

10/10/2016

High proportion of wheat meeting high quality bread milling specifications

The proportion of nabim Group 1 varieties hitting a typical high quality bread wheat specification is the highest for 10 years, according to the second provisional results of the AHDB Cereals & Oilseeds Cereal Quality Survey. A massive 46% of the samples so far have hit the spec for this harvest.

Wheat

James Webster, AHDB Cereals & Oilseeds Analyst said: “With more results now in, covering a wider area of the UK, we are beginning to get a clearer picture of how the quality of this year’s harvest is shaping up.”

15,536 wheat samples in total have been analysed by 24 September 2016.

Of particular note in this year’s second provisional results is the high proportion of nabim Group 1 samples meeting a typical high quality bread wheat specification as shown in the Venn diagrams below. 46% of the total samples analysed so far meet or exceed the required quality standards, which are a minimum specific weight of 76 kg/hl, Hagberg Falling Number (HFN) greater than or equal to 250s and a minimum protein content of 13%.

Last year, 31% of all the samples analysed met or exceeded the requirements for high-quality bread wheat due to lower average protein levels.

Looking at all of the samples, the revised provisional average protein level for 2016 was 12.5%. The protein level is only marginally lower than the level seen in the first release (12.6%) but still remains up on the 2015 results and three year average.

The average HFN for all samples analysed, at 309s, has decreased compared with the level seen in the first provisional results (319s). Even so, it remains above the final results from both 2014 and 2015. In the wider context, this year’s HFN is one of the highest levels on record, with previously only four harvests since 1977 exceeding it.

Another measure of the quality of wheat, the specific weight, remains below the three year average and has also decreased compared to the level seen in the first provisional release. The overall average specific weight for 2016 is 76.7 kg/hl. The lower specific weight likely reflects the increased proportion of nabim Group 4 samples analysed, compared to the first release. Group 4 varieties account for 28% of the current sample, compared with 23% in the first release.

Mr Webster added: “The high proportion of samples meeting milling standards this year is likely to mean a greater proportion of the domestic crop being used in the UK flour milling industry. However, with a lower specific weight than in the previous two years, extraction rates are likely to be lower, which could also influence the amount of wheat required.”

GB wheat to 24/09/16	2012	2013	2014	2015	Provisional 2016	Three-year average
Specific weight, kg/hl	69.6 (70.7)	77.0 (77.1)	77.2 (77.3)	78.6 (78.8)	76.7	77.6
Hagberg falling number, s	237 (249)	314 (319)	308 (311)	288 (293)	309	303
Protein content, %	12.5 (12.5)	12.2 (12.3)	11.2 (11.3)	11.9 (11.9)	12.5	11.8

- Results in brackets are the second provisional estimates for that year.
- 2016 provisional estimates are based on 15,563 wheat samples¹
- For historic data visit <http://cereals.ahdb.org.uk/markets/survey-results.aspx>

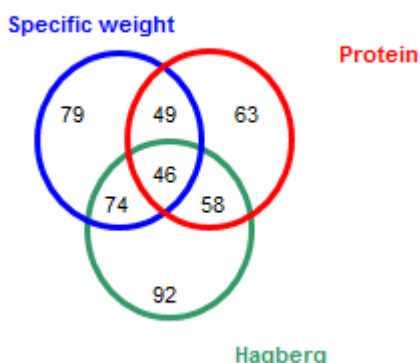
- The 2016 average **Specific weight**, at 76.7 kg/hl, is provisionally the lowest result since 2012. However, it is still high compared with 2012 levels. The range for 2016 is 70.8-82.0 kg/hl.
- The average **Hagberg Falling Number** for 2016, at 309s, is above both the provisional and final results for 2015 and ahead of the three year average. The range for 2016 is 196s-413s.
- The provisional average **protein content** at 12.5%, is provisionally the highest result since 2012. The range for 2016 is 9.97-14.92%

Venn Diagrams

The Venn diagrams below show the proportion of Group 1 samples meeting typical milling wheat specification are higher than the final results from 2015. Moreover, the proportion of Group 1 and 2 samples meeting the requirements for medium quality bread wheat are also up year on year.

2016 Provisional results (GB)

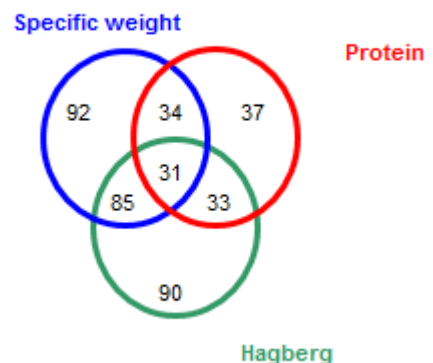
High Quality Bread Wheat 2016 (Group 1, 76.0 kg/hl Spec Wgt/250 Hagberg/13.0% Protein)



Sample Size: 5159

2015 Final results (GB)

High Quality Bread Wheat 2015 (Group 1, 76.0 kg/hl Spec Wgt/250 Hagberg/13.0% Protein)

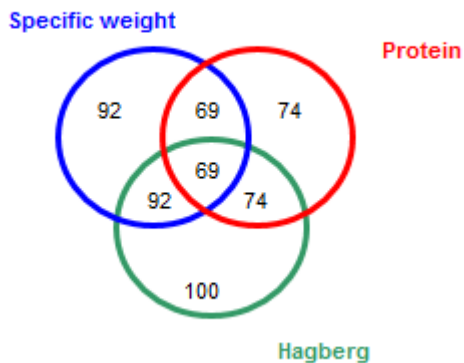


Sample Size: 21966

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

2016 Provisional results (GB)

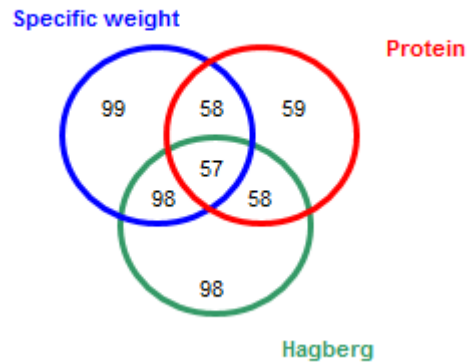
Medium Quality Bread Wheat 2016 (Groups 1 & 2, 74.0 kg/hl Spec Wgt/180 Hagberg/12.5% Protein)



Sample Size: 6333

2015 Final results (GB)

Medium Quality Bread Wheat 2015 (Groups 1 & 2, 74.0 kg/hl Spec Wgt/180 Hagberg/12.5% Protein)



Sample Size: 28061

Barley

For barley, the second provisional results again indicate a smaller specific weight and grain size than the three year average, although it has increased on the previous release.

19,908 barley samples in total have been analysed by 24 September 2016.

As with the previous release the percentage of barley retained by a 2.5mm sieve at 91.9% is behind the three year average of 95.3%. It is worth noting that there was significant variance in the samples analysed, with some retained levels as low as 75.3%. The divide is still apparent between winter and spring results, with an average retained level of 89.4% in winter barley samples versus 92.6% in spring barley samples.

Another parameter of the quality of barley, the nitrogen level, has also seen a dip compared to the previous provisional results with an average of 1.58%. The drop in the nitrogen levels is likely attributed to the increase in samples from Scotland and the North of England, where a greater amount of grain typically goes into the malting industry.

Mr Webster commented: "With the addition of more samples from Scotland and Northern England the second provisional release highlights the regional differences in nitrogen content. The average nitrogen content in Scottish barley samples, at 1.50%, is noticeably lower than the average level seen in England and Wales at 1.64%. That said, both are still above 2015 final levels.

"The difference in the nitrogen levels is reflective of the end use of grains from Scotland compared with those in England. A large proportion of Scottish grain goes into distilling which requires a lower nitrogen content than that required for brewing."

As harvest has progressed, more samples have come in from other regions of GB, with Scotland and the North of England now accounting for 50% of the sample data.

GB barley to 24/09/16	2012	2013	2014	2015	Provisional 2016	Three-year average
Specific weight, kg/hl	62.9 (63.2)	67.5 (67.8)	66.3 (66.4)	66.3 (66.5)	63.9	66.7
Nitrogen content, %	1.60 (1.60)	1.68 (1.68)	1.53 (1.53)	1.52 (1.53)	1.58	1.58
Grain through 2.25mm sieve, %	3.6 (3.7)	1.7 (1.8)	1.4 (1.6)	1.5 (1.5)	3.0	1.5
Grain retained by 2.5mm sieve, %	89.8 (89.4)	94.4 (94.9)	96.1 (95.8)	95.4 (95.4)	91.9	95.3

- Results in brackets are the second provisional estimates for that year.
- 2016 provisional estimates are based on 19,908 barley samples¹
- For historic data visit <http://cereals.ahdb.org.uk/markets/survey-results.aspx>

- For the 2016 second provisional release, the average specific weight for barley is 63.9 kg/hl. This is the lowest second provisional result since 2012. The range for 2016 is 58.1-69.4 kg/hl.
- The average nitrogen content for the 2016 provisional results, at 1.58% is ahead of the provisional and final results from both 2014 and 2015 and equal to the three year average. The range for 2016 is 1.23-1.95%.
- Provisional screening results indicate a smaller grain size compared to the three year average. The proportion of grain which passed through a 2.25mm sieve was 3% (range: 0.1-8.9%), while the percentage that was retained by a 2.5mm sieve was 91.9% (range: 75.3-100%)
- There is a noticeable divide in grain size between winter and spring varieties, with an average of 89.4% of winter barley and 92.6% of spring barley being retained by a 2.5mm sieve.

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



AHDB Cereal Quality Survey 2016 Wheat Analysis by Variety

Provisional as at 24/09/16

	nabim group	Number of samples	Moisture Content		Specific Weight		Hagberg F-Number		Protein Content	
			%	sd*	Kg/hl	sd*	Seconds	sd*	% d.m	sd*
			Mean Values							
Skyfall	1	2,762	14.2	0.83	78.2	1.97	327	42.66	13.1	0.85
Crusoe	1	2,412	14.3	0.83	77.4	2.01	300	41.68	13.4	0.78
Gallant	1	653	14.1	0.84	76.9	2.04	342	41.81	13.1	1.00
All Grp 1	1	6,795	14.3	0.87	77.5	2.16	317	45.28	13.2	0.86
Cordiale	2	1,115	14.2	0.79	78.1	1.96	342	40.46	12.9	0.80
KWS-Lili	2	505	14.5	0.94	75.3	1.99	329	38.81	11.9	0.83
Panorama	2	150	14.3	0.81	75.0	1.87	296	42.45	12.4	0.99
All Grp 2	2	1,805	14.3	0.86	77.0	2.40	333	42.79	12.6	0.95
Claire	3	349	14.4	0.77	75.5	1.96	297	32.37	11.8	0.75
Zulu	3	302	14.3	0.91	75.4	1.77	281	36.81	11.7	0.99
Scout	3	183	14.5	0.87	76.0	2.27	291	36.74	12.1	0.88
All Grp 3	3	908	14.4	0.84	75.6	1.98	291	35.14	11.8	0.88
All Grp 4	4	4,401	14.4	0.90	75.9	2.10	293	46.31	11.5	0.81
ukp		5,227	14.3	0.84	77.2	2.17	316	45.04	13.0	0.94
uks		2,139	14.5	0.90	75.6	2.00	282	36.82	11.7	0.87

* 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 24/09/16

	Number of Samples	Moisture Content		Specific Weight		Hagberg F-Number		Protein Content	
		%	sd*	Kg/hl	sd*	Seconds	sd*	% d.m	sd*
		Mean Values							
Eastern	6,649	14.2	0.87	76.6	2.20	307	48.35	12.4	1.17
Midlands	1,966	14.3	0.83	77.3	2.32	314	45.81	12.4	1.15
Northern	1,077	14.8	1.05	77.3	2.51	307	49.48	12.2	1.21
S. East	3,399	14.4	0.83	76.7	2.24	311	44.68	12.7	1.09
S. West	1,868	14.5	0.85	76.6	2.46	307	46.46	12.6	1.08
GB	15,536	14.3	0.89	76.7	2.32	309	47.07	12.5	1.15

* Standard Deviation

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AHDB Cereal Quality Survey 2016 Barley Analysis by Variety

Provisional as at 24/09/2016

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	4,837	14.8	1.77	63.8	2.79	1.57	0.16	3.7	2.03	89.4	5.84
SY-Venture	882	14.2	1.67	63.2	2.58	1.53	0.13	4.6	2.14	89.3	6.52
Pearl	831	16.0	1.22	66.0	1.80	1.62	0.15	2.4	1.17	92.8	3.48
Cassata	467	15.2	1.37	64.3	2.36	1.57	0.14	2.3	1.31	92.6	3.95
Spring	14,043	15.5	1.86	64.1	2.29	1.57	0.16	2.7	1.65	92.6	4.16
Concerto	5,853	16.8	1.69	63.3	2.11	1.48	0.11	2.7	1.61	93.2	3.99
Propino	5,232	14.4	1.18	64.7	2.23	1.68	0.13	2.2	1.38	93.2	3.57

* Standard Deviation

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AHDB Cereal Quality Survey 2016 Barley Analysis by Region

Provisional as at 24/09/2016

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	4,851	13.9	1.14	63.5	2.60	1.61	0.17	3.5	2.04	90.0	5.65
Midlands	801	14.5	1.15	63.9	2.72	1.67	0.15	3.3	2.21	90.6	6.07
Northern	1,760	15.7	1.39	64.6	2.36	1.59	0.17	2.7	1.76	91.6	4.98
S. East	2,193	14.3	1.07	64.2	2.38	1.69	0.13	2.8	1.88	92.0	4.37
S. West	2,176	14.3	1.14	64.5	2.39	1.66	0.13	2.7	1.78	92.3	4.18
Scot	8,114	16.9	1.56	63.7	2.29	1.50	0.12	2.8	1.57	92.8	4.08
GB	19,908	15.3	1.88	63.9	2.46	1.58	0.16	3.0	1.82	91.9	4.80

* Standard Deviation

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