
May 2010



Crop Development Report



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Summary

May was a dry month with below average rainfall across the country, and, while temperatures peaked at the end of the month at over 25°C, the majority of the month was cooler than normal. Crop development remains 7-10 days behind recent years. The dry weather in April and May, with rainfall around 60% of the long term average for these months, has raised concerns over moisture stress, particularly in crops on light land. Soil moisture deficits at the end of May are approaching 100mm in eastern regions, and crops are showing signs of moisture stress. Regular rain will be required during June to ensure cereal yield potential is met.

It is clear that the control of black-grass in wheat is poor this season with seed heads now appearing above the crops. Black-grass is a very competitive weed found most commonly on medium and heavy soils in winter crop arable rotations. The poor control this year is related to the dry soils at drilling affecting efficacy of pre-emergence herbicides, combined with delays in application of post-emergence products, often into early April, when the weeds were too large for good control. Resistance may also be a contributory factor in some cases. This is a very competitive weed and yield losses are likely in affected crops where the populations are high.

Disease pressure has remained low during May, while dry weather has allowed the application of well-timed fungicides and plant growth regulators, reducing the lodging risk. In oilseed rape, the risk of sclerotinia is low due to cool soil conditions and dry weather, and fungicide programmes have been adapted accordingly.

Weather

April and May were relatively dry months across the country with rainfall lower than average in most weeks (Figure 1). Total rainfall in May was 27mm, which is around 60% of the long term average for the month. Rainfall in the Eastern region, East Midland, Yorkshire and Humberside and the North East were lower than the average with less than 20mm rainfall during May.

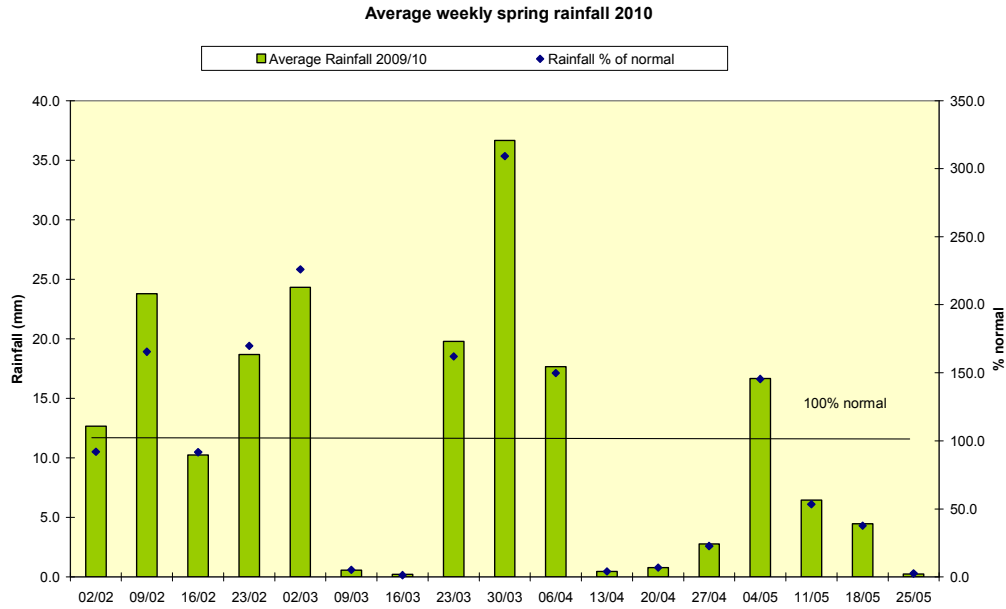


Figure 1 Weekly average rainfall

Soil moisture deficits at the end of May are higher than at the same stage in recent years (Table 1), with all regions above 75mm, and the east coast regions approaching 100mm deficits. At these levels it will be critical to have regular rain to meet the crop demands up to the end of grainfill and avoid yield impacts.

Table 1 Regional Soil Moisture Deficits (Met office data)

Region	End May 2010 (mm)	End May 2009 (mm)	End May 2008 (mm)	End May 2007 (mm)
North East	86.0	66.0	56.8	55.0
North West	83.0	26.0	55.0	33.3
Yorks and Humber	99.0	74.3	57.5	64.0
East Midlands	98.0	81.0	39.6	51.0
West Midlands	86.0	57.8	19.0	42.7
Eastern	95.0	95.0	38.2	37.7
South East	95.0	82.9	14.4	54.0
South West	90.0	58.3	24.0	47.5
Wales	75.0	22.0	29.0	23.6

Note: SMD measures for medium available water capacity soils under grass and will be higher than in crops with less plant cover.

Temperatures for most of May were below the seasonal average, with northerly winds and clear overnight skies causing night temperatures to drop low enough for frosts mid month. Day temperatures although pleasant when the sun came out remained generally cool with overcast skies. The exception to this was during the last week of May where temperatures rose to the high twenties, almost 5 degrees above the seasonal average. However, this warm spell was short lived with a return to northerly winds and cooler conditions right at the end of the month.





Weather Effects

On light land moisture stress symptoms such as leaf curling were evident at the end of May, especially over the hot windy weekend. On light land crops come under stress when soil moisture deficits are in excess of around 75mm, and this can be exacerbated further by poor rooting, and this has been exceeded in most regions.

The cooler temperatures in early May mean that crops are still 7-10 days behind the typical growth stage at the end of May.

Crop Development

Winter Wheat

Crop Development

The majority of winter wheat crops were at flag leaf emerging (GS37) through to flag leaf fully emerged (GS39) by the last week of May. There were some forward varieties, such as Humber and Grafton that were booting (GS45) or even starting to come into ear (GS53). Those crops drilled later than mid October were further behind with typical growth stages around early stem elongation (GS31-33).

Less than 10% of crops have reached boot swollen stage (GS45) at the end of May compared to around 50% in the last two years.

Weeds

The levels of highly competitive black-grass in crops are higher than normal this year, particularly in the eastern counties and south east where soils were dry in the autumn, but higher levels are also evident across the country where spring herbicides were applied late. There are no further control measures and at high populations are likely to have an impact on yields of affected crops.


Cleavers are also highly competitive and additional herbicide applications were needed in many fields to ensure adequate control, due to the cool spring and dry soils delaying emergence. Other broad-leaved weeds such as poppy and thistle also proved more difficult to control this spring.

Disease

The settled weather has allowed planned fungicides to be applied at the correct timing with few delays, while disease pressure remained low. Fungicide applications at T1 were made in early May and T2 applications started at the end of the month, with more backwards crops still to spray. Yellow rust was the main concern where susceptible varieties Robigus, Oakley and to a lesser extent Viscount were planted. Septoria is present in the lower canopy, but dry conditions and fungicide applications will help protect the yield forming leaves of the upper canopy. Mildew started to appear at the end of the month, with small amounts present in the lower parts of the plant on the stem. Where present this was treated at T2.

Pests

Pests did not cause significant concerns on winter wheat during May. Those crops that were affected by wheat bulb fly earlier in the year remain thin.



As crops started to push out their ears the first growers were placing Orange Wheat Blossom Midge traps out in the fields to monitor the migration of these pests into the crop.

Crop Nutrition

All the main fertiliser applications were made to the wheat crop earlier in the season. Late nitrogen applications for protein quality were the only ones left to apply at the end of May. Uptake of nitrogen was slow because of lack of soil moisture.

Winter Barley

Crop Development

There was rapid crop development in the barley crop during May with most typical crops reaching inflorescence completed (GS59) by the end of the month. The most forward crops were starting anthesis (GS60), whilst more backwards crops were at boots swollen (GS45).

Weeds

Weed control was reasonable in winter barley crops, with only occasional bad black-grass problems in crops on heavier soils. Although wild oats appeared in April and May they were well controlled with graminicides. Broad-leaved weed herbicides were applied with the T1 fungicides. These combined with rapidly growing crops and closing canopies provided good control, with out the need for further applications.

Disease

Fungicide applications at T1 and T2 were made with few delays or disruptions and disease levels remained low. There were concerns in April that Rhynchosporium was present in a high proportion of crops. This disease was well controlled by T1 fungicides and did not cause serious infections.

Spring Barley

Crop Development

March drilled crops, accounting for around 45% of the area, mainly in England, established well and are now approaching flag leaf emergence (GS37). Crops on lighter land have suffered from moisture stress during May. The majority of the April drilled crops are in Scotland and have grown slowly due to dry conditions. Early April drilled crops are now around stem elongation (GS31-32) while later drilled crops are around early tillering (GS23). The last of the spring barley was drilled in May and these crops are just emerging.

The majority of spring barley crops were drilled during March and April, with very few very early drilled crops (Figure 2).

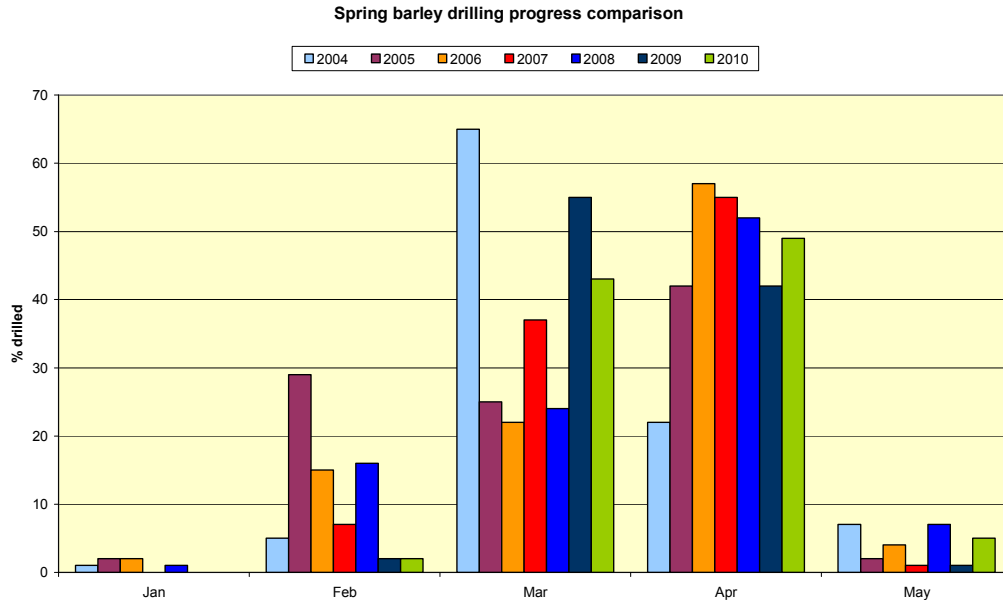


Figure 2 Spring barley drilling progress comparison

Agronomy

Pre-emergence herbicides were not as effective as normal where soils were dry and further treatments were required in some cases, so overall weed control is good. There are no problems with disease following well timed fungicide applications.

Oats

Crop development

Winter oat crops range from flag leaf emerging to flag leaf fully emerged (GS37-39) at the end of May, with occasional forward crops starting to boot (GS45). Spring oats were starting stem elongation (GS30-31), with later drilled crops at late tillering (GS27-29).

Agronomy


Oats tend to be grown on fields that are known to have low grass weed pressure. As a result weed control was good in winter crops. In spring crops the problems with reduced efficacy of pre-emergence herbicides made weed control more difficult, but there are few serious problems.

Oilseed Rape

Crop Development

Winter oilseed rape crops were approaching the end of flowering at the end of May, following a longer flowering period than normal. Pod set is underway in more advanced well established crops, whilst some of the more backwards crops remain at mid to late flowering. Some varieties have suffered frost damage during the cold middle period of the month resulting in blind sites forming where flowers were aborted.





Spring oilseed rape crops were predominantly at the rosette stage with 6-10 true leaves.

Weeds

Some crops are carrying higher levels of weed than ideal following dry soils at establishment in the eastern regions affecting herbicide efficacy, and delays in post-emergence herbicide applications due to poor weather. Most crops are competing well with any surviving weeds, however there are some crops where the weeds may cause some yields losses or harvest difficulties.

Pests

Pollen beetles caused concern in the winter crop due to the later flowering this year, but insecticide applications provided good levels of control and little damage resulted. Seed weevils were present in May, but in many cases had not reached thresholds for treatment.

Disease

Dry weather during the flowering period reduced the risk of sclerotinia as rainfall and subsequent petal stick are required for infection. As a result of the reduced risk many farmers opted for single spray programmes to protect against this disease. In high risk fields, or where flowering was particularly drawn out, some cautious farmers opted for a two spray fungicide programme.

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