

KEY POINTS

- Despite above average domestic wheat consumption, heavy imports from growing concerns over next season's crop, and minimal exports, leave well above average end of season stocks.
- For barley, a tighter than average balance on the year remains. Though much like wheat, minimal exports and concerns over the 2024 crop leave the heaviest ending stocks since 2014/15.
- Due to increased H&I usage, maize imports are expected to rise on year earlier levels, though remain below the previous five-year average.
- Reduced availability of oats, combined with average exports, leads to the smallest ending stocks forecast since 2011/12.

INTRODUCTION

1. This release covers the third 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. **Total cereals demand in 2023/24 for animal feed is estimated at 12.590 Mt, up 110 Kt from the previous estimate, and up 159 Kt on the year. Though this remains at the second lowest level since 2016/17, behind last season.** The slight increase in cereals demand from the previous estimate comes from expectations of higher fed on farm figures for wheat and barley, as well as a rise in recent demand from Integrated Poultry Units (IPU) and compound feed for cattle. Given the deflated grain prices as of late, it's thought farmers are less inclined to sell feed wheat and barley, and instead feed on farm. However, rises in feed demand are limited by the ongoing high input costs experienced by livestock farmers and therefore the overall minimal growth in herd or flock numbers. Some cautious optimism remains in the pig industry, though an imminent rebound is unlikely. Demand for compound feed for poultry remains sluggish, with the impacts of Avian Influenza and elevated energy costs ongoing.

4. **Total cereals usage for human and industrial (H&I) consumption is estimated at 10.834 Mt, an increase of 2% on the year (232 Kt), but down slightly (6 Kt) from January's estimate.** This yearly climb is largely due to a firm start to the season by the bioethanol and starch industries, as well as ongoing stable demand from the brewing malting and distilling (BMD) and flour milling sectors.

WHEAT

5. **Total availability of wheat in 2023/24 is up 275 Kt from January's estimate, but down 4% on the year, at 17.933 Mt. A rise in imports and opening stocks is outweighed by a smaller crop.** Full season wheat imports are now forecast at 2.000 Mt, up 275 Kt on the previous estimate, and up 640 Kt on the year. So far this season (Jul-Jan), wheat

imports have totalled 1.251 Mt, up 55% on the year. The majority of imports this season are expected to be high protein milling wheat due to a lack of high-quality wheat available domestically, with some feed wheat heading into Northern Ireland. Concerns over next season's crop are also expected to contribute to a firm import pace for the remainder of the season.

6. **At 7.492 Mt, H&I wheat consumption is up 166 Kt on year earlier levels, but down 36 Kt from January's estimate.** This figure is down on the previous estimate due to lower-than-forecast actual data in recent months for brewing, malting, and distilling, as well as with lower ethanol prices over the winter impacting margins for bioethanol production. It's also expected that comparatively more maize will be used in place of wheat over the rest of the season as it begins to price more competitively. Wheat demand by flour millers is expected to be up slightly on 2022/23 levels. Despite some impact on demand for premium products because of the cost-of-living crisis, overall flour demand has remained stable. Slightly lower extraction rates at the beginning of the season also increased wheat usage overall. It is still expected that flour millers will use a higher proportion of imported wheat in 2023/24 than last season, due to a lack of available high-quality domestic supply. Wheat usage in BMD is forecast up on the year, with expectations of firm demand from the distilling and starch sectors.

7. **Usage of wheat in animal feed is forecast at 7.034 Mt, up 129 Kt on the year, and up 69 Kt on the previous estimate.** The rise from January is largely down to an increased fed on farm forecast, as well as some recovery in IPU demand and cattle feed compounder demand. Though climbs in demand are limited by firm barley usage, due to its discount under wheat. With grain prices trending generally lower over the past few months, it is thought that farmers are less incentivised to sell grain.

8. **At 3.069 Mt, the balance of total availability and domestic consumption of wheat in 2023/24 is 25% lower than 2022/23 levels, but above the five-year average of 3.008 Mt.** A combination of reduced availability and increased domestic consumption has led to the tighter balance year on year. Full season exports are estimated at 270 Kt, down slightly (5 Kt)

from January's estimate, and down 1.316 Mt on year earlier levels. This season to date (Jul-Jan), the UK has exported 78% less wheat than at the same point last season. At 2.799 Mt, commercial end-season stocks are forecast up 846 Kt on the year, and up 247 Kt on the previous estimate. This forecast is also well above average, perhaps unsurprising given the volume of wheat expected to still be on farm, plus the level of imports expected to be carried over for milling, with doubts over next season's crop.

BARLEY

9. **Total availability of barley in 2023/24 is forecast at 8.357 Mt.** This is 80 Kt lower than year earlier levels largely due to a fall in production, but up 35 Kt from January's estimate due to an increase in imports. Full season imports are now estimated at 125 Kt, up 37 Kt on the year. Despite some higher quality barley imports coming in earlier in the season, the majority of imports are now expected to be of feed quality, largely going into Northern Ireland.

10. **At 1.967 Mt, H&I barley consumption is estimated down 16 Kt on 2022/23 levels, and down 7 Kt on January's estimate.** Usage by the BMD sector is forecast down slightly on last year's high. Demand for brewing is said to be lacklustre as a result of the cost-of-living crisis, though strong distilling demand remains. Capacity closure over winter has also contributed to the lower demand outlook.

11. **Usage of barley for animal feed in 2023/24 is forecast up 94 Kt on the year at 4.035 Mt. This is also up 34 Kt from the previous estimate.** Barley is currently pricing more competitively than maize or wheat, and as such is being used heavily into feed rations. Looking at price direction moving forward, barley inclusions are expected to remain firm for the remainder of the season, and more is expected to be fed on farm.

12. **In 2023/24, the supply and demand balance of barley is forecast down 156 Kt year-on-year, but up slightly (8 Kt) on the previous estimate, at 2.137 Mt.** The tighter yearly balance is driven by a decrease in availability and increase in domestic consumption. Though the rise in availability from the previous estimate outweighs the rise in consumption. The barley balance remains lower than the previous five-year average. The estimate for full season exports remains at 700 Kt, down 423 Kt from 2022/23. From July to January, the UK had exported 27% less than at the same point last season. Commercial end-season stocks are forecast up 168 Kt on the year, at 1.437 Mt, and the highest since 2014/15.

MAIZE

13. **Total availability of maize in 2023/24 is forecast up 108 Kt on the year at 2.479 Mt. This is up 44 Kt from the previous estimate.** Full season imports of maize are expected to reach 2.354 Mt, up 231 Kt on 2022/23 levels, and up 44 Kt on January's estimate. This season to date (Jul-Jan) maize imports have totalled 1.550 Mt, up 11% on the same period a

year earlier. It is thought that maize imports are picking up pace as the grain begins to price more competitively against domestic wheat.

14. **At 869 Kt, H&I maize usage is forecast up 68 Kt on year earlier levels, and up 39 Kt on the previous estimate.** Usage is expected to pick up for the rest of the season in the bioethanol sector and stay firm in wider brewing/distilling, due to relative prices. **Usage of maize in animal feed is expected to rise slightly (7 Kt) on the year at 1.241 Mt. This is up 5 Kt from January's estimate, driven mostly by increased IPU feed demand.** This is the highest level since 2020/21, but still below the previous five-year average. Though barley will likely price most competitively for the remainder of the season, the relative price of maize compared to domestic wheat is expected to lead to stable maize usage in animal feed at the expense of wheat for the season remainder.

15. **The balance of maize availability and consumption in 2023/24 is estimated at 365 Kt, up 33 Kt on the year.** Full season exports remain 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. **At 985 Kt, total availability of oats in 2023/24 is forecast down 197 Kt on the year, and down 10 Kt on January's estimate. Opening stocks, production and imports all see yearly declines.** Full season imports are estimated to fall by 3 Kt on the year, to 15 Kt. This is down 10 Kt from the previous estimate on the back of a slow export pace this season to date, down 40% from Jul-Jan.

17. **H&I oat consumption in 2023/24 is estimated to rise by 13 Kt on the year to 505 Kt.** Despite reports suggesting that global demand for oat products is sluggish, expectations of increased capacity, as well as increased hulling losses this season, mean demand for oats is forecast up on the year. The impact of increased capacity will continue to be assessed as the season progresses. **At 280 Kt, usage of oats in animal feed is forecast down 70 Kt on the year, but up 2 Kt from the previous estimate.** The smaller crop this year, and therefore the relative higher price over other cereals, sees minimal usage by compounders and on-farm feeding this season.

18. **The balance of oat supply and demand in 2023/24 is 139 Kt lower on the year, and down 10 Kt on January's estimate at 173 Kt. This is also 71 Kt tighter than the five-year average.** At 105 Kt, full season exports are estimated to fall by 67 Kt on year earlier levels. Though this is up 5 Kt from January. From July to January, oat exports were down 28% on the same period last season. End-season stocks are estimated to be 72 Kt lower on the year, and down 15 Kt on January's estimate, at 68 Kt.

19. Appendix II shows cumulative usage and trade data to end-January. 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 March 2024

July to June crop years

Thousand tonnes

	WHEAT								BARLEY							
	2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Jan-24	2023/24 Mar-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 Jan-24	2023/24 Mar-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	13,980	13,980	-	-10%	7,404	8,117	6,961	7,385	6,963	6,963	-	-6%
(3) Imports	1,740	2,431	1,994	1,360	1,725	2,000	275	47%	81	89	89	88	90	125	35	42%
(4) Total availability	17,387	14,527	17,394	18,688	17,658	17,933	275	-4%	8,595	9,562	8,108	8,437	8,322	8,357	35	-1%
(5) Human and industrial consumption (b)	7,000	6,617	7,156	7,326	7,529	7,492	-36	2%	1,854	1,722	1,885	1,983	1,974	1,967	-7	-1%
(5a) (of which home grown)	5,936	5,131	6,056	6,407	6,435	6,363	-73	-1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6) Usage as animal feed (c)	7,045	6,115	7,242	6,906	6,965	7,034	69	2%	4,241	5,312	4,228	3,941	4,001	4,035	34	2%
(6a) (of which home grown)	6,421	5,365	6,542	6,486	6,465	6,484	19	0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6b) (of which compounders)	3,990	3,654	4,043	3,771	3,830	3,808	-22	1%	1,469	1,890	1,544	1,342	1,438	1,445	8	8%
(6c) (of which integrated poultry units)	1,134	1,080	1,143	1,104	1,179	1,210	31	10%	80	147	83	74	88	89	2	21%
(7) Seed (d)	264	278	280	267	267	267	-	-	191	185	178	183	183	183	-	-
(8) Other	69	48	70	78	70	70	-	-10%	37	41	35	37	35	35	-	-5%
(9) Total domestic consumption	14,378	13,058	14,748	14,577	14,831	14,864	33	2%	6,323	7,260	6,326	6,144	6,193	6,220	27	1%
(10) Balance (4) - (9)	3,008	1,469	2,646	4,111	2,827	3,069	242	-25%	2,271	2,302	1,782	2,293	2,129	2,137	8	-7%
(11) Exports (e)	774	209	511	1,586	275	270	-5	-83%	1,166	1,290	764	1,123	700	700	-	-38%
(12) Intervention stocks (e)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(13) Commercial end-season stocks (e)	1,901	1,413	1,788	1,953	2,552	2,799	247	43%	1,148	1,058	964	1,268	1,429	1,437	8	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	1,299	247	187%	358	278	164	468	629	637	8	36%
(16) Surplus available for either export or free stock (10)-(12)-(14)-(18)	1,154	122	799	2,038	1,327	1,569	242	-23%	1,524	1,568	928	1,592	1,329	1,337	8	-16%
(17) 2020/21 operating stock deficit (13)-(14)**	-	-87	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(18) Residual (10)-(11)-(13)	-	-153	347	573	-	-	-	-	-46	54	-99	-	-	-	-	-

	MAIZE								OATS							
	2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Jan-24	2023/24 Mar-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 Jan-24	2023/24 Mar-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	830	830	-	-18%
(3) Imports	2,477	2,856	2,207	2,123	2,310	2,354	44	11%	21	20	17	18	25	15	-10	-15%
(4) Total availability	2,726	3,078	2,417	2,371	2,436	2,479	44	5%	1,171	1,157	1,287	1,182	995	985	-10	-17%
(5) Human and industrial consumption	854	1,011	859	801	830	869	39	9%	523	531	501	492	507	505	-2	3%
(5a) (of which home grown)	-	-	-	-	-	-	-	-	501	513	483	474	482	490	8	3%
(6) Usage as animal feed	1,375	1,536	1,172	1,234	1,237	1,241	5	1%	374	394	476	350	278	280	2	-20%
(6a) (of which home grown)	-	-	-	-	-	-	-	-	374	394	476	350	278	280	2	-20%
(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	2,233	2,551	2,035	2,039	2,071	2,114	44	4%	927	958	1,007	870	812	812	-0	-7%
(10) Balance (4) - (9)	492	527	383	332	365	365	-	-10%	244	199	280	312	183	173	-10	-45%
(11) Exportable surplus	145	138	134	131	150	150	-	-14%	99	41	123	172	100	105	5	-39%
(12) Commercial end-season stocks	224	211	248	126	215	215	-	71%	133	147	157	140	83	68	-15	-52%
(13) Residual (10)-(11)-(12)	-	178	0	76	-	-	-	-	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 are updated based on a number of assumptions, calculated for the purposes of the balance sheets only. Seed numbers for the 2023/24 season are pulled forward from the last marketing year.

Given the decrease in wheat area forecast for harvest 2024, significant changes to this figure can be expected when official data is released early next season.

(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)							Absolute change Jan-24	% change on 22/23
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Jan-24	2023/24 Mar-24			
(1)	Opening stocks	6	5	5	10	6	6	-	-41%	
(2)	Production****	227	168	297	330	271	271	-	-18%	
(3)	Imports	4	1	11	4	4	4	-	-9%	
(4)	Total availability	237	174	313	345	281	281	-	-19%	
(5+6)	H&I and animal feed	218	166	289	300	255	255	-	-15%	
(5a+6a)	(of which home grown)	213	165	279	290	250	250	-	-14%	
(7)	Seed	6	3	10	10	10	10	-	-	
(8)	Other	-	-	-	-	-	-	-	-	
(9)	Total domestic consumption	224	169	299	310	265	265	-	-15%	
(10)	Balance (4) - (9)	13	5	14	35	16	16	-	-54%	
(11)	Exportable surplus	7	-	4	29	10	8	-2	-72%	
(12)	Intervention stocks	-	-	-	-	-	-	-	-	
(13)	Commercial end-season stocks	6	5	10	6	6	8	2	34%	

		TOTAL CEREALS							Absolute change Jan-24	% change on 22/23
		2018/19 2022/23 average	2020/21 estimate	2021/22 estimate	2022/23 estimate	2023/24 Jan-24	2023/24 Mar-24			
(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	22,044	22,044	-	-9%	
(3)	Imports	4,324	5,397	4,318	3,594	4,154	4,498	344	25%	
(4)	Total availability	30,116	28,499	29,521	31,023	29,691	30,035	344	-3%	
(5)	H&I (wheat, barley, maize, oats) (h)	10,231	9,881	10,402	10,602	10,840	10,834	-6	2%	
(6)	Animal feed (wheat, barley, maize oats) (h)	13,035	13,357	13,117	12,431	12,480	12,590	110	1%	
(5a +6a)	Other cereals (H&I and animal feed)	218	166	289	300	255	255	-	-15%	
(7)	Seed	487	494	492	483	483	483	-	-	
(8)	Other	115	98	115	124	113	113	-	-9%	
(9)	Total domestic consumption	24,086	23,996	24,415	23,940	24,171	24,275	104	1%	
(10)	Balance (4) - (9)	6,030	4,503	5,105	7,083	5,520	5,760	240	-19%	
(11)	Exports	2,191	1,679	1,537	3,041	1,235	1,233	-2	-	
(12)	Intervention stocks	-	-	-	-	-	-	-	-	
(13)	Commercial end-season stocks	3,412	2,834	3,167	3,493	4,285	4,527	242	30%	
(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	1,936	255	110%	
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(18)	3,720	2,233	2,404	4,234	3,220	3,460	240	-18%	
(17)	Residual (10)-(11)-(13)		-10	401	550					

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 January 2024		Thousand tonnes								
		2018/19 to 2022/23 average	2018/19 30 weeks	2019/20 30 weeks	2020/21 30 weeks	2021/22 30 weeks	2022/23 30 weeks	2023/24 30 weeks	% Change 2023/24 on 2022/23	Actual Change 2023/24 on 2022/23
WHEAT										
Usage	Flour millers ⁽¹⁾	3,496	3,690	3,514	3,279	3,500	3,466	3,674	6%	208
	of which home-grown	2,812	2,972	3,061	2,402	2,811	2,959	3,023	2%	64
	of which imported	684	718	452	877	689	508	652	28%	144
	Brewers, maltsters and distillers	443	404	358	467	545	620	619	0%	-1
	Animal Feed Processors ⁽²⁾	2,741	2,858	2,939	2,492	2,677	2,534	2,608	3%	74
	of which feed compounders	2,080	2,178	2,260	1,860	2,023	1,900	1,895	0%	-5
Imports	of which intergrated poultry units	661	680	679	632	654	634	713	13%	80
	From July ⁽³⁾	1,179	1,309	617	1,597	1,195	808	1,251	55%	443
Exports	From July ⁽³⁾	383	213	892	162	265	761	166	-78%	-596
BARLEY										
Usage	Brewers, maltsters and distillers	1,056	1,079	1,108	960	1,075	1,130	1,131	0%	1
	Animal Feed Processors ⁽²⁾	817	622	723	998	924	719	763	6%	44
	of which feed compounders	769	590	700	922	864	687	707	3%	20
	of which intergrated poultry units	48	32	24	76	60	32	56	74%	24
Imports	From July ⁽³⁾	43	45	28	43	55	45	99	119%	54
Exports	From July ⁽³⁾	845	531	1,308	1,019	521	680	495	-27%	-185
MAIZE										
Usage	Human and Industrial ⁽⁴⁾	**	**	**	**	**	**	**	*	*
	Animal Feed Processors ⁽²⁾	294	339	268	352	217	**	**	*	*
	of which feed compounders	265	313	227	318	202	232	204	-12%	-27
	of which intergrated poultry units	29	27	41	34	15	**	**	*	*
Imports	From July ⁽³⁾	1,526	1,681	1,451	1,762	1,209	1,395	1,550	11%	155
Exports	From July ⁽³⁾	91	113	86	91	73	74	106	42%	31
OATS										
Usage	Human and Industrial ⁽⁵⁾	268	281	267	275	250	258	255	-1%	-3
	Animal Feed Processors ⁽²⁾	49	43	37	42	74	45	32	-29%	-13
Imports	From July ⁽³⁾	15	27	11	11	13	12	7	-40%	-5
Exports	From July ⁽³⁾	43	29	89	24	28	118	84	-28%	-33

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-December (26 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 2024. In order to incorporate the change January 2024 was increased to a 5 week period compared to 4 weeks in 2023.

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.

Figures in Appendix II were updated on 28 March 2024. The data above may differ from the most recent published data.

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