



AHDB



AHDB Arable Crop Report

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SUMMARY

This crop development report covers the crop season through to the end of March 2021. It provides information on drilling and establishment of winter cereals, oilseeds and of the start of spring cereal drilling. Commentary is provided on any weed, pest and disease issues that affected crops during winter 2020 and early spring 2021.

Winter 2020-21 was cold and wet with rain in October that persisted through much of November, December and January. January turned cold with repeated frosts, and heavy snowfall across much of the country towards the end of the month. Conditions became a little milder and more settled from February, although clear skies meant that there were regular overnight frosts.

Winter cereals | The vast majority of winter cereals survived the winter well. Early drilled crops established particularly well, but even those drilled later into wet seedbeds tended to establish well, aided by increased seed rates used as soon as conditions deteriorated. Although some winter cereals were drilled in poorer conditions, many going into wet seedbeds, most planned crops were drilled before the end of November. There were just small areas (7%) of winter wheat drilled in December to March after late harvested maize or roots. Despite these conditions and many soils becoming waterlogged during the wet autumn and early winter, the overall condition of winter wheat crops is good. Just 7% of the crop area is considered to be in poor or very poor condition. Crops in the poor rating were typically later drilled or worst-affected by poor soil drainage, where fields sat with surface water for prolonged periods. These crops have areas with low plant numbers, with crops thin and patchy.

Overall weed pressure is low, especially where autumn herbicides were applied as planned. However, the wet conditions soon after drilling meant that a higher proportion of crops than intended did not receive pre-emergence herbicides. Some crops did not receive autumn post emergence herbicides. In these crops the levels of grass weeds, particularly black-grass, are high and will be the target of spring herbicide applications. Common broad-leaved weeds are present in crops, particularly those that have had no herbicide applications to date, but the frosty conditions over winter helped to reduce early emergence of spring weeds.

Pest and disease pressure remain low. Aphid numbers were curbed by frosts over winter, although there are occasional signs of Barley Yellow Dwarf Virus (BYDV) in early drilled cereals that did not receive an autumn insecticide application. Mildew levels were also reduced as a result of the colder temperature, as was the spread of early yellow rust infections in wheat. Most crops will wait until the T1 timing for their first fungicide application, although occasional susceptible varieties with high incidence were being treated at T0.

Winter oilseed rape | Earlier sown winter oilseed rape crops established well due to moist soils and minimal pest activity. Crops sown from mid-September onwards were slower to establish and were less resilient to damage caused by cabbage stem flea beetles, pigeons and waterlogging. At the end of March, the condition of the crop is fair or better with 84% rated in fair, good or excellent condition. Only 3% of the crop is considered to be of very poor condition and at risk of failure. By the end of March weed control was largely complete, with just occasional broad-leaved weeds left to control in some later drilled crops. Pest and disease pressure was also low.

Spring crops | Drilling is underway for spring crops. Drier weather conditions during the second half of March has enabled good progress to be made, especially on lighter land. Approximately 40% of the planned spring barley area was drilled by the end of March, with a start also made on spring wheat and spring oats.

CROP REPORT

Weather

Through December and January, rainfall was above average across all the main arable regions. Temperatures in January were cooler than average, with snowfall and heavy frosts affecting most of the country. Rainfall in February was above average, with 50-100 mm falling across most arable regions. Milder temperatures towards the end of the month started to dry soils allowing final areas of winter wheat to be drilled and a start to be made on drilling of spring cereals. March rainfall was below average, but a period of more unsettled weather in mid-March returned many soils to moisture capacity, especially in the West, which paused spring drilling progress. A resumption of dry weather towards the end of the month for some regions was coupled with high daytime temperatures, although clear skies also resulted in cold nights with occasional frosts.

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 was challenging for the establishment of winter cereal crops, but unlike autumn 2019, most of the winter cereal area was drilled by the end of November, despite some wet seedbeds. Despite the poor seedbeds, the use of increased seed rates meant that most crops were able to establish good plant populations and survived winter well. Spring drilling started in February, with earlier drilled crops starting to emerge. The condition scores below reflect the proportion of the intended crop area that is in each condition at the end of March (with the whole of the winter crop area in the ground, and only a proportion of spring crops planted to date).

At the end of March, an estimated 48% of the winter wheat crop was in good condition, with a further 30% in fair condition and 15% in excellent condition. An estimated 6% of the wheat crop was deemed to be in poor condition and 1% considered to be very poor. 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 1-3% of crops deemed to be very poor (**Table 1**). The proportion of crops in poor and very poor condition was slightly higher in March than in November, reflecting the challenging conditions over winter. The poorest cereal crops are those that were drilled into seedbeds that have subsequently suffered from persistent waterlogging resulting in seed rotting in the soil prior to germination or those

that germinated failing to thrive in the anaerobic conditions. Some oilseed rape crops were stood in waterlogged soil, and were further damaged by pests such as cabbage stem flea beetle and pigeons.

Of the intended area of spring wheat, 12% has emerged all of which appears to be in good condition. All of the spring barley which has emerged (6%) is rated good condition to excellent.

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

	Very Poor	Poor	Fair	Good	Excellent	Crops not yet planted /emerged
1: Winter Wheat	1%	6%	30%	48%	15%	0%
2: Spring Wheat	0%	0%	0%	12%	0%	88%
3: Winter Barley	1%	9%	30%	42%	18%	0%
4: Spring Barley	0%	0%	0%	5%	1%	94%
5: Oats (winter & spring)	1%	4%	15%	36%	10%	34%
6: WOSR	3%	13%	43%	29%	12%	0%

Winter Wheat

Drilling progress

An estimated 93% of the winter wheat area was drilled before the end of November, with small areas drilled from December through to March on fields where late harvested maize or roots were the preceding crop.

Crop development

The overall condition of winter wheat crops is fair to good. Those earliest drilled crops (September, approx. 31% of crop area) established well and had good tiller numbers. Crops that went into poorer seedbeds during October and November had reasonable establishment, boosted by increased seed rates. However, where fields sat particularly wet, areas of patchy establishment are observed.

At the end of March, the vast majority of crops (60%) were tillering, with the earlier September drilled crops (30%) leaf sheath erect (GS30) and occasional very forward crops (7%) even at first node detectable (GS31). Those crops drilled in late February or March had just emerged.

Nutrition

Almost all crops received their first application of nitrogen during March and many had, or are anticipated to have, a second application, with expectation of completion by mid-April. Application rates are in line with previous years. P and K applications were mainly complete though applications are still required on some fields that were slow to dry out after the wet winter. Manganese deficiency symptoms were becoming more pronounced towards the end of March, though incidence was reported to be lower than average.

Weeds

Good levels of control were seen in **brome**, **ryegrass** and **black-grass** where pre-emergence and post-emergence herbicides were applied on schedule. In areas where autumn sprays were missed, there was poorer control of black-grass, particularly in early sown wheat. Where autumn herbicides were

missed, spring applications are needed, although average temperatures still need to rise before applications are made. Overall, the level of broad-leaved weed pressure is low.

Bur-chervil is an increasing problem, particularly in Yorkshire and the West Midlands, and is being seen in fields where it has not previously been a problem. It has survived a lot of the autumn residual herbicides and is expected to require spring herbicide applications to provide additional control. There were also reports of cleavers and dead nettle in Scotland.

Pests

Overall pest pressure is low. While slugs were an issue in the autumn, crops have largely outgrown the risk and concerns over slugs were minimal during the winter. **Aphid** numbers are low due to the cold weather over winter. There are some localised areas of BYDV, including in the West Midlands, becoming visible on early-sown crops, mostly as a result of autumn aphid feeding where insecticides were not applied.

Some localised pest issues were noted. **Opomyza** (yellow cereal fly) was observed causing damage in Yorkshire. **Wheat bulb fly** larval damage was reported at extremely low levels on late sown wheat. **Gout fly** was reporting in occasional sheltered fields, but overall is only at low levels and not significant from a yield viewpoint. There was a high incidence of **frit fly** in occasional wheat crops following oats though the damage to date is minimal.

Disease

Overall disease pressure at the end of March was low. **Yellow rust** was the main disease noted in most regions. Winter frosts lowered incidence, but it is returning with the warmer weather, mostly on late-sown, backwards crops. A few pre-T0 sprays were required for control, especially for susceptible varieties in some coastal areas of Yorkshire. Occasional crops will need treating at T0 where incidence is higher, but for the majority of crops treatment will wait until T1.

Septoria is common on older leaves. Where incidence is particularly high, and especially in susceptible varieties, occasional growers expect to treat at T0, but most will be waiting until the traditional T1 timing to start Septoria control.

The high levels of **mildew** seen in autumn were greatly reduced by the winter frosts and at the end of March levels remained low. There are reports of low levels of **Rhynchosporium** in Scotland which may cause issues if weather turns wet.

Spring Wheat

An estimated 70% of the intended spring wheat area had been drilled by the end of March, with most drilling taking place in the southern and eastern parts of England during March. Drilling is furthest progressed on farms with lighter land, that dried rapidly during the periods of settled weather in early and late March. Heavier land has taken longer to dry out and is only just starting to be drilled.

Spring Barley

Approximately 40% of the intended spring barley area was drilled by the end of March. The majority of crops were drilled during March, with a proportion (about 9%) drilled on lighter land during February. Drilling is most progressed in the southern half of England where temperatures were milder, and soils dried more rapidly. Drilling was almost complete in parts of the East of England and South

East, whilst further north and into Scotland only the occasional light land fields were drilled before the end of March. In some cases, growers used light cultivations to encourage soil to dry out. Seedbeds produced in February and March were good, with the vast majority of crops sown into moist, but not water-logged, soils. An estimated 6% of crops had emerged by the end of March, with good plant numbers.

Pre-emergence herbicides were applied to most crops in in Yorkshire, the South East, the East Midlands, the East of England and the South East to target grass weeds, especially black-grass and ryegrass.

Winter Barley

Crop development

Establishment varied depending on the ground conditions at drilling. The majority of winter barley was drilled before soil conditions deteriorated and therefore establishment was good, with sufficient plant numbers present. Where crops were affected by heavy rain during drilling seedbeds were poor, but seed rates were increased to try and compensate for reduced germination. Where increases in seed rate were insufficient to compensate for reduced germination, these crops now appear thin and a small proportion (1%) are expected to have significantly reduced yield. Crop development is largely reflective of drilling date, with those crops that were planted in September the most forward. An estimated 10% of the area had the first node detectable (GS31) and 27% had the leaf sheath erect (GS30) by the end of March. The majority (62%) of later October and November drilled crops remain at tillering (GS20-29).

Nutrition

Winter barley crops received initial applications of nitrogen and sulphur across most regions. Lime was applied as planned. Potassium and phosphorus applications progressed as soil conditions dried sufficiently to allow spreaders to access fields. Manganese deficiencies were occasionally reported, e.g. in some parts of Yorkshire.

Weeds

Weed control in winter barley was good, with most crops receiving pre-emergence and post-emergence herbicides. Where optimal autumn spray timings were missed, there are reports of poorer control of **black-grass**, **ryegrass** and **brome**. There are also reports of spring barley and oilseed rape volunteers, along with more isolated reports of **groundsel**, **mayweeds**, **speedwells**, **pansy**, **chickweed**, **charlock**, **raunch** and **cleavers**.

Pests

Most crops have grown past **slug** damage, which occurred earlier in the autumn. **Aphids** levels dropped following the cold winter. **BYDV** levels are low, even where autumn insecticide sprays were missed. **Opomyza** damage is appearing in odd fields in parts of Yorkshire, although overall damage is expected to be minimal.

Disease

Overall disease pressure was low, and most crops will receive their first fungicide applications at T1 (growth stage 30-31). **Net blotch** is widespread across much of GB with treatment planned at T1. Brown rust is present at low levels across GB, with more severe infections noted in hybrid varieties.

There were also reports of low levels of **Rhynchosporium**, particularly in the North West and the West Midlands and **eyespot** in the East of England. **Mildew** incidence and severity was reduced by winter frosts.

Oats

Drilling progress and crop development

Drilling of winter oats was largely complete by the end of November. Establishment was variable with September and October drillings largely well established with good plant numbers. However, November sown crops went into poorer seedbeds and there were a small proportion of these that were affected by waterlogging where plant numbers are poor. Where there are particularly thin patches, some farmers have opted to cultivate out and leave as fallow for the remainder of the year. The majority of winter oats (81%) were tillering at the end of March, with the most forward early drilled varieties starting stem elongation, with 16% at leaf sheath erect (GS30) and 2% at first node detectable (GS31).

Drilling of spring oats started in February, with an estimated 40% of the intended area drilled by the end of March. The majority of drilling has taken place on well-drained, light soils. The more moisture retentive, heavier soil types were gradually drying out and many were sprayed off with glyphosate or lightly cultivated ready for drilling in early April.

Nutrition

Well-established winter crops responded well to early nitrogen and sulphur applications, but poorer crops require warmer weather for improved growth. Phosphorous and potassium fertilisers were applied in March where required and a final application of nitrogen is expected when the crop reaches first node detectable (GS31).

Weeds

The wet period following drilling meant that very few crops received autumn herbicide treatments. Nevertheless, weed pressure tends to be low, other than the presence of **cereal volunteers** and isolated reports of **black-grass**. Where residual herbicides were used, these provided good levels of broad-leaved weed control. However, where autumn herbicide applications were not possible, **broad-leaved weeds** were more prevalent towards the end of March. Weeds such as **charlock**, **mayweed** and **cleavers** were particularly obvious.

Pests

Early drilled winter oats received insecticide applications to control aphids, but many crops drilled later in the season did not. Symptoms of **BYDV** are not obvious at present, however, where crops were untreated for aphids in the autumn, it remains a concern. Aphid levels are low following the cold winter.

Disease

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

Winter Oilseed Rape

Crop development

Drilling of winter oilseed rape was largely complete by the end of September, with the remaining 1% drilled in October. The majority of crops (76%) were drilled in August and 23% in September. Those crops drilled early established well, with sufficient moisture present to aid rapid growth. Crops drilled in later September went into drier seed beds and their establishment was patchy and growth slow, leaving them vulnerable to damage from pests and pigeons.

The condition of these crops was, in part, affected by their early establishment, but also by cold weather and strong winds causing defoliation in occasional crops. An estimated 84% of the winter oilseed rape area is in fair to excellent condition, with the remainder poor or very poor. This is a slight decline in condition compared to November 2020, reflecting the challenges the crop has faced over a wet and cold winter. There is an estimated 10% of the area that is of questionable viability, with the East and West Midlands, the South East and the East of England having the highest proportion of crops affected. At the end of March, most crops (60%) were at green bud (GS3.3), with the most forward crops (11%) at yellow bud (GS3.7).

Nutrition

All crops have received their first nitrogen and sulphur application, and the majority received their second application in the final two weeks of March.

Weeds

Weed control was good in the majority of crops. In late September drilled crops, the low use of pre-emergence herbicides due to poor weather resulted in higher levels of **black-grass** compared to earlier drilled and treated crops. In the small areas where post-emergence herbicides have been applied, it has been to treat **cleaver**, **speedwells**, **shepherd's purse** and **hedge mustard**. **Volunteer cereals** are still present where herbicide applications were missed. The emergence of **thistles**, **cranesbill**, **groundsel** and **charlock** have required spring herbicide applications, before crops exceed cut off growth stages.

Pests

Cabbage stem flea beetle activity was at lower levels than in spring 2020. CSFB larval damage to growing points resulted in a small number of affected crops trying to branch from lower leaves. Where larval loads were high there was the occasional crop failure. The East and West Midlands and East of England in particular have relatively high levels of CSFB present, although earlier drilled crops have now grown away from damage. Elsewhere, damage from **pigeon** grazing was variable, with high damage caused in parts of Yorkshire and the North West and localised damage in parts of the West Midlands and Scotland. **Slugs** were active in autumn but were well controlled and have not caused significant damage in spring. **Aphid** numbers were relatively low. **Cabbage Root fly** activity was occasionally reported, e.g. in the East Midlands, but has caused little damage to date.

Occasional sightings of **pollen beetle** were recorded during March, but forecast cooler weather is expected to slow emergence.

Disease

Although severity is currently low, **light leaf spot** was present in crops across GB, encouraged by recent rainfall and warm temperatures.

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