AHDB

AHDB Arable Crop Report

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04 December 2020

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EXECUTIVE SUMMARY

This crop development report covers the period from harvest through to the end of November. It provides information on the drilling and establishment of winter cereals and oilseeds, as well as commentary on any weed, pest and disease issues that have affected crops during autumn 2020. While not as challenging as last year, autumn 2020 has provided some challenges to crop establishment.

Winter oilseed rape about 75% of the area was drilled in August, with the remaining crops drilled in September. Earlier sown winter oilseed rape crops established well on the whole, due to moist soils and minimal pest activity at planting. Occasional crops sown from mid-September have been slower to establish and have suffered from cabbage stem flea beetle damage and waterlogging. Nevertheless, the overall condition of the crop is good with 77% rated as good or excellent condition. Only 1% of the crop is considered to be of very poor condition and at risk of failure.

Winter cereal drilling is nearing completion, with 1% of the planned wheat area drilled in August, 32% September, 44% in October and 15% in November. Winter oats followed a similar pattern, with 39% drilled in September, 49% in October and 4% in November. Of the planned winter barley area, 63% was drilled in September, with much of the remainder (34%) drilled in October and 2% drilled in November.

Drilling progress was variable, with many farmers choosing to commence drilling early to avoid the establishment issues faced last year. In some cases, these early drillings took place on land with high grassweed pressure, e.g. black-grass, with growers prepared to accept a need for increased post-planting black-grass control as a consequence.

Conditions in September were largely dry. Following the challenging conditions experienced in autumn 2019, many farmers opted to take advantage of good travelling conditions and drilled early rather than risking delayed drilling. Conditions then turned very wet during early October and any crops drilled during this period tended to go into cloddy, poor seed beds. Through November conditions started to improve and there were opportunities to drill late cereals into reasonable seed beds, especially on some of the lighter land. By the end of November, an estimated 46% of the wheat crop was in good condition, with a further 23% in fair condition and 11% in excellent condition. An estimated 12% of the wheat crop was deemed to be in poor or very poor condition. A similar pattern was seen in winter barley and oats, with the majority of crops falling into the fair and good categories and 2-6% of crops deemed to be in poor to very poor condition.

Where crops were drilled into wet seed beds during October, applications of pre-emergence herbicides were challenging as ground conditions rapidly deteriorated. Where timings were disrupted by unfavourable weather, poor levels of weed and volunteer cereal control were reported. The impact of slugs and aphids was variable across the UK, with reports of higher slug activity on heavier soils and greater aphid presence on earlier drilled crops, both requiring treatment.

CROP REPORT

Weather

Rainfall totals have been highly variable across GB and although soil conditions have not been as bad as autumn 2019, frequent low-level rainfall events kept soils wet and difficult to work through much of October and early November. The Met Office weather maps show that rainfall in September was below average in all areas. Rainfall in October was above the long term average in all regions. November was generally dry for most regions, with the exception of the North West and parts of Scotland having higher than average rainfall throughout the month. The week ending 17 November saw higher than average rainfall across much of Southern and Western England.

Overall, autumn 2020 weather was unsettled. There were brief periods of settled dry conditions interspersed with more persistent periods of wetness. In many cases, rainfall was not unduly heavy, just sufficient to prevent soil from drying out. The unsettled conditions led to stop-start drilling, with some delays caused to planned drilling operations, although none as significant as those seen in autumn 2019.

Later drilled crops suffered from poor seedbeds and waterlogging in many regions. Waterlogging was particularly bad in direct drilled crops, where seeds rotted in the ground and surviving plants died due to anaerobic soil conditions.

Overall temperatures in autumn 2020 were close to, or slightly above, average, although there were some cooler temperatures recorded during parts of October.

Crop Condition

Crop condition was assessed using the USDA approach. This classifies crops into one of five categories, from very poor through to excellent (see details below). The values are given as the percentage of the GB crop area for that crop, that fall in each of the categories – regional condition scores are available on the AHDB website.

Crop Condition definitions:

Very Poor	Extreme degree of loss to yield potential, complete or near crop failure.
Poor	Heavy degree of loss to yield potential which can be caused by excess soil moisture, drought, disease, etc.
Fair	Less than normal crop condition. Yield loss is a possibility, but the extent is unknown.
Good	Yield prospects are normal. Moisture levels are adequate and disease, insect damage, and weed pressures are minor.
Excellent	Yield prospects are above normal. Crops are experiencing little or no stress. Disease, insect damage, and weed pressures are insignificant.

Autumn 2020 provided some challenges for the establishment of later drilled winter cereal crops. However, unlike autumn 2019, most of the winter cereal area had been drilled by the end of November. The condition scores below reflect the proportion of the crop area that was in each condition at the end of November. At the end of November, an estimated 47% of the wheat crop was in good condition, with a further 23% in fair condition and 11% in excellent condition. An estimated 9% of the wheat crop was deemed to be in poor condition and 3% considered to be very poor. The majority of the planted winter wheat crop had emerged by the end of November, with only 8% yet to

emerge and/or unplanted. A similar pattern was seen in winter barley, oats and winter oilseed rape crops, with the majority of crops falling into the fair and good categories and 0-1% of crops deemed to be very poor. (**Table 1**).

The poorest crops were those that were drilled into overly wet, cloddy seed beds, that subsequently suffered from persistent waterlogging. This resulted in seed rotting in the soil prior to germination, or those that germinated suffering from the anaerobic conditions caused by waterlogging.

Table 1 – Average crop condition of the drilled area – GB crops

	Very Poor	Poor	Fair	Good	Excellent	Crops not yet emerged
1: Winter Wheat	3%	9%	23%	46%	11%	8%
3: Winter Barley	1%	5%	36%	45%	13%	0%
5: Oats	1%	1%	25%	56%	12%	5%
6: WOSR	1%	4%	17%	57%	20%	0%

Note: Some figures have been adjusted to reflect a 100% total.

Wheat

Drilling progress

Drilling of winter wheat was nearing completion by the end of November, with 8% left to drill. In response to the challenges faced establishing crops late in autumn 2019, an increased proportion of farmers aimed to drill their winter wheat early in autumn 2020. With favourable conditions in September 2020, this meant that an estimated 32% of the wheat area was drilled in the month. Heavy rainfall in late September and early October put a pause on drilling, before it recommenced in mid-October. These October drilled crops showed the poorest levels of establishment, having gone into cold, cloddy, wet seed beds and then sat persistently wet for a number of weeks. This resulted in poor germination, and even some loss of plants post germination, in the worst affected fields.

With low rainfall and persistent wind in November land started to drain, allowing drilling to resume. Crops planted in November were typically those after late harvested maize and potatoes.

There was a lot of seed carried over from harvest 2019, as a result of failure to plant planned areas for the 2020 season. This seed has shown lower levels of germination and seed vigour than seed harvested in 2020.

There were a range of cultivation methods in use across GB, with some growers resorting to the plough or power harrow/ drill combinations, particularly when soil conditions had been wet and difficult to work. Where conditions permitted, growers tended to use low and minimum tillage cultivation, with associated increased reliance on glyphosate in removal of weeds ahead of drilling.

Crop development

At the end of November, an estimated 92% of the intended winter wheat area had emerged, with just over half at tillering. Typically, crops are at GS 21-22.

Weeds

Early drilling of wheat crops meant that a proportion of crops were drilled before they could benefit from a stale seed bed to reduce weed burden prior to drilling. This meant that grass weed pressure was increased in early sown wheat crops.

Where soil conditions permitted, timely applications of pre-emergence herbicides provided good weed control. With the variable weather into October and November, many post-emergence herbicides applications were disrupted. To date, few contact acting herbicides have been applied.

Black-grass- Levels were lower than normal where pre-emergence herbicides were effective. Even where pre-emergence herbicide applications were disrupted, black-grass levels remained manageable.

Brome- Brome levels in most regions remain low, with little urgency to treat. However, pressure is higher in parts of the North East, where early post-emergence herbicide applications were required to target the weed.

Ryegrass- Ryegrass has started to emerge.

Volunteer cereals- Volunteer cereals, particularly spring barley and oats, were the main weed problem, especially in regions where there was extreme grain shedding prior to harvest. Germination occurred over a protracted period, causing issues in established crops.

Pests

Slugs – Overall slug pressure was low. However, there were isolated incidents of late October sown crops suffering crop thinning as a result of their activities and requiring redrilling. In most situations, even where slug activity started to increase as wetter conditions settled in, it was possible to maintain control through judicious use of slug pellets.

Aphids- Aphids were active in early sown crops and most of these received a planned aphicide application. Where aphids remained active in later sown crops, aphicide treatments were more difficult to apply due to poor travelling conditions during October and November.

Frit fly – Frit flies caused minor damage to a small proportion of the wheat area in the East Midlands, West Midlands, South East and Yorkshire, particularly in areas that were previously sown with oats or grass.

Gout fly - Gout fly eggs were reported in Yorkshire on crops sown in the first three weeks of September.

Wheat Bulb fly – Low numbers of wheat bulb flies were reported in late sown crops.

Disease

Mildew- Mildew was reported at low levels on lighter soils where manganese deficiency was present. However, no treatments were required, and it is expected that the impending cold weather will reduce mildew activity.

Yellow rust – Low incidence of yellow rust was reported in occasional crops across GB, especially on crops sown in September or early October.

Septoria - Septoria is present at low levels in many susceptible varieties.

Winter Barley

Drilling progress and Crop development

Drilling of winter barley was complete by the end of November. All of the area had emerged, with 76% at tillering (GS 21-23) by the end of November. Establishment varied depending on the ground conditions at drilling.

As with wheat, farmers were keen to get barley drilled early in the autumn whilst conditions were good. This resulted in an estimated 63% of barley crops being drilled before the end of September. These early drilled crops emerged and established well. Where drilling was delayed into October, for example following late harvested maize and root crops, soils were often in poor condition and establishment more uneven. A lot of seed was carried over from last year and where this seed was used, reduced germination and vigour was noted.

As with wheat, cultivation techniques were a mix of plough based and minimal tillage. Farmers tended to use the plough where necessitated by the wet soil conditions.

Weeds

The majority of farmers achieved good control of weeds in winter barley, with most crops having received a well-timed pre-emergence herbicide. Where required post-emergence herbicides were used, especially where ground conditions immediately after drilling prevented pre-emergence herbicide application. In the minority of crops where optimal spray timings were missed, there are reports of poorer control of **black-grass**, **ryegrass** and **brome**.

Pests

The impact of **slugs** this autumn was variable, with slug pellet treatments required on heavier soils and little to no slug damage reported elsewhere. **Frit fly** was found in a very small number of barley crops, where they have caused limited damage. **Aphids** were a problem across GB requiring aphicides to control, where weather conditions permitted.

Disease

Net blotch was present across much of the barley growing area, particularly in crops that were well established, although it has not required treatment. **Mildew** is widespread, especially in earlier grown crops on lighter soils, but at low levels. There are also reports of low levels of **rhynoscosporium** and of **brown rust**.

Oats

Drilling progress and crop development

It is estimated that 93% of the originally intended winter oat area was drilled by the end of November. 95% of the area sown has emerged with 53% at tillering (GS 21-23) by the end of November. Most drilling took place in September (39%) and October (49%) with 4% sown in November.

The majority of winter oats were drilled into good conditions during September or late October to early November, and established well. However, where significant rainfall waterlogged soils, it resulted in reduced germination rates and more uneven emergence.

Weeds

The wet period following drilling meant that very few crops have had herbicide treatments. Nevertheless, weed pressure tends to be low, other than the presence of **cereal volunteers** and isolated reports of **black-grass**. Where earlier applications were not possible, **broad-leaved weeds** and **annual meadow grass** are more prevalent.

Pests

There are some reports of low-level **slug** activity. **BYDV** could be an issue where crops were not sprayed for aphids.

Disease

There are reports of **mildew**, but levels are low at present.

Winter Oilseed Rape

Drilling progress and crop development

Drilling of winter oilseed rape is completed, with 75% of the area drilled in August and the remaining 25% drilled in September. The majority of crops (85%) have 6 true leaves plus. Later drilled crops are generally at the 2-4 true leaves stage with a minority (2%) at the expanded cotyledons stage.

Crops were generally sown earlier than last year and August sown crops are on the whole well established thanks to moist soils and little pest activity. Crops sown from early September onwards were slower to establish and had more issues with cabbage stem flea beetle. There have been occasional reports of growers in the East of England losing significant proportions of their crop to this. There are also some bare patches where soil was waterlogged, and seeds have rotted.

Weeds

Due to the weather conditions, low use of pre-emergent herbicides has resulted in higher levels of **broad-leaved weeds** in crops that were drilled in the wet weather in late August. These will necessitate herbicide treatments over the coming weeks. In the small areas where post-emergence herbicides have been applied, is has been to treat **cleaver**, **shepherd's purse** and **hedge mustard**. **Volunteer cereals** have emerged at relatively high numbers due to shedding prior to harvest. The emergence of **thistles**, **mayweed**, **chickweed**, **poppy** and **cranesbill** have necessitated herbicidal control. **Groundsel** and **charlock** are common broad-leaved weeds in the East of England, where weed burdens are high in early drilled crops.

Pests

In the majority of the country, incidence of CSFB was low and with well-established crops the damage caused rarely reached the threshold for insecticide treatment. However, there are some hotspots of activity, such as parts of the East of England and Midlands, where high levels of activity in later sown crops have resulted in crop losses. In many cases, these crops have already been replaced with either winter cereals or beans. **Slugs** were active, but easily controlled with pellets. **Pigeon** grazing was an issue in the East of England, where slow emerging or damaged crops were particularly vulnerable. **Aphid** numbers were relatively low. **Cabbage Root fly** was very occasionally reported, but has caused little damage to date.

Disease

There are some reports of low levels of **phoma** leaf spot lesions. Where thresholds were met, the first fungicide applications were made. **Light leaf spot** incidence has been reported across GB, but to date only at low levels. **Clubroot** is being found at high levels in the occasional field, due to the warm, wet conditions.

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