

Overview – Week 12- WE 25 September 2018

This Harvest Report has been prepared by ADAS for AHDB Cereals & Oilseeds, using data supplied by regional reporters (mostly independent agronomists). The approach used is consistent with previous years, allowing comparison of data and provides a snapshot of harvest progress throughout the harvest season. It should be noted that national average cereal yields are adjusted to a moisture content of 14.5%. However, the high temperatures and lack of rainfall during the main harvest period have meant that in reality most early-harvested grain was being harvested with lower moisture levels (12-13%), meaning that actual yields are slightly lower than reported. The regional ranges presented are based on the combine yields at the time of harvest.

Harvest 2018 progressed rapidly for most winter crops, with high temperatures and consistently dry weather facilitating an easy and relatively uneventful harvest period. Lack of dew during much of July and August meant that long harvest days were possible and many farms completed the harvest of winter crops well ahead of normal. However, harvest of spring crops has proven to be a more drawn out affair. These crops were planted over an extended period, with the early planted Feb/March crops ready for harvest in line with typical timings and being completed along with winter wheat. However, the arrival of a period of cold and then wet weather in the early spring delayed drilling of may spring crops with some only drilled at the end of April or early May, making them later ripening. The later ripening coincided with more unsettled weather, resulting in a drawn out end to harvest 2018. By WE 28/08, 91% of the GB cereal and oilseed area had been cut. However, more unsettled weather from the end of August onwards slowed progress across the country, and as of WE 25/09 some small areas of spring cereals are still left to cut in both Scotland and Wales. Overall though, 98% of the GB cereal and oilseed area has now been harvested. Harvest progress was typically well ahead of harvest in any of the last 5 years.

Grain drying was not required for much of the early harvested cereals, however, those crops harvested in late August and into September have required modest amounts of drying to ensure that storage moistures are achieved.

Yields have held up better than expected given the prolonged hot dry period that covered much of grain fill, although they are disappointing compared to those achieved in recent years. Light land crops - especially spring varieties - were the

worst affected by the dry conditions, with soil moisture levels being insufficient to adequately support the crops through the duration of the dry spell. For many crops on the heavier clay soils, heavy rain in April and May meant that soils had good reserves of water and were able to sustain crops throughout much of the grain fill period.

Weather

Harvest 2018 was characterised by sustained high temperatures and minimal rainfall during the main harvest period in most regions. During July, the majority of weather stations in the southern and eastern regions recorded under 10mm of rainfall and across GB. This was the driest start to harvest in 80 years, with mean weekly rainfall of 0mm in several weeks.

Air temperatures were consistently 25°C or higher and occasionally over 30°C throughout July and early August, with night time temperatures also remaining in the high teens or low twenties. From mid-August onwards, conditions became more unsettled, with lower temperatures and more frequent rainfall. This often fell as heavy showers – rather than persistent light rain - with sufficient drying periods between, to allow harvest of ripe crops to progress. In some regions this rainfall was heavy, with 34mm falling on 26/08 in the South East.

The majority of the remaining crops left to harvest in September were in Scotland and Wales, with just occasional spring crops left to harvest in the English regions. Conditions in parts of Scotland and Wales were more challenging than in much of England. Here they have seen above average rainfall during September, which has disrupted harvest in the last remaining fields.

Winter wheat

Harvest 99% complete - GB winter wheat harvest progress was rapid during the first half of harvest due to the warm dry conditions. Harvest was complete in the South East and South West by WE 21/08 and by the start of September (WE 04/09) harvest was complete in all regions apart from Wales. However, as of WE 25/09, a few isolated areas in Wales are still left to cut, due to frequent showers making combining impossible.

Overall, winter wheat progress continued to be ahead of the last five harvests, throughout the harvest period.

Yields

The national average estimated wheat yield for 2018 is 7.8-7.9t/ha (adjusted to 14.5% moisture), which is below the GB 5 year average yield for wheat (8.2t/ha).

Due to the impact of soil type and localised rainfall, yields remained highly variable throughout harvest, with ranges of up to 7t/ha between fields on the same farm. Crops grown on heavier soil types benefited from more consistent access to water, as these soils are able to hold more water than light soils. This means the crop is able to access water for a greater period of time during a period of prolonged dry weather. Yields ranged from 2.5t/ha on very light land to 8.2t/ha on the heavier soils, rising to 11.5t/ha or higher in parts.

Quality

The [AHDB Provisional Cereal Quality Survey](#) has now been published for grain processed up to 20 August. The data from this survey currently only includes the English regions and is broadly in line with the results that have been presented throughout the harvest period. Across the English regions Hagberg falling numbers have averaged 322 seconds (but ranging from 215 to 430 seconds), with group 1 milling wheats averaging 340 seconds. The specific weights have averaged 78.5 kg/hl, with group 1s averaging 79.3 kg/hl. Protein content averaged 12.6%, with group 1s averaging 13.1%. The average moisture content of samples received was 12.4%.

Most wheat had been harvested by the time of this assessment, however, there were still some late harvested crops remaining in parts of Scotland and Wales. Where these crops were subjected to weather induced delays, post maturity quality issues have started to develop. These included reports of sooty moulds developing in ripe crops in Scotland where harvest was delayed due to wet weather, as well as incidences of sprouting in very late wheat crops.

- Specific weight – The specific weights reported by our network are slightly lower than those captured in the survey, but do include some lower specific weights from Scotland. The average to end of September is 76kg/hl (typical range 73-78kg/hl). Specific weights are variable with light land crops dropping to 70kg/hl, whilst some crops on heavier land have had specific weights up to 80kg/hl.
- Hagberg Falling Number – as with the quality survey, Hagberg falling numbers are reported to have held up well, with the majority well over 300 seconds. A minority of late harvested crops have lower HFNs, but these are likely to be heading to a feed market, so are less of an issue.
- Grain protein – variable. Typically 12.4-13.6%, although on occasional crops there were reports of up to 15.0%.
- Moisture – initially as low as 12-13% but rose to 15% in the latter half of harvest. Initially almost no drying was required, but from the start of August onwards, showery conditions meant that almost all crops harvested later in the harvest period required drying.

Spring wheat

Harvest 99% complete - Harvest of spring wheat started in earnest during WE 07/08, with the warm and dry conditions allowing rapid progress and by WE 14/08, 17% of the GB crop area had been harvested. Rapid progress continued during August, and as of WE 04/09 84% of the GB crop area had been cut. However, frequent rainfall during September, slowed the end of harvest and as of WE 25/09, small areas of late-sown spring wheat are still left to cut in the North West, Wales and Scotland. Overall, GB spring wheat harvest is now 99% complete.

The estimated 2018 GB yield is 5.0-6.0t/ha, although there were reports of yields of up to 7.5t/ha on fields with very moisture retentive soil, whilst light land yields dropped to below 3 tonnes on occasion.

Initial reports show that spring wheat quality continues to meet milling specification and protein levels are adequate or slightly elevated. Generally, quality is very dependent on soil type and sowing date.

Winter barley

Harvest complete - Harvest of winter barley was completed in week 6 (WE 14/08), which is just ahead of the 2014 harvest and in line with 2017. In the later harvests of 2015 and 2016, winter barley harvest was not complete until WE 28/08.

Yields

The estimated 2018 yield for winter barley is 6.9t/ha (adjusted to 14.5% moisture) which is in line with the GB five year average (6.9t/ha). Regional average yields ranged from 5.6-7.5t/ha, although there was a great deal of variability within and between farms.

Yields in southern and eastern England, Scotland and Wales are close to the GB five year average, with the best yields occurring on heavier land, due to better moisture retention – although where there was poor drainage, heavier soils impeded yields. On heavier land, yields of 8.0t/ha were produced by conventional varieties and 9.0t/ha on hybrid varieties, rising to 11.0t/ha for the best crops. In these regions, some areas of light land delivered yields of about 6.0t/ha, as most of the yield building had already occurred by the time drought set in. However, in the Midlands, northern and western England, yields tended to be slightly below the GB five year average, with yields as low as 3.1t/ha reported.

Quality

The AHDB Cereal Quality Survey provides information on grain quality from a large sample of winter barley crops across all regions except Wales. Winter barley varieties

showed an average specific weight of 68.3kg/hl (slightly higher than the 64kg/hl reported by our assessment). The nitrogen content averaged 1.67% which is in line with our assessment of 1.6-1.7% and screenings averaged 3.9%, which corresponds well with the findings from our assessment of 2-10% (average 4%). Moisture content of the grain sampled in the survey averaged 13.4%, with the southern and central English regions tending to have moistures around 12.5%, whilst northern England and Scotland bring the overall average up with moistures of 14.4-15.1%.

- Germination – typically around 98%

Spring Barley

Harvest 98% complete - Harvest of spring barley fell into two parts. The early planted crops were harvested in August, whilst later planted crops that were not drilled until April or May were slow to come to maturity and were not ready for harvest until late August or into September. Early progress was good, with harvest starting almost a week earlier than normal. However, the slow maturation of later sown crops meant that although harvest remained ahead of that in the last 5 years it remained a drawn out process with crops continuing to be harvested in parts of northern England and Scotland throughout September.

Yields

The GB spring barley yield is estimated to be 5.2-5.3t/ha. This compares to a 5 year average yield of 5.8t/ha, so is a 9-11% reduction in yield. The majority of the crops harvested in the last month have been in Scotland. Here farm yields have ranged from 2.5t/ha in parts of the North East to some good yields of 8.0t/ha on heavier soils in the Borders.

Quality

Despite the challenging conditions, quality was average or slightly better than expected, although grain nitrogen levels are a little on the high side and screenings have also been high in some places, such as in the Eastern region. The AHDB cereal quality survey included data for spring barley, although it does not capture quality for the later harvested Scottish crops. Specific weights for spring barley crops averaged 67.4, with nitrogen contents at 1.73% and screenings averaging 2.4%. These findings are broadly in line with the results from our assessments, which suggests 2-10%. In Scotland, most malting crops - even the later harvested ones - have continued to meet malting specification, although there has been a slight relaxing of nitrogen specifications which has helped. Later harvested feed crops in parts of the North East

have suffered from some skinning of the grain and there are issues of poor germination in some of the later harvested crops.

- Specific weight – our assessments show slightly lower specific weights than the AHDB survey averaging 64 kg/hl (regional range 60-66 kg/hl).
- Grain nitrogen (malting varieties) – grain nitrogen values remain in line with the AHDB Cereal Quality Survey, average 1.7%, regional range from 1.5-2.0%. Considerable variation within regions.
- Screenings – ranged from 2%-10%, although there have been reports of screenings of up to 20% in several regions, particularly on lighter soils.
- Moisture – Moisture contents have varied through the season, with most early harvested crops averaging 12-13% moisture, whilst those harvested in late August and September have tended to average closer to 15% and have required a small amount of drying.
- Germination – typically around 98%.

Oats

Harvest 99% complete. Harvest of winter oats started in mid-July, in a period of good weather allowing rapid harvest progress in winter varieties. Spring varieties were planted either in the early window February/March or late in April/May, meaning that maturity of crops was highly variable through the harvest period. The delayed maturity of the late planted crops meant that despite good conditions, early in the harvest period the end of the oat harvest (from late August onwards) was steady and drawn out, being delayed first by maturity and then by rainfall. A few crops are still left to harvest in the wettest parts of Wales.

Yield

The estimated 2018 oat yield (winter and spring varieties) is 5.2-5.3t/ha, which is below the five year average of 5.7t/ha, which includes both winter and spring varieties.

Winter oat yields ranged from 5.1t/ha on the lighter land, through to 8.5t/ha on the heavier land, although this reached 9.0t/ha on occasional fields in the North East. Spring oat yields ranged from 4.5t/ha on light land to 6.5t/ha on heavier land.

Quality

Specific weight – average 55kg/hl. Specific weights were better in the west, with the South West reporting averages of 64kg/hl and figures from Wales of 68kg/hl. In the Eastern region, the specific weights averaged 51kg/hl.

Moisture – average 13%. Almost all spring crops required drying in Scotland and Yorkshire & Humberside, due to wet conditions. Moisture content ranged from 12-17% - with higher moisture contents reported in later harvested crops from the northern regions and Scotland, due to higher rainfall.

Winter oilseed rape

Harvest complete - GB winter oilseed rape harvest started in mid-July and progressed rapidly due to the settled conditions. Harvest was complete by WE 14/08, in all regions except for Scotland, where 84% had been cut. This remaining area had all been harvested by WE 04/09.

Harvest progress was broadly in line with the early harvests of 2014 and 2017, remaining well ahead of the late harvests of 2016 and 2015.

In the early stages of harvest 2018, it was necessary to harvest at night in an attempt to avoid pod shattering due to the very dry conditions in some cases. However, due to higher moisture levels across GB in the latter half of August, this was not necessary for the final stages of harvest.

Yields

The 2018 yield for winter oilseed rape is 3.4-3.5t/ha, which remains slightly below the GB five year average of 3.5t/ha.

Yields were highly variable, with light land yields dropping as low as 1.5-2.0t/ha, whilst on heavier land the yields ranged from 3.5-5.0t/ha. Cooler coastal areas yielded more consistently across the soil types than the warmer inland areas. Reports pointed to considerable variation of up to 3.5t/ha within regions. In many cases, the low seed moisture content reduced yields further, due to high temperatures and low rainfall.

Quality

- Oil content – occasional reports of low oil contents, but most crops averaged 44%.
- Specific weight – no issues reported.
- Moisture - very dry conditions meant moisture levels were low and no drying was necessary in most cases - although some growers in the North West had to make use of dryers for seed at 11% moisture, after combining plants with green stems. Average moisture levels were around 7-8%.

