

KEY POINTS

- A stronger wheat import pace, coupled with relatively stable demand and exports, have led to heavier closing stocks.
- With tight domestic availability of barley, combined with stronger domestic consumption and exports, carry out stocks are set to be the lowest level in nearly a decade.
- With huge volatility in the global grain market and little liquidity domestically, maize has become more competitive, with imports revised up.
- Driven by a record level of production in 2021, domestic oat usage and exports are forecast to reach multi year highs, leaving tighter end-season stocks.

INTRODUCTION

1. This release covers the fourth official 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. **At 13.159Mt, total cereals demand for animal feed is 94Kt higher than March's estimate, but down 198Kt compared with 2020/21.** Despite a projected overall decline in total animal feed production this season, the cereal inclusion rate is higher than previous forecasts, based on actual usage information to date. Compared with last season, pig feed production is forecast to increase, with the reductions in the size of the national pig herd not happening as soon as initially expected by the industry. With rising costs of production for both cattle and sheep producers and favourable spring weather so far, it is expected feed usage by these sectors will continue the decline seen since the start of the year. Total poultry feed production, including integrated poultry units (IPU), is also forecast to fall on year earlier levels and on previous estimates, driven by tighter margins, especially for egg producers. **Human and industrial (H&I) usage of total cereals is estimated at 10.385Mt, 88Kt higher than March's estimate and 527Kt more than last season.** The increase on the previous estimates is largely due to a rise in wheat usage by flour millers and distillers, outweighing a projected decline in bioethanol usage of cereals.

WHEAT

4. **Total availability of wheat in 2021/22 is estimated at 17.154Mt, 250Kt higher than March's forecast and 2.691Mt up year on year.** The increase from the previous forecast is driven by a rise in wheat imports. From July 2021 to March 2022, the UK imported 1.506Mt of wheat, which is 6Kt higher than March's full season projection. The import pace has

been stronger than initially anticipated, partly due to stronger demand by the animal feed sector, with flour milling demand remaining down on the year. Full season imports are forecast up from March by 250Kt at 1.750Mt, but are 26% lower on the year.

5. **In 2021/22, H&I wheat consumption remains relatively (-1Kt) unchanged from March and is 524Kt higher on the year.** While the projection remains stable compared with earlier estimates, usage by flour millers and distillers is expected to be higher, outweighing a fall in bioethanol demand. So far this season, usage by flour millers has been up slightly on the year, returning to near pre-pandemic levels. Distilling demand for wheat is up on previous estimates and year earlier levels, as usage switches from maize. Compared with March, bioethanol usage of wheat is expected to fall. This is driven by more maize usage at its expense and further delays with the UK bioethanol industry becoming fully operational again. However, compared with 2020/21, usage of wheat by bioethanol plants is expected to increase.

6. **Wheat usage in animal feed in 2021/22 is forecast at 7.265Mt, marginally lower (-8Kt) than previous estimates, but 1.154Mt higher than in 2020/21.** Despite a higher proportion of wheat being used to date (Jul-Mar) due to its relative price, total animal feed production has declined more than expected and forecast in March. This has led to little change on previous estimates. Towards the end of the season, the rise in wheat usage is expected to slow, as maize will start to feature more heavily in some rations due to its current price competitiveness.

7. **At 2.423Mt, the balance of available supplies and total consumption is up 259Kt from previous estimates and 991Kt, or 69%, compared with 2020/21.** The estimated operating stock requirement has remained unchanged at 1.500Mt. So far this season (Jul-Mar), the UK has exported 297Kt of wheat. Full season exports are projected to reach 530Kt, on the back of strong export sales at the end of March and in April, when UK cereals were very competitive on the European market. With higher domestic availability of wheat, but relatively stable overall demand and exports, end-season stocks are forecast to rise by 229Kt from March's estimate and 476Kt on the year, to 1.893Mt.

BARLEY

8. **Total available supplies of barley in 2021/22 are estimated at 8.089Mt, unchanged from March, but 1.473Mt, or 15%, lower year on year.** As with previous estimates, the decline on the year is driven by a reduction in output, due to a smaller spring barley area being planted for harvest 2021. Barley imports are forecast at 70Kt, 19Kt lower than 2020/21.

9. **At 1.896Mt, H&I barley usage is relatively unchanged (+4Kt) from March's forecast, but 175Kt higher than 2020/21.** Barley usage by the brewing, malting and distilling sector (BMD) remains strong as demand continues to return to pre-pandemic levels. Any possible impact of the current 'cost of living crisis' is not expected to affect barley usage by the BMD sector in 2021/22, but is a watch point going forward.

10. **Usage of barley in animal feed is forecast to decline by 22Kt on previous estimates and 1.156Mt on the year, at 4.154Mt.** So far this season (Jul-Mar), GB feed compounders and IPUs have used 14% less barley in rations than the same period last season. The further reduction in usage compared with previous estimates is due to barley becoming less price competitive compared with wheat, as supply has become tighter domestically. It is expected that barley usage will continue to fall for the rest of the season.

11. **The balance of supply and demand for barley in 2021/22 is 18Kt higher than March's estimate, but 486Kt down on 2020/21 levels.** From July 2021 to March 2022, the UK exported 616Kt of barley. Barley trade is expected to be relatively strong during the last quarter of the season. Therefore, full season exports are now forecast at 765Kt, 15Kt up on the previous estimate. With a tight balance and relatively strong exports, end-season stocks remain at the lowest levels since 2012/13, at 1.054Mt.

MAIZE

12. **At 2.394Mt, total availability of maize is 201Kt up from previous estimates, but 687Kt (22%) lower than in 2020/21.** The increase from March is driven by a rise in projected imports. To date (Jul-Mar), the UK has imported 1.557Mt of maize, 29% down on the same period last season. Full season maize imports are forecast at 2.184Mt, 201Kt higher than March's estimate, but 676Kt lower year on year. The increase from March is due to a rise in demand by both the animal feed and bioethanol sectors during the last quarter of the season. With the ongoing volatility in global grain markets due to the war in Ukraine, imported maize has now become more price competitive compared with other imported grains, especially into Northern Ireland.

13. **In 2021/22 H&I demand for maize is estimated at 854Kt, 97Kt up on March's forecast, but 157Kt down on 2020/21 levels.** With maize becoming more competitive domestically over the past month, it is expected that maize usage by the bioethanol industry will be higher during the last quarter of the season than initially expected. Likewise, the decline in maize usage by distillers is expected to slow. **The usage of maize in animal feed is forecast to be 74Kt higher than in March, but 305Kt down on year earlier levels.** During quarter four of 2021/22, more maize is expected to be included in some rations at the expense of wheat, particularly in Northern Ireland.

14. **At 300Kt, the balance of maize supply and demand is 30Kt higher than earlier forecasts, but 225Kt lower than levels recorded in 2020/21.** If realised, this would be the tightest maize balance since 2015/16. Exports are pegged at 100Kt, 38Kt lower on year, while closing stocks are forecast at 200Kt, 20Kt up from March, but 11Kt down year on year.

OATS

15. **In 2021/22, available supplies of oats are unchanged from March's estimate and 133Kt higher year on year.** As with previous estimates, the increase on the season is driven by record production levels. Oat imports are forecast at 20Kt, unchanged from March and on the year.

16. **H&I usage of oats in 2021/22 is estimated at 516Kt, down 12Kt from March, and 14Kt lower on the year.** Usage by oat millers was down for the first half of the season, but increased on year earlier levels in the third quarter and is expected to remain up on the year in quarter four. **Usage of oats in animal feed is pegged at 504Kt, 50Kt higher than previous estimates and 109Kt up on 2020/21.** Due to its availability and relative price to other feed grains this season, more oats have been included in compound feed rations and it is expected that more has been fed on farm.

17. **At 236Kt, the balance of oat availability and consumption is 39Kt down on March, but 37Kt up on the year.** With a substantial domestic crop this season, UK oats have been competitive on the export market. Full season exports have been revised up by 25Kt from earlier forecasts, to 125Kt. If realised, this would be the highest volume exported in 19 years. With higher exports forecast and stronger domestic demand, closing stocks of oats are projected to fall by 64Kt from March, to 111Kt.

18. Appendix II shows cumulative usage and trade data to end-March. 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 May 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 Mar-22	2021/22 May-22	Absolute change Mar-22	% change on 20/21	2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Mar-22	2021/22 May-22	Absolute change Mar-22	% change on 20/21
(1) <u>Opening stocks</u>	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) <u>Production</u>	13,731	13,555	16,225	9,658	13,988	13,988	-	45%	7,300	6,510	8,048	8,117	6,961	6,961	-	-14%
(3) <u>Imports</u>	1,772	1,858	988	2,367	1,500	1,750	250	-26%	88	70	70	89	70	70	-	-21%
(4) Total availability	17,626	17,131	19,123	14,463	16,904	17,154	250	19%	8,587	7,657	9,210	9,562	8,089	8,089	-	-15%
(5) <u>Human and industrial consumption (b)</u>	7,279	6,969	6,932	6,594	7,119	7,118	-1	8%	1,829	1,901	1,778	1,722	1,893	1,896	4	10%
(5a) (of which home grown)	6,226	5,918	6,169	5,108	5,999	6,050	50	18%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6) <u>Usage as animal feed (c)</u>	7,165	7,402	7,560	6,111	7,273	7,265	-8	19%	4,147	3,582	4,144	5,310	4,175	4,154	-22	-22%
(6a) (of which home grown)	6,478	6,652	7,060	5,361	6,723	6,665	-58	24%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6b) (of which compounders)	4,080	4,164	4,320	3,648	4,119	4,081	-39	12%	1,374	1,172	1,399	1,887	1,590	1,546	-44	-18%
(6c) (of which integrated poultry units)	1,175	1,155	1,185	1,082	1,148	1,158	10	7%	71	50	44	147	85	82	-3	-44%
(7) <u>Seed (d)</u>	265	281	215	278	278	278	-	0%	193	187	223	185	185	185	-	0%
(8) <u>Other</u>	69	68	81	48	70	70	-	46%	37	33	40	41	35	35	-	-15%
(9) Total domestic consumption	14,777	14,720	14,788	13,031	14,740	14,731	-9	13%	6,206	5,703	6,185	7,257	6,288	6,270	-18	-14%
(10) Balance (4) - (9)	2,848	2,411	4,336	1,432	2,164	2,423	259	69%	2,381	1,954	3,025	2,305	1,801	1,819	18	-21%
(11) <u>Exports (e)</u>	731	358	1,205	205	500	530	30	159%	1,214	863	1,790	1,290	750	765	15	-41%
(12) <u>Intervention stocks (e)</u>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(13) <u>Commercial end-season stocks (e)</u>	1,848	1,911	2,438	1,416	1,664	1,893	229	34%	1,137	1,091	1,357	1,058	1,051	1,054	3	0%
(14) (of which estimated operating stock requirement) (f)	1,552	1,550	1,550	1,500	1,500	1,500	-	-	776	780	790	780	800	800	-	3%
(15) (of which free stock) (g)	296	361	888	-	164	393	229	*	361	311	567	278	251	254	3	-9%
(16) Surplus available for either export or free stock (10)-(12)-(14)-(18)	1,027	720	2,093	664	923	259	259	*	1,576	1,174	2,356	1,568	1,001	1,019	18	-35%
(17) 2020/21 operating stock deficit (13)-(14)**				-84												
(18) Residual (10)-(11)-(13)		142	693	-189						-	-121	-44				

	MAIZE								OATS							
	2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Mar-22	2021/22 May-22	Absolute change Mar-22	% change on 20/21	2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Mar-22	2021/22 May-22	Absolute change Mar-22	% change on 20/21
(1) <u>Opening stocks</u>	240	247	313	222	211	211	-	-5%	113	138	116	106	147	147	-	38%
(2) <u>Production</u>	-	-	-	-	-	-	-	-	930	850	1,076	1,031	1,123	1,123	-	9%
(3) <u>Imports</u>	2,418	2,825	2,376	2,860	1,983	2,184	201	-24%	24	32	18	20	20	20	-	0%
(4) Total availability	2,659	3,072	2,689	3,082	2,193	2,394	201	-22%	1,066	1,020	1,210	1,157	1,290	1,290	-	11%
(5) <u>Human and industrial consumption</u>	765	800	800	1,011	757	854	97	-16%	536	536	553	531	528	516	-12	-3%
(5a) (of which home grown)	-	-	-	-	-	-	-	-	509	500	537	513	511	497	-14	-3%
(6) <u>Usage as animal feed</u>	1,368	1,573	1,362	1,542	1,163	1,237	74	-20%	316	302	346	394	453	504	50	28%
(6a) (of which home grown)	-	-	-	-	-	-	-	-	316	302	346	394	453	504	50	28%
(7) <u>Seed</u>	-	-	-	-	-	-	-	-	26	25	29	28	28	28	-	0%
(8) <u>Other (h)</u>	4	4	4	4	4	4	-	0%	4	4	5	5	6	6	-	20%
(9) Total domestic consumption	2,137	2,377	2,166	2,557	1,923	2,094	171	-18%	881	867	933	958	1,016	1,054	39	10%
(10) Balance (4) - (9)	521	696	523	525	270	300	30	-43%	185	153	276	199	275	236	-39	19%
(11) <u>Exportable surplus</u>	161	188	135	138	90	100	10	-28%	49	37	120	41	100	125	25	204%
(12) <u>Commercial end-season stocks</u>	253	313	222	211	180	200	20	-5%	124	116	106	147	175	111	-64	-25%
(13) Residual (10)-(11)-(12)		194	166	176							50	11				

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)							Absolute change Mar-22	% change on 20/21
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Mar-22	2021/22 May-22			
(1)	Opening stocks	5	5	5	5	4	4	-	-22%	
(2)	Production	145	169	168	156	297	297	-	90%	
(3)	Imports	3	3	1	2	2	2	-	-37%	
(4)	Total availability	152	177	174	164	303	303	-	85%	
(5+6)	H&I and animal feed	144	169	166	156	296	296	-	90%	
(5a+6a)	(of which home grown)	142	166	165	155	293	293	-	89%	
(7)	Seed	3	3	3	3	3	3	-	0%	
(8)	Other	-	-	-	-	-	-	-	-	
(9)	Total domestic consumption	147	172	169	159	299	299	-	88%	
(10)	Balance (4) - (9)	5	5	5	5	4	4	-	-23%	
(11)	Exportable surplus	-	-	-	1	-	-	-	-1	
(12)	Intervention stocks	-	-	-	-	-	-	-	-	
(13)	Commercial end-season stocks	5	5	5	4	4	4	-	-12%	

		TOTAL CEREALS							Absolute change Mar-22	% change on 20/21
		2016/17 2020/21 average	2018/19 estimate	2019/20 estimate	2020/21 estimate	2021/22 Mar-22	2021/22 May-22			
(1)	Opening stocks	3,679	3,184	3,437	4,128	2,836	2,836	-	-31%	
(2)	Production	22,105	21,085	25,517	18,962	22,369	22,369	-	18%	
(3)	Imports	4,306	4,789	3,453	5,337	3,574	4,025	451	-25%	
(4)	Total availability	30,090	29,058	32,407	28,428	28,779	29,230	451	3%	
(5)	H&I (wheat, barley, maize, oats) (h)	10,409	10,206	10,063	9,858	10,296	10,385	88	5%	
(6)	Animal feed (wheat, barley, maize oats) (h)	12,996	12,858	13,412	13,357	13,065	13,159	94	-1%	
(5a +6a)	Other cereals (H&I and animal feed)	144	169	166	156	296	296	-	90%	
(7)	Seed	487	496	470	494	494	494	-	0%	
(8)	Other	114	109	130	98	115	115	-	17%	
(9)	Total domestic consumption	24,149	23,838	24,241	23,962	24,266	24,449	183	2%	
(10)	Balance (4) - (9)	5,941	5,220	8,165	4,465	4,513	4,781	268	7%	
(11)	Exports	2,156	1,446	3,249	1,676	1,440	1,520	80	-9%	
(12)	Intervention stocks	-	-	-	-	-	-	-	-	
(13)	Commercial end-season stocks	3,367	3,437	4,128	2,836	3,073	3,261	188	15%	
(14)	Estimated operating stock requirement (wheat & barley only)	2,328	2,330	2,340	2,280	2,300	2,300	-	1%	
(15)	Free stock for wheat and barley***	657	673	1,455	278	415	647	232	133%	
(16)	Surplus available for either export or free stock (10)-(12)-(14)-(17)	3,613	2,553	5,038	2,232	2,213	2,481	268	11%	
(17)	Residual (10)-(11)-(13)		336	788	-46					

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 March 2022

Thousand tonnes

		2016/17 to 2020/21 average	2015/16 39 weeks	2016/17 39 weeks	2017/18 39 weeks	2018/19 39 weeks	2019/20 39 weeks	2020/21 39 weeks	2021/22 39 weeks	% Change 2021/22 on 2020/21	Actual Change 2021/22 on 2020/21
WHEAT											
Usage	Flour millers ⁽¹⁾	4,786	4,831	5,356	5,103	4,677	4,605	4,190	4,458	6%	268
	of which home-grown	4,004	4,125	4,679	4,422	3,831	4,020	3,066	3,612	18%	546
	of which imported	783	707	677	681	846	585	1,124	846	-25%	-278
	Brewers, maltsters and distillers	561	465	546	635	531	486	608	730	20%	122
	Animal Feed Processors ⁽²⁾	3,571	3,365	3,536	3,656	3,679	3,796	3,187	3,506	10%	319
	of which feed compounders	2,691	2,472	2,631	2,730	2,808	2,912	2,373	2,644	11%	272
Imports	of which intergrated poultry units	880	893	905	927	871	885	814	862	6%	47
	From July ⁽³⁾	1,341	1,169	1,260	1,214	1,510	837	1,886	1,506	-20%	-380
Exports	From July ⁽³⁾	630	1,966	1,315	383	275	1,001	177	297	68%	120
BARLEY											
Usage	Brewers, maltsters and distillers	1,370	1,346	1,372	1,404	1,411	1,422	1,243	1,382	11%	139
	Animal Feed Processors ⁽²⁾	964	813	775	939	789	963	1,351	1,162	-14%	-189
	of which feed compounders	911	775	736	891	751	932	1,246	1,092	-12%	-154
	of which intergrated poultry units	52	38	39	48	38	31	105	70	-33%	-35
Imports	From July ⁽³⁾	57	86	74	70	56	40	47	60	27%	13
Exports	From July ⁽³⁾	1,036	1,536	860	964	737	1,475	1,145	616	-46%	-529
MAIZE											
Usage	Human and Industrial ⁽⁴⁾	**	**	**	**	**	**	**	**	*	*
	Animal Feed Processors ⁽²⁾	360	254	235	264	478	345	480	**	*	*
	of which feed compounders	320	211	200	232	440	293	435	267	-39%	-168
	of which intergrated poultry units	40	44	34	32	38	52	45	**	*	*
Imports	From July ⁽³⁾	1,831	1,285	1,380	1,551	2,135	1,885	2,202	1,557	-29%	-645
Exports	From July ⁽³⁾	129	83	141	137	144	108	114	79	-31%	-36
OATS											
Usage	Human and Industrial ⁽⁵⁾	406	392	394	410	410	415	404	382	-5%	-22
	Animal Feed Processors ⁽²⁾	47	41	30	43	54	49	58	99	70%	41
Imports	From July ⁽³⁾	19	22	19	16	28	12	19	16	-14%	-3
Exports	From July ⁽³⁾	43	61	18	23	32	106	35	54	56%	19

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 March (39 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 26 May 2022. The data above may differ from the most recent published data.

Disclaimer

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