

KEY POINTS

- Reduced availability of wheat, combined with increased domestic consumption leads to a tighter wheat balance year-on-year. However, minimal exports and concerns over next season's crop lead to the heaviest ending stocks since 2015/16.
- For barley, much like wheat, despite a tighter balance on the year, reduced exports, and concerns over the 2024 crop leave the heaviest ending stocks since 2014/15.
- Maize imports this season are expected to rise primarily due to increased usage by the bioethanol sector.
- A smaller oat crop and average exports lead to the smallest ending stocks since 2012/13.

INTRODUCTION

1. This release covers the second official estimates made of UK cereal supply and demand for 2023/24 (Appendix 1).

2. The UK Cereals Supply and Demand Estimates include the official production figures for wheat, barley and oats published by Defra in the results of the [Cereal and Oilseed Rape Production Survey](#).

3. **In 2023/24, total cereals demand for animal feed is forecast up 37 Kt from the previous estimate at 12.480 Mt, relatively unchanged on the year and the second lowest level since 2016/17.** Demand remains sluggish in the feed sector with some yearly recovery expected only in the poultry and sheep sectors. Avian Flu and elevated energy prices will continue to be monitored, though a strong start to the season suggests some recovery in the poultry sector. For pigs and cattle, costs of production are expected to remain high. Cautious optimism remains in the pig industry, though an imminent significant rebound is unlikely. Cattle margins continue to be squeezed and reductions are also expected within the dairy herd over winter as a way of cutting costs.

4. **Total cereals usage for human and industrial (H&I) consumption is estimated to increase by 2% on the year, though down 98 Kt from November at 10.840 Mt.** This increase is due to a firm start in usage by the bioethanol and starch industries, as well as stable demand from the brewing, malting and distilling (BMD) and flour milling sectors.

WHEAT

5. **Total availability of wheat in 2023/24 is estimated at 17.658 Mt, up 225 Kt from November's estimate, but 1.016 Mt lower than 2022/23 levels, with a smaller crop outweighing a rise in carry-in stocks and imports.** Following the release of the final results of the [Defra Cereals and Oilseed Rape Production Survey](#), wheat production is estimated at 13.980 Mt, down slightly (75 Kt) from November's estimate, and down 1.560 Mt from 2022/23. Opening stocks this season remain unchanged from November at 1.953 Mt, the highest since 2020/21 and up 165 Kt on the year. Full season wheat imports are forecast at 1.725 Mt, up 300 Kt on November's estimate, and up 379 Kt on year earlier

levels. This season to date (Jul-Nov), wheat imports are up 38% on the year. The majority of imports this season are expected to be high protein milling wheat due to the lack of high-quality wheat available domestically.

6. **H&I wheat consumption is expected to increase by 193 Kt on the year at 7.529 Mt in 2023/24.** This estimate is down 135 Kt from November because of lower-than-forecast actual data in recent months, plus some caution for the remainder of the season surrounding current lower ethanol prices. A positive resolution to the renewable energy directive (RED II) requirements following the UK's exit from the EU is assumed, though this will remain something to monitor. Wheat demand by flour millers is expected to be up slightly on 2022/23 levels. While the 'cost-of-living crisis' continues to impact demand for premium products, total flour demand remains stable. Slightly lower extraction rates at the beginning of the season also increased wheat usage overall. Flour millers are expected to use a higher proportion of imported wheat in 2023/24 than last season, due to a lack of high-quality domestic supply. Plus, with growing concerns over next season's crop, the import pace is expected to be strong especially towards the end of the season for quality wheat. Wheat usage in BMD is forecast up on the year, with firm demand from the distilling sector.

7. **Usage of wheat in animal feed is forecast up 56 Kt on the year, at 6.965 Mt.** This estimate is down 20 Kt from November, with barley featuring more heavily in rations due to its relative price as of late. For the rest of the season, barley usage is expected to remain at strong levels, and maize expected to price more competitively into feed production later in the season, capping any further climbs in wheat demand. This season, the amount of wheat fed on farm is forecast to be slightly lower on the year due to tighter availability and the relative price of wheat.

8. **In 2023/24, the balance of total availability and domestic consumption of wheat is 2.827 Mt, 31% lower than 2022/23 levels, and below the five-year average of 3.003 Mt.** Reduced availability combined with increased domestic consumption has led to the tighter balance. Full season exports are estimated at 275 Kt, down 1.311 Mt on the year. From

July to November, the UK had exported 71% less than at the same point last season. Commercial end-season stocks are forecast at 2.552 Mt, up 599 Kt on the year, and the highest since 2015/16. Plenty of wheat is expected to still be on farm, plus a rise in imports is expected to be carried over for milling with doubts over next season's crop.

BARLEY

9. **At 8.322 Mt, total availability of barley in 2023/24 is 115 Kt lower than 2022/23 levels largely due to a fall in production.** Opening stocks remain at their highest level since 2020/21, and imports are forecast at 90 Kt, up 2% on the year. However, Defra's final estimate for the 2023 barley crop was 6.963 Mt, down 422 Kt on the year, and 17 Kt lower than AHDB's previous estimate. High quality barley imports are expected to remain firm this season, with firm demand forecast from the BMD sector.

10. **H&I barley consumption is estimated to be slightly down (-6 Kt) on year earlier levels and down 11 Kt on November's estimate, at 1.974 Mt.** Usage by the BMD sector is expected to remain relatively stable. Despite strong distilling demand, demand for brewing is said to be lacklustre as a result of the rise in cost of living.

11. **At 4.001 Mt, usage of barley as animal feed in 2023/24 is forecast to rise by 58 Kt on the year, and 72 Kt on November's estimate.** Due to its relative price, barley is now featuring more heavily than previously in rations at the expense of wheat and maize. Barley inclusions are expected to stay firmer for the remainder of the season.

12. **The supply and demand balance of barley in 2023/24 is 166 Kt or 7% lower year-on-year, and down 78 Kt from the previous estimate, at 2.129 Mt.** This is driven by a decrease in availability and a slight increase in domestic consumption. The barley balance remains lower than the previous five-year average. Full season exports are forecast at 700 Kt, down 423 Kt from 2022/23. From July to November, the UK had exported 31% less than at the same point last season. Commercial end-season stocks are forecast at 1.429 Mt, up 161 Kt on the year, and the highest since 2014/15.

MAIZE

13. **In 2023/24, total availability of maize is estimated to be up 64 Kt on the year at 2.436 Mt, up 36 Kt from the previous estimate.** Full season imports of maize are forecast to climb 187 Kt on year earlier levels to 2.310 Mt. So far this season (Jul-Nov) maize imports into the UK have totalled 934 Kt, in line with the same period in 2022/23. It is expected that maize imports will pick up pace as the season progresses due to its relative price compared with domestic grains.

14. **H&I maize usage is estimated at 830 Kt, up 52 Kt on November's estimate and up 39 Kt on**

year earlier levels. Despite a slow start for maize usage by the bioethanol sector, usage is expected to pick up for the rest of the season due to relative prices. **Maize usage in animal feed is forecast down slightly (16 Kt) on the previous estimate and in line with 2022/23 at 1.237 Mt. This would be the highest level since 2020/21 but still below the previous five-year average.** While barley is expected to remain price competitive, the relative price of maize compared to domestic wheat is expected to shift towards the end of the season. This is expected to lead to a rise in maize usage in animal feed at the expense of wheat later in the season.

15. **In 2023/24, the balance of maize availability and consumption is forecast up 25 Kt on the year and unchanged on the previous estimate at 365 Kt.** Exports are estimated at 150 Kt, up 19 Kt on the year, while closing stocks are forecast at 215 Kt, up 89 Kt from 2022/23 levels.

OATS

16. **Total availability of oats in 2023/24 is estimated at 995 Kt. This is down 187 Kt on the year, and down 16 Kt from November's estimate. A yearly fall in both opening stocks and production outweighs a rise in imports.** The final Defra UK oat production estimate for 2023 is 830 Kt, down 177 Kt year on year, and down 11 Kt from November's estimate. Full season imports are expected to reach 25 Kt, up 7 Kt from 2022/23, but down 5 Kt from AHDB's previous estimate.

17. **H&I oat consumption in 2023/24 is estimated to rise by 16 Kt on the year to 507 Kt.** Increased hulling losses from this season's domestic crop, as well as expectations of increased capacity mean demand for oats is forecast up on the year. However, any major climbs are limited by sluggish global demand for oat products. The impact of increased capacity will be assessed as the season progresses. **Usage of oats in animal feed is forecast down 72 Kt or 21% on the year, at 278 Kt. This is relatively unchanged from November's estimate.** Both demand by compounders and on-farm usage are forecast down this season, driven largely by a smaller crop.

18. **The oat supply and demand balance in 2023/24 is 130 Kt or 41% lower on the year at 183 Kt. This is also down 12 Kt on AHDB's previous estimate and 62 Kt tighter than the previous five-year average.** Full season exports are forecast to fall by 72 Kt on the year, at 100 Kt. This is up 40 Kt from November, with increased demand on the continent reflected in recent months. End-season stocks are estimated to be 57 Kt lower on the year at 83 Kt.

19. 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.

UK CEREAL SUPPLY AND DEMAND ESTIMATES ^(a)

Estimates made in January 2024

July to June crop years

		WHEAT								BARLEY								Thousand tonnes	
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23	2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23		
(1)	Opening stocks	1,854	2,438	1,413	1,788	1,953	1,953	-	9%	1,109	1,357	1,058	964	1,268	1,268	-	32%		
(2)	Production	13,793	9,658	13,988	15,540	14,055	13,980	-75	-10%	7,404	8,117	6,961	7,385	6,981	6,963	-17	-6%		
(3)	Imports	1,737	2,431	1,994	1,346	1,425	1,725	300	28%	81	89	89	88	87	90	3	2%		
(4)	Total availability	17,384	14,527	17,394	18,674	17,433	17,658	225	-5%	8,595	9,562	8,108	8,437	8,336	8,322	-14	-1%		
(5)	Human and industrial consumption (b)	7,002	6,617	7,156	7,336	7,664	7,529	-135	3%	1,853	1,722	1,885	1,980	1,985	1,974	-11	0%		
(5a)	(of which home grown)	5,939	5,131	6,056	6,419	6,617	6,435	-182	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
(6)	Usage as animal feed (c)	7,046	6,115	7,242	6,909	6,985	6,965	-20	1%	4,242	5,312	4,228	3,943	3,929	4,001	72	1%		
(6a)	(of which home grown)	6,422	5,365	6,542	6,489	6,485	6,465	-20	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
(6b)	(of which compounders)	3,991	3,654	4,043	3,774	3,883	3,830	-53	1%	1,470	1,890	1,544	1,344	1,374	1,438	63	7%		
(6c)	(of which integrated poultry units)	1,134	1,080	1,143	1,104	1,176	1,179	4	7%	80	147	83	74	79	88	8	19%		
(7)	Seed (d)	264	278	280	267	267	267	-	-	191	185	178	183	181	183	2	-		
(8)	Other	69	48	70	78	70	70	-	-10%	37	41	35	37	35	35	-	-5%		
(9)	Total domestic consumption	14,381	13,058	14,748	14,590	14,985	14,831	-155	2%	6,323	7,260	6,326	6,142	6,129	6,193	63	1%		
(10)	Balance (4) - (9)	3,003	1,469	2,646	4,084	2,447	2,827	380	-31%	2,272	2,302	1,782	2,295	2,207	2,129	-78	-7%		
(11)	Exports (e)	774	209	511	1,586	-	275	*	-83%	1,166	1,290	764	1,123	-	700	*	-38%		
(12)	Intervention stocks (e)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
(13)	Commercial end-season stocks (e)	1,901	1,413	1,788	1,953	-	2,552	*	31%	1,148	1,058	964	1,268	-	1,429	*	13%		
(14)	(of which estimated operating stock requirement) (f)	1,520	1,500	1,500	1,500	1,500	1,500	-	-	790	780	800	800	800	800	-	-		
(15)	(of which free stock) (g)	381	-87	288	453	-	1,052	*	132%	358	278	164	468	-	629	*	34%		
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(18)	1,154		799	2,038	947	1,327	380	-35%	1,524	1,568	928	1,592	1,407	1,329	-78	-17%		
(17)	2020/21 operating stock deficit (13)-(14)**		-87																
(18)	Residual (10)-(11)-(13)		-153	347	546						-46	54	-97						

		MAIZE								OATS									
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23	2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23		
(1)	Opening stocks	248	222	211	248	126	126	-	-49%	133	106	147	157	140	140	-	-11%		
(2)	Production	-	-	-	-	-	-	-	-	1,017	1,031	1,123	1,007	841	830	-11	-18%		
(3)	Imports	2,477	2,856	2,207	2,123	2,274	2,310	36	9%	21	20	17	18	30	25	-5	-42%		
(4)	Total availability	2,726	3,078	2,417	2,371	2,399	2,436	36	3%	1,171	1,157	1,287	1,182	1,011	995	-16	-16%		
(5)	Human and industrial consumption	852	1,011	859	791	778	830	52	5%	523	531	501	492	512	507	-4	3%		
(5a)	(of which home grown)	-	-	-	-	-	-	-	-	501	513	483	474	487	482	-4	2%		
(6)	Usage as animal feed	1,376	1,536	1,172	1,236	1,253	1,237	-16	0%	374	394	476	350	277	278	1	-21%		
(6a)	(of which home grown)	-	-	-	-	-	-	-	-	374	394	476	350	277	278	1	-21%		
(7)	Seed	-	-	-	-	-	-	-	-	26	28	24	23	23	23	-	-		
(8)	Other (h)	4	4	4	4	4	4	-	-	5	5	6	5	4	4	-	-20%		
(9)	Total domestic consumption	2,232	2,551	2,035	2,031	2,034	2,071	36	2%	927	958	1,007	869	816	812	-4	-7%		
(10)	Balance (4) - (9)	494	527	383	340	365	365	-	7%	244	199	280	312	195	183	-12	-41%		
(11)	Exportable surplus	145	138	134	131	150	150	-	14%	99	41	123	172	60	100	40	-42%		
(12)	Commercial end-season stocks	224	211	248	126	215	215	-	71%	133	147	157	140	135	83	-52	-41%		
(13)	Residual (10)-(11)-(12)		178	0	84						11	0	0						

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 the 2020/21 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)							
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23
(1)	Opening stocks	6	5	5	10	6	6	-	-41%
(2)	Production****	227	168	297	330	330	271	-59	-18%
(3)	Imports	4	1	11	4	3	4	1	-9%
(4)	Total availability	237	174	313	345	339	281	-58	-19%
(5+6)	H&I and animal feed	219	166	289	300	295	255	-40	-15%
(5a+6a)	(of which home grown)	213	165	279	290	287	250	-37	-14%
(7)	Seed	6	3	10	10	10	10	-	-
(8)	Other	-	-	-	-	-	-	-	-
(9)	Total domestic consumption	224	169	299	310	305	265	-40	-15%
(10)	Balance (4) - (9)	13	5	14	35	34	16	-18	-54%
(11)	Exportable surplus	7	-	4	29	25	10	-15	-65%
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	Commercial end-season stocks	6	5	10	6	9	6	-3	0%

		TOTAL CEREALS							
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Nov-23	2023/24 Jan-24	Absolute change Jan-24	% change on 22/23
(1)	Opening stocks	3,350	4,128	2,834	3,167	3,493	3,493	-	10%
(2)	Production	22,442	18,974	22,369	24,262	22,207	22,044	-163	-9%
(3)	Imports	4,321	5,397	4,318	3,579	3,818	4,154	336	16%
(4)	Total availability	30,113	28,499	29,521	31,009	29,518	29,691	173	-4%
(5)	H&I (wheat, barley, maize, oats) (h)	10,230	9,881	10,402	10,598	10,938	10,840	-98	2%
(6)	Animal feed (wheat, barley, maize oats) (h)	13,036	13,357	13,117	12,437	12,443	12,480	37	0%
(5a +6a)	Other cereals (H&I and animal feed)	219	166	289	300	295	255	-40	-15%
(7)	Seed	487	494	492	483	481	483	2	-
(8)	Other	115	98	115	124	113	113	-	-9%
(9)	Total domestic consumption	24,087	23,996	24,415	23,942	24,270	24,171	-99	1%
(10)	Balance (4) - (9)	6,026	4,503	5,105	7,067	5,248	5,520	272	-22%
(11)	Exports	2,191	1,679	1,537	3,041	-	1,235	*	-
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	Commercial end-season stocks	3,412	2,834	3,167	3,493	-	4,285	*	23%
(14)	Estimated operating stock requirement (wheat & barley only)	2,310	2,280	2,300	2,300	2,300	2,300	-	-
(15)	Free stock for wheat and barley***	738	191	452	921	-	1,681	*	83%
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(18)	3,716	2,233	2,404	4,234	2,948	3,220	272	-24%
(17)	Residual (10)-(11)-(13)		-10	401	533				

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 for 2020/21 balance sheet relates to barley only, due to the wheat deficit

**** Other cereals production in 2023/24 has been calculated using official harvest 2023 area data and 2020/21 - 2022/23 average yields.

Appendix II

CUMULATIVE MONTHLY STATISTICS

Usage of cereals by processors, external trade and stocks

Situation as at end of November 2024

Thousand tonnes

		2018/19 to 2022/23 average	2018/19 21 weeks	2019/20 21 weeks	2020/21 21 weeks	2021/22 21 weeks	2022/23 21 weeks	2023/24 21 weeks	% Change 2023/24 on 2022/23	Actual Change 2023/24 on 2022/23
WHEAT										
Usage	Flour millers ⁽¹⁾	2,528	2,743	2,438	2,415	2,517	2,503	2,640	5%	137
	of which home-grown	2,021	2,154	2,118	1,811	2,001	2,143	2,187	2%	44
	of which imported	508	589	321	604	516	361	453	26%	93
	Brewers, maltsters and distillers	328	290	300	336	385	436	443	2%	8
	Animal Feed Processors ⁽²⁾	1,925	2,022	2,012	1,798	1,868	1,803	1,810	0%	7
	of which feed compounders	1,461	1,535	1,558	1,339	1,414	1,356	1,322	-3%	-34
Imports	of which intergrated poultry units	464	486	455	459	455	447	488	9%	41
	From July ⁽³⁾	872	1,043	436	1,144	867	560	772	38%	212
Exports	From July ⁽³⁾	292	134	745	127	161	441	127	-71%	-314
BARLEY										
Usage	Brewers, maltsters and distillers	744	761	782	682	750	790	798	1%	8
	Animal Feed Processors ⁽²⁾	568	453	490	658	671	499	523	5%	24
	of which feed compounders	533	429	473	608	621	472	481	2%	9
	of which intergrated poultry units	35	25	17	50	50	27	42	54%	15
Imports	From July ⁽³⁾	32	26	20	35	46	35	59	65%	23
Exports	From July ⁽³⁾	628	314	1,121	693	383	476	329	-31%	-147
MAIZE										
Usage	Human and Industrial ⁽⁴⁾	**	**	**	**	**	**	**	*	*
	Animal Feed Processors ⁽²⁾	195	204	192	230	156	**	**	*	*
	of which feed compounders	175	188	162	207	141	168	140	-17%	-28
	of which intergrated poultry units	21	16	29	23	15	**	**	*	*
Imports	From July ⁽³⁾	1,013	1,098	1,006	1,217	730	936	934	0%	-3
Exports	From July ⁽³⁾	63	73	63	68	47	54	77	41%	22
OATS										
Usage	Human and Industrial ⁽⁵⁾	134	142	128	139	128	129	124	-4%	-5
	Animal Feed Processors ⁽²⁾	33	29	24	28	50	32	21	-35%	-11
Imports	From July ⁽³⁾	12	22	8	8	10	9	5	-46%	-4
Exports	From July ⁽³⁾	28	19	60	19	15	75	58	-23%	-17

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 as at end-November (21 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 January 2024. The data above may differ from the most recent published data.

Disclaimer

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