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Winter linseed pre-harvest report
July 2016

Introduction
The crop inspections which provided the data for this report where carried out on the week beginning Monday 11th July and finished on Friday 15th of July. Counties visited were Hertfordshire, Cambridgeshire, Essex, Suffolk, Norfolk, Leicestershire, Lincolnshire, Nottinghamshire and Yorkshire (North, East and South Ridings) and Hampshire, which amounted to 42% of the national crop.
Crops were assessed for lodging and overall appearance and those finding are reported here.

Background
Coming out of the winter crops across the country where generally in good conditions. Some had been grazed by pigeons, more severely on the eastern side of the country. The bulk of winter linseed crops were forward in the early spring, similar to oilseed rape.
Unseasonably wet weather in May, June and the first of July created a challenge for crop protection (Appendix 1).

Crop conditions
35% of all crops visited showed 25% lodging or more. This equates to 15 % of the national winter linseed crop. Many of these crops where showing signs of standing back up at time of inspection and with very hot weather during the week beginning 18th of July.

The causes of lodging in order of severity

1. ***early application of nitrogen where it was not needed***
2. ***applying the second spilt before green bud stage.***

The total amount of nitrogen to be applied to winter linseed is 125kg/ha, normally in two splits 30%/70%. The first split is usually applied in late February or early March. However, in crops taller than 25cm the first split should be foregone as it promotes excessive stem extension and increases the risk of lodging. Where this first split is not used, it can be subtracted from the total nitrogen required.

The second split is intended to be applied at green bud stage, just before flowering. This is to drive flower, boll and seed production as linseed does not translocate nitrogen from the leaves or stem into seed production. The reason for applying nitrogen at this timing is to reduce the risk of lodging. Applying the main split of nitrogen at stem extension will cause rapid and excessive stem growth and greatly increase the lodging risk. By sticking to the recommended Nitrogen guidelines for winter linseed, lodging risk is greatly reduced.

3. ***interactions between high field fertility and weather in the form of heavy thunder storms or persistent drizzle in June.***

This form of lodging is apparent due to the random pattern of lodging areas across fields. Linseed is excellent at scavenging nitrogen and does not require vast quantities of nitrogen to get the crop up and running after the

winter. In high fertility sites or where organic manures have been applied, it is better to reduce the total nitrogen requirement.

4. ***Weed control***.

In one case poor control of broad leaf weeds such as chickweed and cleavers in the spring, caused the crop to be pulled down by the weed burden.

No lodging or crop damage was found during the survey relating to the use of carbetamide. When applied pre-Christmas, it will cause the crop to lie prone to the ground for a number of weeks and blacken the foliage, acting as an extreme growth regulator. There is no evidence that it increases the risk of lodging.

Figure 1: shown as a percentage of crops which had more than 25% lodging at time of survey and not as percentage of the national crop.

Varietal differences

The winter linseed crop consists of three varieties; Angora 46%, Everest 31% and Alpaga 19%. During the survey 43% of all crop visited where Angora, 37% Everest and 20% Alpaga. No real differences can be found between varieties in terms of straw strength. There for it can be assumed that the lodging trend has less to do with varietal differences and more to do with regional differences.

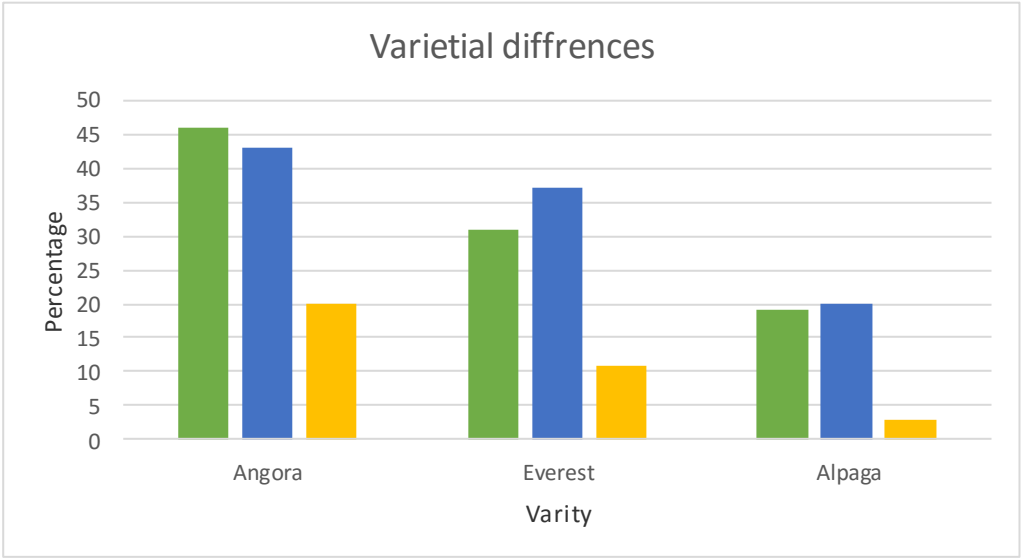


Figure 2: Green show the % of the national crop that consisted of each variety. Blue for the % of each variety on the survey. Yellow for the % of crops which had more than 25% lodging on the survey tour.

Regional differences

There is a clear North/ South divide in terms of crop lodging. While the Northern half of the country has 20% of the winter linseed crop, only 4% of crops with 25% of lodging damage where found in the North. There is a number of reasons for this:

In April the Northern half of the country had more rainfall and less sunshine than the south. This not only slowed crop growth, but also prevented field work and nitrogen applications from taking place. The South in contrast, had less rain and more sunshine, pushing crops ahead and also allowing field work to take place. Winter linseed crops grew more rapidly in mid to late spring across the Southern region, leading to taller crops with weaker stems due to the rapid growth.

In June however this was the opposite with rain sweeping across the Southern half of the country, either as thunder storms or as heavy persistent drizzle. With taller crops and more lush growth, winter linseed in the Southern region was more susceptible to lodging.

Crop quality

The vast majority of crops are thick and even in height and crop density. All crops show high numbers bolls. This helped by favourable conditions during flowering in the month of May, with lower rainfall and increased sunshine hours across the country.

Boll fill looks good in most crops, however there are a number of blind seed sites to be found in some crops. This is due to lack of sunshine in June rather than disease pressure. Crops have been very clean since the end of March due to robust spring fungicide programmes using difconazole , metconazole. A tebuconazole application at the end of flower ensured bolls where kept free of disease and green to increase seed fill in a difficult June.

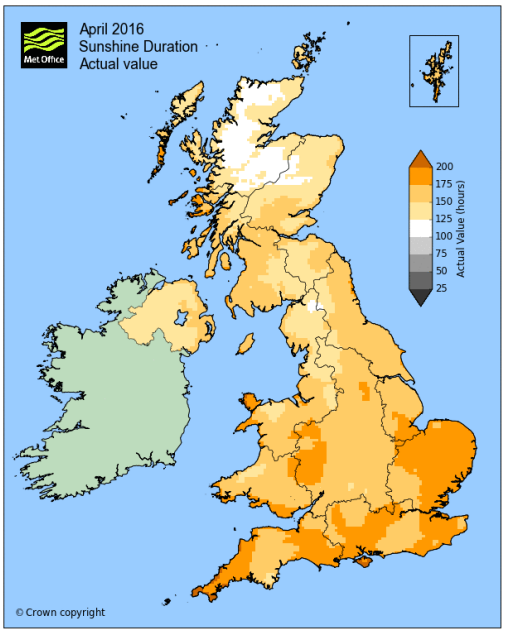
Outlook ahead and Conclusion

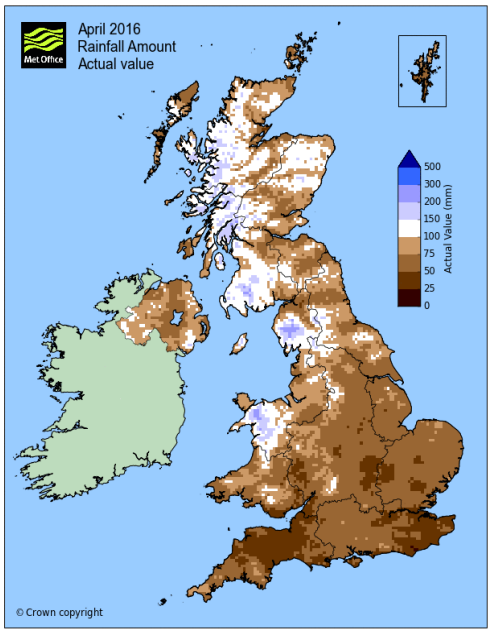
The winter linseed harvest was beginning at time of going to print. With good weather at the start of harvest it is fully expected crops which were lodged will return to vertical. As the harvest progresses we will update on yields and crop quality.

The number one cause of crop lodging in winter linseed is Nitrogen Mismanagement. Premium Crops issue guidelines on Nitrogen usage in winter linseed, where these have been adhered to, either by design or weather constraints, lodging is reduced or completely avoided. Yields will be reported as the harvest progresses.

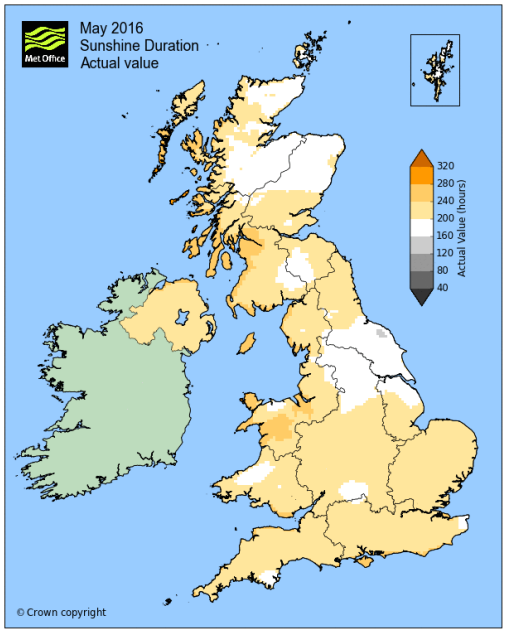
Appendix 1: Weather

April





May


May 2016
Sunshine Duration
Actual value
320
280
240
200
160
120
80
40
Actual Value (hours)
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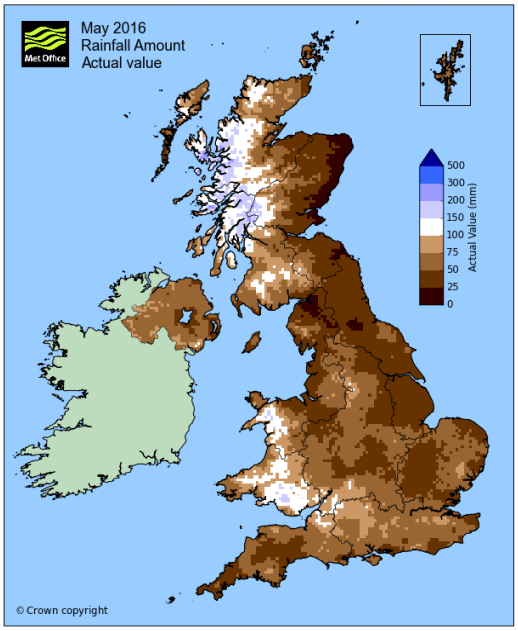
May 2016
Rainfall Amount
Actual value
500
300
200
150
100
75
50
25
0
Actual Value (mm)
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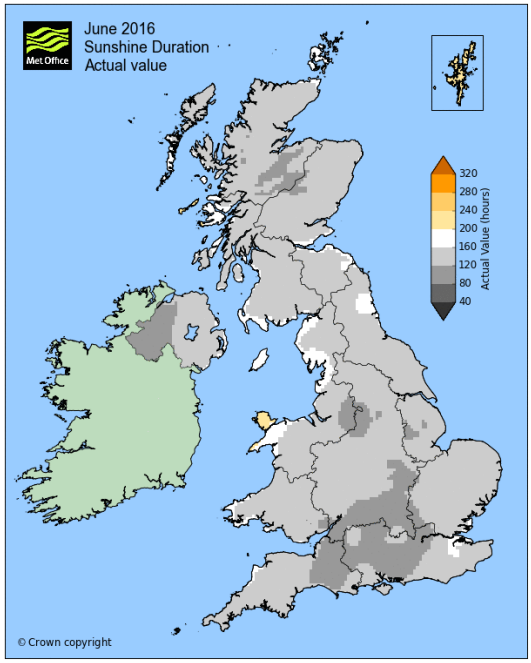
June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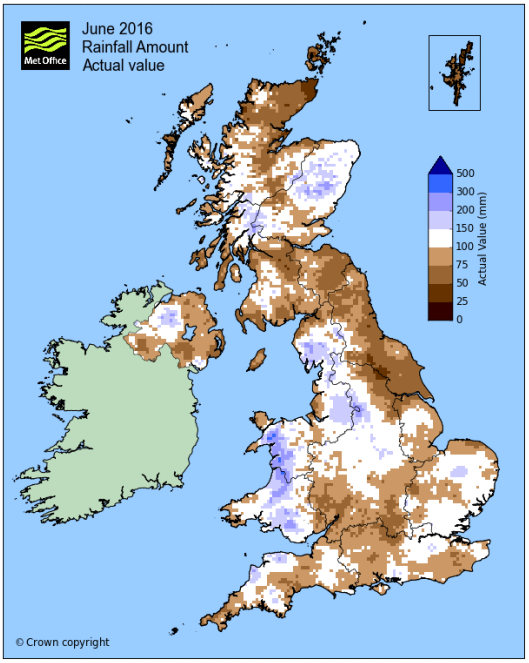
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