

## **BBRO Advisory Bulletin No.9 - Week Ending 25th August 2017**

### **Quick Update**

- **Varietal differences clearly showing in canopy cover.**
- **Good healthy canopies provide more yield potential for late lifted beet – assess your crops and plan lifting accordingly.**
- **Foliar disease – Rust and some cercospora making an appearance in many crops. Consider 2nd fungicide spray if disease found.**
- **Pests – Check for 3rd generation leaf miner, particularly in Newark area.**

### **General Outlook**

Crops have benefited from some good growing conditions over the last few weeks with plenty of rain and sun to encourage growth and sugar production. Early root digs are indicating potential good final yield levels.

However, as crop canopies begin to mature some are showing a lot of variation in colour and vigour. This may be showing as patches or strips within fields. Headland areas are also now beginning to senesce quickly in some fields.

This season has again highlighted the variation in canopy growth characteristics of different varieties, and strips of different varieties are visible in many fields especially now as crops begin to mature. Differences in both canopy colour and growth vigour are visible with some looking more pale and yellow than others.

Some questions are being asked whether the paleness and yellowing are a result of nitrogen deficiency. BBRO have established nitrogen demonstration strips on six farms in 2017 providing a range of contrasting soil types, across seven different varieties on each site. This has been to assess responses to additional nitrogen applications of +20, 40, & 60 kg/ha above the recommended rate for each site. We're not currently seeing any consistent differences between canopy growth and greenness, and nitrogen levels but there is some clear difference between the varieties in terms of greenness and canopy vigour.



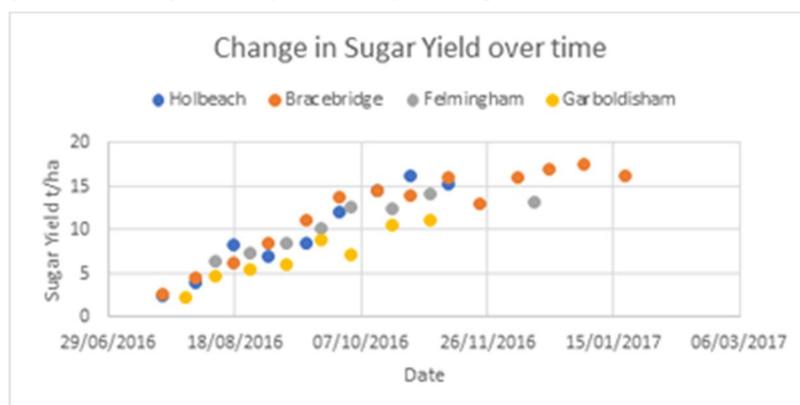
If you are concerned about nitrogen and maybe thinking of applying some foliar N (ensuring you keep within the N-max rules of 120kg/ha if they apply) you may want to consider having leaves tested to establish nitrogen levels. A sample from a 'good' and 'poor' area will give good confirmation of the nitrogen level as the likely cause. As a broad guideline, leaf concentrations of 5% are normal and it is levels below 3% and certainly lower than 2% that deficiency is more likely to show.

We have seen some cases of boron deficiency in the plant clinic this season. If you see plants where the growing point is beginning to die or symptoms like those in the photo, especially in the absence of any obvious disease infection (such as downy mildew) it is worth establishing whether the cause is boron deficiency as the growing point of the plant will die and as a result the crown darkens and becomes subject to rot and as such not an ideal candidate for later harvesting and storage.

## Harvest Planning

As the next campaign draws closer, it is now worth identifying which fields are going to be harvested first.. Notwithstanding factors such as soil type and frost risk, you will need to consider future crop canopy potential and likelihood of root rots.

**Canopy yield potential** - those crops with low leaf cover, more extensive yellowing or higher levels of foliar disease should be harvested first, allowing others to optimise their yield. Selecting crops with the better canopies and therefore greater yield potential can deliver real yield advantage. In 2016, the BBRO sequential harvest digs showed how yields increase throughout the season with increases of up to 40% from September to December. The graph below shows the increase in sugar levels over time at four sites. Fresh weight yield (t/ha) followed a similar trend. Of course, the 2016 autumn was a relatively mild period but this highlights the potential of crops with good canopy potential to capitalise on good growing conditions and build yield at this stage of the season. Remember that to maintain a healthy canopy further fungicide application may be required, depending on the disease risk.



**Root rots** - any crops with root rots should also be candidates for first harvesting

We are often asked about which varieties are most suited to later lifting in terms of yield potential. We are undertaking work on our demonstration farms to assess this

during the 2017/18 campaign as there is no clear data on this at present. Clearly, in frost-prone areas, crops and varieties with larger and vigorous canopies will be at an advantage in term of frost protection and this should be a consideration.

### **Foliar Disease Update**

Increasing reports of further disease development, particularly rust and cercospora, have been received by the BBRO this week. Therefore, now is a good time to consider a second fungicide application (if it has not already been applied) particularly if beet are to be lifted from October onwards.

Regional differences in disease development also seem to be appearing, as well as between different varieties. For example, higher disease pressure is being observed along the Norfolk and Suffolk coast compared to further inland.

There have also been several reports of rust developing more rapidly than anticipated even when the first application had only been applied two weeks earlier. Conditions have been good for disease development this year, and it is important that first applications are applied at disease onset and any subsequent sprays are applied according to label recommendations to limit disease development further. So far, there have been no known cases of resistant strains of rust or powdery mildew in the UK, although three cases of cercospora resistance to QoI fungicides were identified by Bayer in 2016. This is being looked at further by the BBRO in 2017, and if you have any concerns about foliar diseases please contact the BBRO.

### **Leaf Miner**

This pest has been conspicuous by its absence this year, apart from some early first generation activity in north Lincolnshire in May and June.

There have been no reports of activity in August but we are now approaching the third generation period. If you are in a higher risk area such as the northern part of the Newark factory area then please monitor crops for eggs and spray if necessary to avoid significant defoliation in September as has been seen in the last three years from fields affected by third generation attack.

## Plant Clinic Update

There have been a flurry of recent samples and we have now received 67 physical samples this year. Recent problems include BCN, the first case of fusarium rot, confirmation of specific foliar diseases including stemphylium, pH, compaction and crop yellowing.

Yellowing of beet at this time of the year can be caused by many different reasons such as Virus Yellows, earlier downy mildew infection, rhizomania or lack of specific nutrients and leaf yellowing can often be an indicator of other problems too.

If you have any concerns about crop yellowing this year please contact your British Sugar area manager or agronomist, and if necessary, send a sample for further investigation into the BBRO plant clinic.



(Picture of stemphylium found in Norfolk)

**Caution:** *this information is based on results of experiments and experience but cannot constitute a recommendation.*

### BBRO Office

British Beet Research Organisation  
Innovation Centre  
Norwich Research Park  
Colney Lane  
Norwich  
NR4 7GJ  
**01603 672169**  
[www.bbro.co.uk](http://www.bbro.co.uk)  
[www.uksugarbeet.co.uk](http://www.uksugarbeet.co.uk)

### Contacts

Dr Mark Stevens  
[mark.stevens@bbro.co.uk](mailto:mark.stevens@bbro.co.uk)  
07712 822194

Dr Simon Bowen  
[simon.bowen@bbro.co.uk](mailto:simon.bowen@bbro.co.uk)  
07718 422717

### General Enquiries

[info@bbro.co.uk](mailto:info@bbro.co.uk)

### BASIS Points

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