SUPPLY AND DEMAND

21 September 2023

SUMMARY OF REVISIONS

The tables below provide estimates of UK cereals supply and demand for the 2022/23 season (July – June). For the 2022/23 wheat and maize balance sheets, residuals have been identified and for the barley balance sheet, a deficit has been identified, after the full season official statistics have been taken into account, stated in Appendix 1.

The **main revisions** from May's estimates and comparisons with the 2021/22 season are summarised below.

END-SEASON 2022/23 UK CEREAL SUPPLY AND DEMAND

WHEAT

- **Trade** – At 1.346 Mt, the UK imported 648 Kt less wheat in 2022/23 than in 2021/22, but 146 Kt more than what was estimated in May. Full season wheat exports are estimated at 1.586 Mt, 64 Kt lower than May's estimate, but 1.074 Mt higher year on year.
- **Availability** – At 18.674 Mt, total availability in 2022/23 was slightly higher (89 Kt) than May's estimate and 1.280 Mt higher than in 2021/22. Despite imports being down on the year, a larger crop and greater opening stocks in 2022/23 led to a rise in available supplies.
- **Usage** – In 2022/23 total domestic consumption is estimated at 14.603 Mt. This is 108 Kt higher than May's forecast, but down 146 Kt year on year, driven largely by lacklustre animal feed demand.
- **Closing stocks** – Commercial end-season stocks are estimated at 1.953 Mt, 488 Kt lower than May's estimate, but 165 Kt more than year earlier levels.

BARLEY

- **Trade** – At 88 Kt, imports of barley in 2022/23 were 13 Kt higher than the previous estimate and marginally (-1 Kt) lower than levels recorded in 2021/22. In 2022/23, the UK is estimated to have exported 1.123 Mt of barley, down 27 Kt from May's forecast, but 359 Kt higher year on year.
- **Availability** – In 2022/23, availability of barley was estimated to be 8.437 Mt, 13 Kt higher than that estimated in May, and up 329 Kt on levels recorded in 2021/22, driven by larger production.
- **Usage** – In 2022/23, total domestic consumption of barley is estimated to be 58 Kt lower than May's estimate, at 6.137 Mt. Compared with 2021/22, barley demand is 189 Kt lower, driven by a fall in animal feed usage, outweighing a rise in H&I demand.
- **Closing stocks** – At 1.280 Mt, commercial end-season stocks are 201 Kt higher than May's estimate, and 316 Kt higher on the year.

OATS

- **Trade** – In 2022/23, oat imports totalled 18 Kt, 3Kt higher than the previous estimate, and relatively unchanged on the year. 2022/23 exports are estimated at 172 Kt, 12 Kt higher than May's forecast, and 49 Kt higher than 2021/22 levels. 2022/23 oat exports are the highest since 1995/96.
- **Availability** – In 2022/23, with a smaller crop, total availability of oats is estimated at 1.182 Mt, 106 Kt lower than in 2020/21, but slightly up (3 Kt) on May's estimate.
- **Usage** –Total domestic consumption of oats in 2022/23 totalled 870 Kt. This is 24 Kt lower than what was forecast in May, and 137 Kt less than 2021/22 levels. Lower usage was largely due to less animal feed demand, with H&I usage down just slightly on the year.
- **Closing stocks** – End-season stocks of oats are estimated at 140 Kt, 15 Kt higher than the previous estimate, but down 17 Kt year on year.

MAIZE

- **Trade** – The UK imported 2.123 Mt of maize in 2022/23, 97 Kt more than May's estimate, but down 84 Kt on the year.
- **Availability** – Total availability of maize for 2022/23 is estimated at 2.371 Mt, down 46 Kt from levels recorded in 2021/22, driven by lower imports.
- **Usage** – Full season domestic consumption of maize is estimated at 2.031 Mt. This is 97 Kt more than May's estimate and relatively unchanged (-4 Kt) on the year.
- **Closing stocks** – At 126 Kt, maize closing stocks are 122 Kt less than 2021/22 levels and 99 Kt lower than what was estimated in May.

Date published: 21/09/2023

Appendix I

UK CEREAL SUPPLY AND DEMAND ESTIMATES [(a)]

Estimates made in September 2023

July to June crop years — **Thousand tonnes**

		WHEAT								BARLEY							
		2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22	2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22
(1)	Opening stocks	1,847	1,911	2,438	1,413	1,846	1,788	-58	27%	1,137	1,091	1,357	1,058	964	964	-	-9%
(2)	Production	13,652	16,225	9,658	13,988	15,540	15,540	-	11%	7,361	8,048	8,117	6,961	7,385	7,385	-	6%
(3)	Imports	1,826	1,056	2,431	1,994	1,200	1,346	146	-32%	85	70	89	89	75	88	13	-1%
(4)	**Total availability**	**17,326**	**19,192**	**14,527**	**17,394**	**18,585**	**18,674**	**89**	**7%**	**8,583**	**9,210**	**9,562**	**8,108**	**8,424**	**8,437**	**13**	**4%**
(5)	Human and industrial consumption (b)	7,093	6,932	6,617	7,156	7,329	7,336	6	3%	1,833	1,778	1,722	1,885	1,986	1,980	-6	5%
(5a)	(of which home grown)	6,008	6,169	5,131	6,056	6,436	6,419	-17	6%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6)	Usage as animal feed (c)	7,167	7,560	6,115	7,242	6,807	6,909	101	-5%	4,262	4,144	5,312	4,228	3,995	3,943	-52	-7%
(6a)	(of which home grown)	6,482	7,060	5,365	6,542	6,407	6,489	81	-1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(6b)	(of which compounders)	4,083	4,320	3,654	4,043	3,750	3,774	23	-7%	1,457	1,399	1,890	1,544	1,330	1,344	14	-13%
(6c)	(of which integrated poultry units)	1,161	1,185	1,080	1,143	1,101	1,104	3	-3%	77	44	147	83	65	74	8	-11%
(7)	Seed (d)	265	215	278	280	280	280	-	-	191	223	185	178	178	178	-	-
(8)	Other	68	81	48	70	78	78	-	11%	37	40	41	35	37	37	-	6%
(9)	**Total domestic consumption**	**14,593**	**14,788**	**13,058**	**14,748**	**14,495**	**14,603**	**108**	**-1%**	**6,324**	**6,185**	**7,260**	**6,326**	**6,196**	**6,137**	**-58**	**-3%**
(10)	**Balance (4) - (9)**	**2,733**	**4,404**	**1,469**	**2,646**	**4,090**	**4,071**	**-19**	**54%**	**2,259**	**3,025**	**2,302**	**1,782**	**2,228**	**2,300**	**72**	**29%**
(11)	Exports (e)	546	1,205	209	511	1,650	1,586	-64	210%	1,162	1,790	1,290	764	1,150	1,123	-27	47%
(12)	Intervention stocks (e)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(13)	**Commercial end-season stocks (e)**	**1,854**	**2,438**	**1,413**	**1,788**	**2,440**	**1,953**	**-488**	**9%**	**1,109**	**1,357**	**1,058**	**964**	**1,078**	**1,280**	**201**	**33%**
(14)	(of which estimated operating stock requirement) (f)	1,540	1,550	1,500	1,500	1,500	1,500	-	-	784	790	780	800	800	800	-	-
(15)	(of which free stock) (g)	314	888	-87	288	940	453	-488	57%	325	567	278	164	278	480	201	193%
(16)	**Surplus available for either export or free stock (10)-(12)-(14)-(18)**	**860**	**2,093**		**799**	**2,590**	**2,038**	**-552**	**155%**	**1,498**	**2,356**	**1,568**	**928**	**1,428**	**1,603**	**175**	**73%**
(17)	**2020/21 operating stock deficit (13)-(14)****		**888**	**-87**													
(18)	**Residual (10)-(11)-(13)**		**761**	**-153**	**347**		**533**				**-121**	**-46**	**54**		**-103**		

		MAIZE								OATS							
		2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22	2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22
(1)	Opening stocks	253	313	222	211	248	248	-	18%	124	116	106	147	157	157	-	7%
(2)	Production	-	-	-	-	-	-	-	-	991	1,076	1,031	1,123	1,007	1,007	-	-10%
(3)	Imports	2,458	2,376	2,856	2,207	2,025	2,123	97	-4%	21	18	20	17	15	18	3	2%
(4)	**Total availability**	**2,710**	**2,689**	**3,078**	**2,417**	**2,274**	**2,371**	**98**	**-2%**	**1,136**	**1,210**	**1,157**	**1,287**	**1,179**	**1,182**	**3**	**-8%**
(5)	Human and industrial consumption	823	800	1,011	859	709	791	82	-8%	532	553	531	501	501	492	-9	-2%
(5a)	(of which home grown)	-	-	-	-	-	-	-	-	510	537	513	483	487	474	-13	-2%
(6)	Usage as animal feed	1,375	1,362	1,536	1,172	1,221	1,236	16	6%	358	346	394	476	364	349	-15	-27%
(6a)	(of which home grown)	-	-	-	-	-	-	-	-	358	346	394	476	364	349	-15	-27%
(7)	Seed	-	-	-	-	-	-	-	-	26	29	28	24	24	24	-	-
(8)	Other (h)	4	4	4	4	4	4	-	-	5	5	5	6	5	5	-	-17%
(9)	**Total domestic consumption**	**2,201**	**2,166**	**2,551**	**2,035**	**1,934**	**2,031**	**97**	**0%**	**921**	**933**	**958**	**1,007**	**894**	**870**	**-24**	**-14%**
(10)	**Balance (4) - (9)**	**509**	**523**	**527**	**383**	**340**	**340**	**-**	**-11%**	**215**	**276**	**199**	**280**	**285**	**312**	**27**	**11%**
(11)	Exportable surplus	153	135	138	134	115	131	16	-2%	70	120	41	123	160	172	12	40%
(12)	**Commercial end-season stocks**	**248**	**222**	**211**	**248**	**225**	**126**	**-99**	**-49%**	**133**	**106**	**147**	**157**	**125**	**140**	**15**	**-11%**
(13)	**Residual (10)-(11)-(12)**		**166**	**178**			**84**				**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)							
		2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22
(1)	Opening stocks	5	5	5	5	10	10	-	90%
(2)	Production	185	169	168	297	330	330	-	11%
(3)	Imports	4	3	1	11	10	4	-6	-60%
(4)	**Total availability**	**194**	**177**	**174**	**313**	**350**	**345**	**-6**	10%
(5+6)	H&I and animal feed	183	169	166	289	300	300	-	4%
(5a+6a)	(of which home grown)	178	166	165	279	290	290	-	4%
(7)	Seed	4	3	3	10	10	10	-	-
(8)	Other	-	-	-	-	-	-	-	-
(9)	**Total domestic consumption**	**187**	**172**	**169**	**299**	**310**	**310**	**-**	4%
(10)	**Balance (4) - (9)**	**7**	**5**	**5**	**14**	**40**	**35**	**-6**	144%
(11)	Exportable surplus	1	-	-	4	30	29	-1	572%
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	**Commercial end-season stocks**	**6**	**5**	**5**	**10**	**10**	**6**	**-4**	-41%

		TOTAL CEREALS							
		2017/18 2021/22 average	2019/20 estimate	2020/21 estimate	2021/22 estimate	2022/23 May-23	2022/23 Sep-23	Absolute change May-23	% change on 21/22
(1)	Opening stocks	3,366	3,437	4,128	2,834	3,224	3,167	-57	12%
(2)	Production	22,189	25,518	18,974	22,369	24,262	24,262	-	8%
(3)	Imports	4,395	3,523	5,397	4,318	3,325	3,579	254	-17%
(4)	**Total availability**	**29,949**	**32,478**	**28,499**	**29,521**	**30,812**	**31,009**	**197**	**5%**
(5)	H&I (wheat, barley, maize, oats) (h)	10,281	10,063	9,881	10,402	10,525	10,598	73	2%
(6)	Animal feed (wheat, barley, maize oats) (h)	13,162	13,412	13,357	13,117	12,387	12,437	50	-5%
(5a +6a)	Other cereals (H&I and animal feed)	183	169	166	289	300	300	-	4%
(7)	Seed	487	470	494	492	492	492	-	-
(8)	Other	114	130	98	115	124	124	-	8%
(9)	**Total domestic consumption**	**24,226**	**24,244**	**23,996**	**24,415**	**23,827**	**23,951**	**123**	**-2%**
(10)	**Balance (4) - (9)**	**5,724**	**8,234**	**4,503**	**5,105**	**6,984**	**7,058**	**74**	**38%**
(11)	Exports	1,932	3,249	1,679	1,537	3,105	3,041	-64	98%
(12)	Intervention stocks	-	-	-	-	-	-	-	-
(13)	**Commercial end-season stocks**	**3,350**	**4,128**	**2,834**	**3,167**	**3,879**	**3,504**	**-375**	**11%**
(14)	Estimated operating stock requirement (wheat & barley only)	2,324	2,340	2,280	2,300	2,300	2,300	-	-
(15)	Free stock for wheat and barley***	639	1,455	191	452	1,219	933	-286	106%
(16)	**Surplus available for either export or free stock (10)-(12)-(14)-(18)**	**2,958**	**5,038**	**2,233**	**2,404**	**4,684**	**4,245**	**-439**	**77%**
(17)	**Residual (10)-(11)-(13)**	**441**	**856**	**-10**	**401**	**-**	**513**		

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 operating stock deficit

Appendix II

CUMULATIVE MONTHLY STATISTICS

Usage of cereals by processors, external trade and stocks

Situation as at end of June 2023 | Thousand tonnes

		2017/18 to 2021/22 average	2017/18 52 weeks	2018/19 52 weeks	2019/20 52 weeks	2020/21 52 weeks	2021/22 52 weeks	2022/23 52 weeks	% Change 2022/23 on 2021/22	Actual Change 2022/23 on 2021/22
WHEAT										
Usage	**Flour millers** [1]	**6,157**	**6,845**	**6,085**	**6,050**	**5,649**	**6,004**	**6,128**	**2%**	**124**
	of which home-grown	5,075	5,817	5,034	5,287	4,163	4,904	5,211	**6%**	**307**
	of which imported	1,082	1,028	1,051	763	1,486	1,100	917	**-17%**	**-183**
	Brewers, maltsters and distillers	**753**	**794**	**730**	**670**	**818**	**1,001**	**1,065**	**6%**	**64**
	Animal Feed Processors [2]	**4,726**	**4,906**	**4,800**	**4,960**	**4,240**	**4,629**	**4,347**	**-6%**	**-282**
	of which feed compounders	3,561	3,665	3,644	3,777	3,159	3,486	3,243	**-7%**	**-243**
	of which intergrated poultry units	1,165	1,241	1,155	1,184	1,080	1,144	1,104	**-3%**	**-39**
Imports	**From July** [3]	**1,785**	**1,793**	**1,858**	**1,056**	**2,431**	**1,994**	**1,346**	**-32%**	**-648**
Exports	**From July** [3]	**555**	**448**	**358**	**1,205**	**209**	**511**	**1,586**	**210%**	**1,074**
BARLEY										
Usage	**Brewers, maltsters and distillers**	**1,808**	**1,867**	**1,889**	**1,766**	**1,710**	**1,872**	**1,967**	**5%**	**94**
	Animal Feed Processors [2]	**1,339**	**1,185**	**1,057**	**1,293**	**1,823**	**1,448**	**1,233**	**-15%**	**-215**
	of which feed compounders	1,264	1,126	1,007	1,249	1,676	1,365	1,165	**-15%**	**-200**
	of which intergrated poultry units	75	59	50	44	147	83	68	**-18%**	**-15**
Imports	**From July** [3]	**84**	**105**	**70**	**70**	**89**	**89**	**88**	**-1%**	**-1**
Exports	**From July** [3]	**1,261**	**1,101**	**863**	**1,790**	**1,290**	**764**	**1,123**	**47%**	**359**
MAIZE										
Usage	**Human and Industrial** [4]	**	**	**	**	**	**	**	*	*
	Animal Feed Processors [2]	**512**	**347**	**653**	**435**	**613**	**	**	*	*
	of which feed compounders	456	305	595	371	553	373	378	**1%**	**5**
	of which intergrated poultry units	56	42	58	64	60	**	**	*	*
Imports	**From July** [3]	**2,520**	**2,024**	**2,825**	**2,376**	**2,856**	**2,207**	**2,123**	**-4%**	**-84**
Exports	**From July** [3]	**158**	**171**	**188**	**135**	**138**	**134**	**131**	**-2%**	**-3**
OATS										
Usage	**Human and Industrial** [5]	**539**	**537**	**536**	**553**	**531**	**501**	**492**	**-2%**	**-10**
	Animal Feed Processors [2]	**68**	**58**	**66**	**64**	**82**	**125**	**72**	**-42%**	**-53**
Imports	**From July** [3]	**22**	**19**	**32**	**18**	**20**	**17**	**18**	**2%**	**0**
Exports	**From July** [3]	**57**	**28**	**37**	**120**	**41**	**123**	**172**	**40%**	**49**

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-June (52 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 21 September 2023. The data above may differ from the most recent published data.

Disclaimer