



## IN BRIEF

- Dry conditions have slowed the growth of many crops and the extended drilling period is still reflected in a wide range of growth stages with some crops meeting across drills, others still at 6-8 leaf stage.
- There are some early reports of cercospora. There are differences in varietal susceptibility so remember to check across all varieties.
- Incidence of BCN are also being confirmed at the Plant Clinic
- Now is the time to check for leaf miner activity in crops.
- Some crops are receiving foliar feeds. Be clear on what nutrients you are targeting.
- Book your place NOW for BBRO Open Days <https://bbro.co.uk/events/>

## BEET 2018

3<sup>rd</sup> July @ Swanton Morley  
5<sup>th</sup> July @ Bracebridge

BBRO's targeted approach to sugar beet growing



## ADVISORY

### Pests

#### Aphid Survey

- Apart from at Morley, Norfolk, aphid numbers remain very low at all other sites.
- The warm and settled weather predicted for next week could encourage increasing activity.
- Seed treatments should still be working, but backward crops maybe at risk from colonisation if they have been in the ground for more than 12 weeks.
- Some leaf miner activity is being reported but again pressure from this pest is, so far, low this year.

#### Plant clinic update

The main pest and disease issues seen in the plant clinic so far this season are Aphanomyces, beet cyst nematode and grey/silver beet (see below). Aphanomyces and BCN development have been encouraged by the consequences of later drilling, warm seed beds and early moisture enabling the disease and pest to develop rapidly.

#### Silver/Grey beet

Silver/Grey beet have been reported randomly in several crops across the four factories, although it has been seen as high as 5% of plants in several fields in Suffolk. This is an unusual disease that is being seen in the UK and other beet growing areas across Europe.

The disease presents as:

- Blue-Grey matt colour with increasing leaf surface silvering as leaf grows
- Cracking leaf tissue (similar to hailstone damage)
- Occasional yellowing of leaf veins
- Roots may not develop fully and browning of the root tissue can occur.

The symptoms usually start at 4-6 true leaves and, from Belgium studies, are caused by the bacteria, *Curtobacterium flaccumfaciens*. There is no known method of control. The disease does not present in discreet patches and instead will be seen in individual beet throughout the field. Infected beet will yield an average of 50% less than uninfected beet, but there is huge variation in this; and although it has been found in the material of all breeding companies there does appear to be some possible varietal differences.

### **Leaf diseases**

There are early reports of cercospora leaf spot. There were differences in varietal susceptibility to this disease in BBRO trials last year so please remember to check across all varieties. The current warm and dry conditions will favour early development of powdery mildew rather than rust.

### **Crop nutrition and foliar feeds.**

Some later drilled crops are showing signs of nutrient deficiency. In some cases, this may be nitrogen deficiency as top-dressed nitrogen has not had the rain to move it into the rooting zone and roots are not functioning in the dry top soil conditions. Symptoms of manganese deficiency also evident in many crops and require foliar treatment.

The use of foliar bio-stimulants and other broad spectrum foliar feeds is practiced by some growers, especially where crops are looking backwards. There are a large number of products available and there is no doubt that in some situations there are genuine responses to these products. However, it is not possible to predict where responses are more likely and **BBRO does not have consistent data to support routine use.**

If you are looking to use foliar feeds, be clear on what the product contains in terms of nutrients and bio-stimulants. Products may contain just one or two nutrients/bio-stimulants and others a complex mix of nutrients and bio-stimulants. This can influence the cost considerably. Use the Foliar Feed Chart to help you understand what constitutes different 'types' of foliar feeds.

Always aim to apply a foliar feed to a crop with both sufficient and active canopy growth, as most products require active uptake by the leaves. This is especially relevant if applying to herbicide

damaged or stressed crops. An actively growing 6-8 leaf stage crop is likely to respond better than a damaged 4-6 leaf stage crop. Where a product contains nitrogen, follow recommendations carefully, especially water volumes and avoid spraying in hot sunny conditions to minimise the risk of scorch. As a general guide, crops can't take up more than 8-10 kg/ha of nutrients through their foliage in a single application so a 'little and often' approach is often the most likely to produce a response.

#### Foliar Feed Chart

<b>Foliar feed 'type'</b>	<b>Typical content</b>	<b>Foliar feeding comment</b>
Macro -nutrients analysis usually as % (w/w or w/v)	nitrogen, phosphate, potash, magnesium, sulphur	Can help relieve deficiencies and/ or where root activity is compromised by pest or poor soil conditions. Inclusion of nitrogen may 'green-up' crop but this may not always give a root yield response.
Micro/trace elements analysis usually as mg/kg (w/w or w/v)	Usually chelated forms of manganese, zinc, iron, boron, copper, cobalt, & molybdenum	Typically, manganese and boron are the more common in sugar beet.
Bio-stimulant- non- microbial	Seaweed extracts Phosphites Chitin/chitosan derivatives Amino-acids (protein hydrolysates) Humic substances	A wide range of products are available some just as a single constituent, others as a mix. Limited data on efficacy on sugar beet. Don't assume results on other crops will translate into responses in sugar beet *
Bio-stimulants - microbial	Plant growth promoting bacteria (PGRP) Arbuscular mycorrhizal fungi (AMF)	Relatively newcomers to the market so limited data available for sugar beet *

\*BBRO trials are currently assessing many of these products. Visit one of the BBRO Demonstration Farms during the season to get the latest information.



#### EVENTS

We recently announced the four finalists in the Beet Yield Challenge:

Mark Means – JS Means

Will Jones – Salle Farm

Guy Hitchcock – Hitchcock Farms

David Mawer/Phil Burrell – G R Mawer & Son

The full report and application forms for this year can be found on the BBRO website  
<https://bbro.co.uk/on-farm/beet-yield-challenge/>

Join us at the Royal Norfolk Show on the 27<sup>th</sup> June at the Innovation Hub. Presentation to the Champion Grower will take place at 14:00

Don't forget to book your place at the BBRO Open Days <https://bbro.co.uk/events/>



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#### BASIS POINTS

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