

19/09/2016

Early indications of high average protein levels for GB wheat

The average protein level for GB wheat harvested in 2016 is at the highest level for 10 years, according to the provisional results of AHDB Cereals & Oilseeds' Cereal Quality Survey 2016. Meanwhile, the provisional results for barley indicate a smaller specific weight and grain size than in previous years.

Wheat

For the 10,166 wheat samples analysed by 31 August, the provisional average protein level was 12.6%. However, at this early stage the results are based predominantly on nabim Group 1 & 2 varieties and are geographically biased towards Eastern and South Eastern England. As with previous years, this bias means the results are liable to change as the rest of the GB crop is harvested and analysed.

James Webster, AHDB Cereals and Oilseeds Analyst added: "Compared with previous first provisional results as at 31 August, the current provisional protein values for wheat are the highest they have been at this stage for the past four years, and nearly 1% higher than the previous three-year average."

Another measure of the quality of the grain, the Hagberg Falling Number (HFN), has provisionally seen an increase on last year, at 319s in 2016 compared with 312s at this stage last year.

Within the wheat samples analysed, the provisional results represent the lowest specific weights for four years, with an overall average of 77.2Kg/hl. This year is still well above the levels witnessed at the provisional stage in 2012 (71.9Kg/hl).

Skyfall is most notable within the nabim Group 1 varieties, which has once again achieved a specific weight and HFN above the Group 1 average, plus a protein level only 0.1% below the average. Skyfall represents a large proportion (46%) of the Group 1 sample and also accounts for 23% of the total wheat data analysed at this stage.

As with previous years, the early provisional data has a regional bias towards the East and South East, representing 53% and 25% respectively of the total sample. It is also worth noting that nabim Group 1 varieties account 51% of the total sample. As such the current results are biased towards milling wheat varieties and are not a fair representation of the GB wheat crop as a whole. As further data and releases are published the regional and varietal biases will be addressed.

GB wheat to 31/08/15	2012	2013	2014	2015	Provisional 2016	Three-year average
Specific weight, kg/hl	69.6 (71.9)	77.0 (77.8)	77.2 (78.7)	78.6 (79.8)	77.2	77.6
Hagberg falling number, s	237 (267)	314 (334)	308 (331)	288 (312)	319	303
Protein content, %	12.5 (12.7)	12.2 (12.4)	11.2 (11.7)	11.9 (12.1)	12.6	11.8

- Results in brackets are the first provisional estimates for that year.
- 2016 provisional estimates are based on 10,166 wheat samples¹
- For historic data visit <http://cereals.ahdb.org.uk/markets/survey-results.aspx>

¹ In order to ensure a representative sample covering regions, varieties and data providers is given, some samples have been removed by random selection.

- The 2016 average **Specific weight**, at 77.2 kg/hl, is the lowest provisional result since 2012. However, it is in line with the 2014 final result and marginally behind the three year average final result. The range for 2016 is 72.0-82.0 kg/hl.
- The average **Hagburg Falling Number** for 2016, at 319s, is above both the provisional and final results for 2015 and ahead of the three year average. The range for 2016 is 219s-413s.
- The provisional average **protein content** at 12.6%, is highest provisional result since 2012. The range for 2016 is 10.2-15%

Barley

For barley, the provisional results indicate a smaller specific weight and grain size than seen in last year's provisional results although there is a noticeable divide between winter and spring barley. Nitrogen content is above last year's level.

The 11,502 barley samples analysed have revealed an average specific weight of 63.6Kg/hl across Great Britain. The provisional screening data indicates a much smaller grain size than last year, with an average of 88.5% being retained by a 2.5mm sieve. It is worth noting that there is large difference between winter and spring barley samples with retained levels of 85% and 92% respectively. This data is in line with the [ADAS harvest progress reports](#) and AHDB Recommended Lists trials, which have also identified high screenings in some winter barley samples this year.

Finally, the provisional sample indicates an increase in the nitrogen levels on the same stage last year. The provisional nitrogen content for the 2016 GB barley crop is 1.61%, versus 1.58% at the same point last year.

As with the wheat sample, the provisional barley results also demonstrate a regional bias towards the East and South East, representing 56% of the total sample. The results are subject to change as further samples from other regions are collected and analysed.

GB barley to 01/09/15	2012	2013	2014	2015	Provisional 2016	Three-year average
Specific weight, kg/hl	62.9 (64.0)	67.5 (67.9)	66.3 (66.9)	66.3 (67.2)	63.6	66.7
Nitrogen content, %	1.60 (1.66)	1.68 (1.66)	1.53 (1.55)	1.52 (1.58)	1.61	1.6
Grain through 2.25mm sieve, %	3.6 (3.6)	1.7 (2.0)	1.4 (2.2)	1.5 (1.7)	4.4	1.5
Grain retained by 2.5mm sieve, %	89.8 (88.9)	94.4 (92.7)	96.1 (93.4)	95.4 (93.8)	88.5	95.3

- Results in brackets are the first provisional estimates for that year.
- 2016 provisional estimates are based on 11,502 barley samples
- For historic data visit <http://cereals.ahdb.org.uk/markets/survey-results.aspx>

- For 2016, the average specific weight for barley is 63.6 kg/hl. This is lower than the provisional result from 2012. The range for 2016 is 56.2-70.4 kg/hl.
- The average nitrogen content for 2016, at 1.61% is ahead of the provisional and final results of from both 2014 and 2015. The range for 2016 is 1.24-2.01%.
- For winter and spring barley the average nitrogen content is 1.59% and 1.61% respectively.
- Provisional screening results indicate a smaller grain size compared to the three year average, and below the level seen at this stage in 2012. The proportion of grain which passed through a 2.25mm sieve was



4.4% (range: 0.1-17.2%), whilst the percentage that was retained by a 2.5mm sieve was 88.5% (range: 58.4-99.6%)

- There is a significant divide in grain size between winter and spring varieties, with an average of 85% of winter barley and 92% of spring barley being retained by a 2.5mm sieve.

The first set of survey results will be updated in early October and the final 2016 Cereal Quality Survey results will be published in late October/early November.

Further details on the AHDB Cereals and Oilseeds Cereal Quality Survey can be found at <http://cereals.ahdb.org.uk/markets/survey-result.aspx> .

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AHDB Cereal Quality Survey 2016 Wheat Analysis by Variety

Provisional as at 31/08/16

Mean Values

	nabim group	Number of samples	Moisture Content		Specific Weight		Hagberg F-Number		Protein Content	
			%	sd*	Kg/hl	sd*	Seconds	sd*	% d.m	sd*
Skyfall	1	2,362	14.2	0.76	78.4	1.80	334	38.75	13.1	0.82
Crusoe	1	1,718	14.2	0.73	77.7	1.82	306	39.85	13.4	0.77
Gallant	1	615	14.1	0.79	76.8	1.91	342	35.76	13.0	0.95
All Grp 1	1	5,188	14.2	0.75	77.9	1.93	325	41.56	13.2	0.83
Cordiale	2	1,064	14.1	0.78	78.1	1.74	344	32.92	12.9	0.80
KWS-Lili	2	282	14.4	0.74	75.6	1.78	332	32.21	11.8	0.82
Panorama	2	97	14.3	0.75	75.1	1.41	293	40.73	12.0	1.05
All Grp 2	2	1,451	14.2	0.77	77.5	2.09	338	36.48	12.7	0.94
Claire	3	303	14.6	0.72	75.6	1.85	299	32.04	11.9	0.69
Zulu	3	269	14.2	0.75	75.4	1.67	291	27.83	11.9	0.99
Scout	3	134	14.4	0.71	76.6	1.97	289	29.21	12.0	0.75
All Grp 3	3	782	14.4	0.74	75.8	1.88	295	30.17	11.9	0.82
All Grp 4	4	2,305	14.2	0.76	76.3	1.92	303	42.51	11.5	0.79
ukp		4,072	14.2	0.76	77.5	1.95	322	41.26	13.0	0.92
uks		1,348	14.4	0.78	75.8	1.82	291	31.53	11.8	0.83

* Standard Deviation

For more, contact cereals.mi@ahdb.org.uk

All averages are simple arithmetic means

AHDB Cereal Quality Survey 2016 Wheat Analysis by Region

Provisional as at 31/08/16

Mean Values

	Number of Samples	Moisture Content		Specific Weight		Hagberg F-Number		Protein Content	
		%	sd*	Kg/hl	sd*	Seconds	sd*	% d.m	sd*
Eastern	5,345	14.0	0.75	77.0	2.04	320	42.15	12.6	1.14
Midlands	998	14.3	0.69	78.1	2.00	328	39.36	12.6	1.09
Northern	254	14.7	0.76	78.8	2.05	316	38.86	12.1	1.11
S. East	2,541	14.5	0.74	77.0	2.17	314	42.88	12.7	1.00
S. West	1,016	14.3	0.74	77.6	1.99	319	43.80	12.7	1.01
GB	10,166	14.2	0.77	77.2	2.11	319	42.35	12.6	1.10

* Standard Deviation

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AHDB Cereal Quality Survey 2016 Barley Analysis by Variety

Provisional as at 01/09/2016

Mean Values

	Number of Samples	Moisture Content		Specific Weight		Nitrogen Content		Screening Values % through 2.25mm		Screening Values % retained 2.5mm	
		%	*sd	Kg/hl	*sd	% d.m.	*sd	%	*sd	%	*sd
Winter	5,456	14.3	1.64	63.1	3.24	1.59	0.17	5.5	4.01	85.0	10.41
SY-Venture	1,555	13.9	1.55	62.6	2.83	1.54	0.14	7.4	4.19	81.1	11.52
Pearl	803	16.0	1.20	66.2	2.01	1.63	0.16	2.4	1.19	92.8	3.64
Cassata	435	15.0	1.42	64.2	2.60	1.57	0.14	2.5	1.70	92.0	4.98
Spring	5,352	14.6	1.34	64.4	2.38	1.61	0.16	2.9	2.14	92.0	4.99
Concerto	1,306	15.5	1.66	63.7	2.31	1.47	0.11	3.0	2.11	92.8	4.75
Propino	2,990	14.2	1.03	64.8	2.31	1.67	0.14	2.4	1.76	92.8	4.17

* Standard Deviation

For more, contact cereals.mi@ahdb.org.uk

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AHDB Cereal Quality Survey 2016 Barley Analysis by Region

Provisional as at 01/09/2016

Mean Values

	Number of Samples	Moisture Content		Specific Weight		Nitrogen Content		Screening Values % through 2.25mm		Screening Values % retained 2.5mm	
		%	sd*	Kg/hl	sd*	% d.m.	sd*	%	sd*	%	sd*
Eastern	5,083	13.7	1.17	63.0	3.00	1.61	0.18	5.0	3.78	87.2	9.31
Midlands	492	14.1	1.20	62.9	3.25	1.64	0.17	6.6	4.56	81.6	12.35
Northern	1,156	15.3	1.31	64.2	2.97	1.60	0.16	4.3	3.36	86.7	9.02
S. East	1,361	14.1	1.09	63.7	2.85	1.68	0.14	4.6	3.86	88.6	9.08
S. West	1,350	14.3	1.19	64.0	2.90	1.66	0.14	4.1	3.40	89.6	8.26
Scot	2,054	16.3	1.24	64.7	2.49	1.52	0.14	2.6	1.62	93.3	3.76
GB	11,502	14.4	1.51	63.6	2.96	1.61	0.17	4.4	3.56	88.5	8.95

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