower than levels reported in 2020/21.** With the barley discount to wheat reducing since the start of September, wheat inclusions in rations are estimated to increase, at the expense of barley. However, the continued backlog persisting in the livestock sector has seen greater demand for animal feed than previously estimated in November. Forecast herd reductions, as high costs and labour and logistical shortages result in some producers rationalising herds or exiting the industry, are likely for the second half of the season. Therefore, a projected decline in cereals usage for animal feed would be coupled with this rationalisation.

11. **The balance of barley supply and demand is estimated to be marginally smaller (-377Kt) than 2020/21 at 1.931Mt.** The decrease in consumption has not been to quite the same degree as the fall in availability, given the projected rise in the H&I sector and the extended demand for animal feed as a result of livestock backlogs on farm. The estimated operating stock requirement of 740Kt has been trimmed 50Kt on the year. The result is a reduction in the surplus, of 368Kt, to 1.191Mt. The UK has exported 382Kt of barley from July to November, which leaves a total surplus to either be exported from December to June or carried over into next season as free stock of 809Kt.

MAIZE

12. **In 2021/22 total availability of maize is forecast at 2.252Mt, 827Kt less than last year, primarily driven by a decrease in imports.** Full

season imports of maize are forecast to be 816Kt lower than year earlier levels at 2.041Mt. So far this season (Jul-Nov) the UK has imported 718Kt, down 41% on the same period last year. High global maize prices have significantly reduced its competitiveness, and there is a lower requirement projected from both the H&I and animal feed sector. Should maize prices soften later in the season, and the grain become more attractive in price relative to other cereals, we may see imports start to rise. However, as it currently stands, the outlook for global prices remains supported and therefore, maize imports are expected to remain relatively subdued during the season.

13. **H&I demand for maize in 2021/22 is estimated at 702Kt, 308Kt lower year on year and in line with 2017/18 volumes.** Despite an overall increase in cereal usage by the bioethanol & starch sector, strong maize prices and greater wheat availability are reportedly reducing the attractiveness of maize. **At 1.226Mt, animal feed usage of maize is expected to decline 308Kt on the year.** The relative price of maize and the greater availability of wheat are both reducing demand from the animal feed sector.

14. **With domestic consumption not declining at the same volume as availability, the balance of supply and demand is forecast to fall by 212Kt to 320Kt.** This would be the lowest since 2015/16. Exports are estimated at 100Kt, 41Kt lower year on year, with closing stocks pegged at 220Kt, 9Kt higher than in 2020/21.

OATS

15. **Total availability of oats is estimated to be 133Kt more on the year at 1.290Mt.** Defra's final estimate for oat production is 92Kt higher than in 2020/21 at 1.123Mt, reduced by 25Kt from the earlier provisional estimate. Opening stocks of oats are forecast to be 41Kt more on the year at 147Kt, while imports are estimated to stay at 2020/21 levels, at 20Kt.

16. **At 531Kt, H&I usage of oats in 2021/22 is unchanged on year earlier levels.** Oat miller's usage is expected to increase marginally, but more due to the exceptional extraction rates achieved last year than a wholesale increase in demand. **However, the usage of oats in animal feed is expected to increase 23Kt, to 420Kt, driven by relative price attractiveness.**

17. **In 2021/22, the balance of oats total availability and domestic consumption is estimated at 306Kt, 110Kt more than in 2020/21.** While both domestic demand and exports are forecast up, this is not to the same degree as the rise in both production and opening stocks. Oat exports are forecast at 58Kt, 17Kt more on the year, leaving estimated closing stocks at 248Kt, 101Kt higher year on year.

18. Appendix II shows cumulative usage and trade data to end-November. This release and related information can be found at ahdb.org.uk/cereals-oilseeds-markets.



CEREALS & OILSEEDS

UK CEREAL SUPPLY AND DEMAND ESTIMATES ^(a)

Estimates made in January 2022

July to June crop years

Thousand tonnes

		WHEAT								BARLEY							
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21	2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21
(1)	Opening stocks	2,122	1,718	1,911	2,438	1,416	1,416	-	-42%	1,199	1,076	1,091	1,357	1,058	1,058	-	-22%
(2)	Production	13,731	13,555	16,225	9,658	14,022	13,988	-35	45%	7,300	6,510	8,048	8,117	7,108	6,961	-147	-14%
(3)	Imports	1,799	1,858	1,056	2,431	1,450	1,450	-	-40%	88	70	70	88	80	85	5	-4%
(4)	Total availability	17,652	17,131	19,192	14,527	16,889	16,854	-35	16%	8,587	7,657	9,210	9,562	8,246	8,104	-142	-15%
(5)	Human and industrial consumption (b)	7,276	6,969	6,923	6,587	7,279	7,245	-34	10%	1,827	1,901	1,781	1,721	1,871	1,869	-3	9%
(5a)	(of which home grown)	6,225	5,918	6,173	5,099	6,216	6,187	-29	21%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6)	Usage as animal feed (c)	7,118	7,402	7,438	5,999	7,206	7,275	69	21%	4,146	3,582	4,142	5,307	4,066	4,085	18	-23%
(6a)	(of which home grown)	6,431	6,652	6,938	5,249	6,656	6,725	69	28%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6b)	(of which compounders)	4,033	4,164	4,200	3,536	4,058	4,129	71	17%	1,373	1,172	1,398	1,884	1,574	1,595	21	-15%
(6c)	(of which integrated poultry units)	1,174	1,155	1,182	1,082	1,141	1,140	-2	5%	71	50	44	147	93	90	-3	-39%
(7)	Seed (d)	264	281	215	277	277	278	1	0%	194	187	228	185	185	185	-	0%
(8)	Other	69	68	81	48	70	70	-	46%	37	33	40	41	36	35	-1	-15%
(9)	Total domestic consumption	14,727	14,720	14,656	12,911	14,832	14,868	37	15%	6,204	5,703	6,191	7,254	6,158	6,173	15	-15%
(10)	Balance (4) - (9)	2,925	2,411	4,535	1,616	2,057	1,986	-71	23%	2,383	1,954	3,019	2,308	2,088	1,931	-158	-16%
(11)	Exports (e)	732	358	1,205	209	-	250	*	20%	1,214	863	1,790	1,290	-	710	*	-45%
(12)	Intervention stocks (e)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(13)	Commercial end-season stocks (e)	1,848	1,911	2,438	1,416	-	1,736	*	23%	1,137	1,091	1,357	1,058	-	1,221	*	15%
(14)	(of which estimated operating stock requirement) (f)	1,552	1,550	1,550	1,500	1,500	1,500	-	0%	778	780	790	790	740	740	-	-6%
(15)	(of which free stock) (g)	296	361	888	-	-	236	-	-	359	311	567	268	-	481	*	-
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(18)	1,373	720	2,093	-	557	486	-71	*	1,605	1,174	2,356	1,558	1,348	1,191	-158	-24%
(17)	2020/21 operating stock deficit (13)-(14)**	-	-	-	-84	-	-	-	-	-	-	-	-	-	-	-	-
(18)	Residual (10)-(11)-(13)	-	142	892	-9	-	-	-	-	-	-	-127	-40	-	-	-	-

		MAIZE								OATS							
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21	2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21
(1)	Opening stocks	240	247	313	222	211	211	-	-5%	113	138	116	106	147	147	-	38%
(2)	Production	-	-	-	-	-	-	-	-	930	850	1,076	1,031	1,149	1,123	-25	9%
(3)	Imports	2,418	2,825	2,376	2,857	2,122	2,041	-80	-29%	24	32	18	20	18	20	2	0%
(4)	Total availability	2,658	3,072	2,689	3,079	2,332	2,252	-80	-27%	1,066	1,020	1,210	1,157	1,314	1,290	-23	11%
(5)	Human and industrial consumption	765	800	803	1,010	688	702	14	-30%	536	536	553	531	532	531	-1	0%
(5a)	(of which home grown)	-	-	-	-	-	-	-	-	509	500	537	513	516	514	-2	0%
(6)	Usage as animal feed	1,365	1,573	1,351	1,534	1,310	1,226	-84	-20%	317	302	350	397	407	420	12	6%
(6a)	(of which home grown)	-	-	-	-	-	-	-	-	317	302	350	397	407	420	12	6%
(7)	Seed	-	-	-	-	-	-	-	-	26	25	30	29	29	28	-1	-3%
(8)	Other (h)	4	4	4	4	4	4	-	0%	4	4	5	5	6	6	-	20%
(9)	Total domestic consumption	2,134	2,377	2,158	2,548	2,002	1,932	-70	-24%	883	867	939	962	974	985	10	2%
(10)	Balance (4) - (9)	524	696	531	532	330	320	-10	-40%	183	153	271	195	339	306	-34	57%
(11)	Exportable surplus	162	188	135	141	110	100	-10	-29%	49	37	120	41	55	58	3	41%
(12)	Commercial end-season stocks	253	313	222	211	220	220	-	4%	124	116	106	147	284	248	-37	68%
(13)	Residual (10)-(11)-(12)	-	194	174	180	-	-	-	-	-	-	45	7	-	-	-	-

Links connect to relevant Defra/AHDB data pages

Due to rounding, totals may not agree with the sum of individual items

* Change not meaningful

** Due to the highly unusual nature of this seasons hugely reduced wheat production figure, an extra line is included in the balance sheet to show the operating stock deficit.

(a) These are revised during the year. Figures rounded to the nearest 1000 tonnes.

(b) Defra updated the registry for the UK flour millers survey in spring 2016, the wheat H&I usage has been adjusted to take account of this change.

(c) Animal feed usage has been split by sector. Note, other users are only included in the total.

(d) Seed numbers have been updated based on a number of assumptions, calculated for the purposes of the balance sheets only.

(e) Split of exports, intervention and total commercial end-season stocks only published for historical seasons.

(f) Estimated operating stocks requirement is a calculated estimate of the minimum tonnage that users of grain require to get through to a point at which new crop can be utilised.

(g) Free stock is the stock available after both exports and estimated operating stock requirements have been fulfilled.

(h) 2014/15 new format: Maize demand in "Other food use" has been added to the H&I total for maize. This was previously included in the "Other" category.

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		OTHER CEREALS (i)							
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21
(1)	Opening stocks	5	5	5	5	5	4	-1	-22%
(2)	Production	145	169	168	156	271	297	26	90%
(3)	Imports	3	3	1	2	2	2	-1	-37%
(4)	Total availability	153	177	174	164	278	303	25	85%
(5+6)	H&I and animal feed	144	169	166	156	271	294	23	88%
(5a+6a)	(of which home grown)	142	166	165	155	270	293	23	89%
(7)	Seed	3	3	3	3	3	3	-	0%
(8)	Other	-	-	-	-	-	-	-	-
(9)	Total domestic consumption	147	172	169	159	274	297	23	87%
(10)	Balance (4) - (9)	5	5	5	5	4	6	2	20%
(11)	Exportable surplus	-	-	-	1	-	-	-	-1
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	Commercial end-season stocks	5	5	5	4	4	6	2	37%

		TOTAL CEREALS							
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Nov-21	2021/22 Jan-22	Absolute change Nov-21	% change on 20/21
(1)	Opening stocks	3,679	3,184	3,437	4,128	2,837	2,836	-1	-31%
(2)	Production	22,105	21,085	25,517	18,962	22,550	22,369	-181	18%
(3)	Imports	4,332	4,789	3,522	5,399	3,672	3,598	-74	-33%
(4)	Total availability	30,116	29,058	32,475	28,490	29,059	28,803	-256	1%
(5)	H&I (wheat, barley, maize, oats) (h)	10,404	10,206	10,060	9,849	10,370	10,347	-24	5%
(6)	Animal feed (wheat, barley, maize oats) (h)	12,946	12,858	13,281	13,237	12,990	13,006	16	-2%
(5a +6a)	Other cereals (H&I and animal feed)	144	169	166	156	271	294	23	88%
(7)	Seed	488	496	476	494	494	494	-	0%
(8)	Other	114	109	130	98	116	115	-1	17%
(9)	Total domestic consumption	24,095	23,838	24,113	23,834	24,241	24,255	14	2%
(10)	Balance (4) - (9)	6,021	5,220	8,362	4,656	4,818	4,548	-271	-2%
(11)	Exports	2,157	1,446	3,249	1,682	-	1,118	*	-34%
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	Commercial end-season stocks	3,367	3,437	4,128	2,836	509	3,430	2,921	21%
(14)	Estimated operating stock requirement (wheat & barley only)	2,330	2,330	2,340	2,290	2,240	2,240	-	-2%
(15)	Free stock for wheat and barley***	655	673	1,455	268	-	716	716	167%
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(17)	3,691	2,553	5,038	2,228	2,578	2,308	-271	4%
(17)	Residual (10)-(11)-(13)		336	984	138				

Source: AHDB, Defra

[Links connect to relevant Defra/AHDB data pages](#)

Due to rounding, totals may not agree with the sum of individual items

(i) Includes mainly rye, triticale and mixed grain.

* Change not meaningful

*** Free stock figure in total cereals balance sheet relates to barley only due to the wheat deficit

Appendix II

CUMULATIVE MONTHLY STATISTICS

Usage of cereals by processors, external trade and stocks

Situation as at end of November 2021

Thousand tonnes

		2016/17 to 2020/21 average	2015/16 22 weeks	2016/17 22 weeks	2017/18 22 weeks	2018/19 22 weeks	2019/20 22 weeks	2020/21 22 weeks	2021/22 22 weeks	% Change 2021/22 on 2020/21	Actual Change 2021/22 on 2020/21
WHEAT											
Usage	Flour millers ⁽¹⁾	2,708	2,724	2,984	2,958	2,743	2,438	2,417	2,490	3%	72
	of which home-grown	2,257	2,328	2,623	2,579	2,154	2,118	1,813	1,971	9%	158
	of which imported	451	396	362	379	589	321	605	519	-14%	-86
	Brewers, maltsters and distillers	317	281	316	343	290	300	336	386	15%	51
	Animal Feed Processors ⁽²⁾	1,927	1,838	1,925	1,964	2,022	1,970	1,755	1,807	3%	52
	of which feed compounders	1,449	1,336	1,435	1,464	1,535	1,515	1,295	1,352	4%	57
Imports	of which intergrated poultry units	478	501	490	500	486	455	460	455	-1%	-5
	From July ⁽³⁾	802	703	662	725	1,043	436	1,144	867	-24%	-278
Exports	From July ⁽³⁾	445	736	972	247	134	745	127	161	27%	34
BARLEY											
Usage	Brewers, maltsters and distillers	751	745	759	769	761	782	682	750	10%	67
	Animal Feed Processors ⁽²⁾	496	416	382	501	453	486	655	666	2%	11
	of which feed compounders	468	396	360	475	429	470	605	616	2%	11
	of which intergrated poultry units	28	20	21	26	25	17	50	50	0%	0
Imports	From July ⁽³⁾	35	62	46	47	26	20	35	45	29%	10
Exports	From July ⁽³⁾	645	637	552	546	314	1,121	693	382	-45%	-311
MAIZE											
Usage	Human and Industrial ⁽⁴⁾	**	**	**	**	**	**	**	**	*	*
	Animal Feed Processors ⁽²⁾	176	135	122	137	204	189	227	**	*	*
	of which feed compounders	155	113	104	120	188	160	204	146	-29%	-59
	of which intergrated poultry units	21	22	18	17	16	29	23	**	*	*
Imports	From July ⁽³⁾	970	772	673	856	1,098	1,006	1,217	718	-41%	-499
Exports	From July ⁽³⁾	70	44	79	66	73	63	68	40	-40%	-27
OATS											
Usage	Human and Industrial ⁽⁵⁾	133	125	126	130	142	128	139	128	-8%	-11
	Animal Feed Processors ⁽²⁾	23	23	16	20	29	23	27	50	89%	24
Imports	From July ⁽³⁾	13	21	12	13	22	8	8	9	15%	1
Exports	From July ⁽³⁾	25	30	11	18	19	60	19	15	-22%	-4

Source: AHDB, Defra, HMRC

⁽¹⁾ Includes bioethanol and starch usage⁽²⁾ Great Britain only⁽³⁾ HMRC⁽⁴⁾ Data no longer available. For quarterly data to end of 2017/18, please access using historic balance sheets.⁽⁵⁾ Oat milled data published quarterly. Data displayed to end of September (13 weeks)

* Changes not meaningful

**Insufficient sample to produce robust figure

Notes

Due to rounding, totals may not agree with the sum of the individual items.

There are 53 weeks in the statistical year 2020. In order to incorporate the change January 2020 was increased to a 5 week period compared to 4 weeks in 2019.

There are 53 weeks in the statistical year 2016. In order to incorporate the change April 16 was increased to a 5 week period compared to 4 weeks in 2015.

Figures in Appendix II were updated on 25 November 2021. The data above may differ from the most recent published data.

Disclaimer

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