



IN BRIEF

- **Currently, foliar disease appears to be remaining at generally low levels in crops. However, rust and cercospora are being found and need monitoring.**
- **Fungicide programmes are helping to keep diseases in check. Maintaining protection is key to ensuring crops can optimise yield progression into the autumn.**
- **Crop yields continue to recover some of their potential lost due to the summer drought, although it is unlikely to recover all of this. As crops mature, sugar levels are increasing and amino-N levels decreasing.**
- **Selecting the most suitable crops for earlier and later harvesting will allow you to optimise yield production.**
- **With the start of campaign almost here, and without any significant rain forecast, harvesting crops in dry conditions is set to be very challenging.**
- **Careful monitoring of surface losses, over-crowning and root breakages will be important as will regular communication with your harvest operator/contractor.**



ADVISORY

Foliar Diseases

We are seeing variable levels of foliar developing with rust and cercospora being found more frequently. However, levels in most crops remain generally low and have been kept in check by the dry weather and previous application(s) of fungicides. A change to wetter conditions may see greater disease pressure and development.

There are differences between varieties in terms of rust development so ensure that you check different varieties to establish the levels of infection in your crop. Disease ratings can be found on the Recommended List.

Be aware of specific label restrictions for the number of applications of different products that can be made to crops and follow recommendations for water volume and spray quality. Some products such as Escolta recommend the use of a higher water volume in 'dense crops'.

As we move into campaign, remember also to check and comply with the harvest interval (HI) of different products. These range between 21 and 42 days, so check the label of the product used. Information on fungicides, including harvest interval, are also available on the BBRO website <https://bbro.co.uk/publications/weeds-pest-and-diseases-2018/>

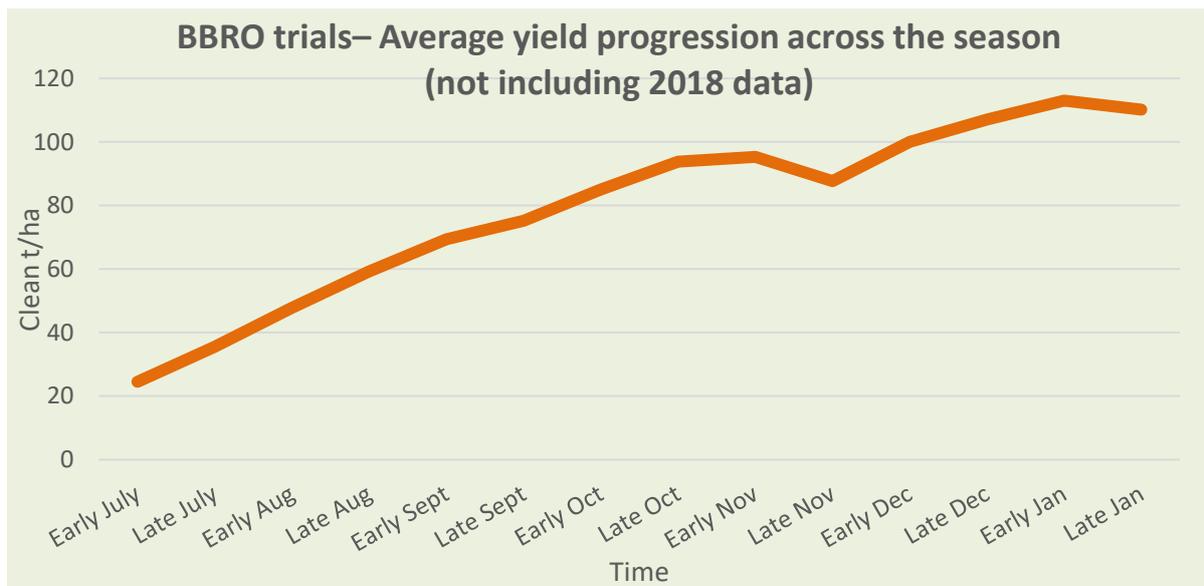
Harvest planning

It is now important to decide which fields are going to be harvested first. Overriding factors such as soil type, following crops and frost risk are important but where you have a choice, selecting the best crop to leave for later harvests will allow you to optimise yields.

Root rots - any crops with root rots should also be candidates for first harvesting. It is worth checking crops for potential problems, especially areas where seedbeds were poor and where emergence and development were backwards or affected by earlier *Aphanomyces* infection. Any areas where there was standing water following rain are also worth checking.

Crop yield potential – many crops have regenerated canopies since the drought and are very green, active and healthy. This represents a relative degree of immaturity compared to other seasons at a similar time of the year. However, test digs are encouraging, showing that sugar levels are increasing and Amino-N levels declining as the crop matures.

The graph below used previous BBRO data (but not 2018 data) to demonstrate how on average, yields can increase in the later part of the season.



An average yield increase of 30%, highlights the potential progression between September and December. However, this clearly depends on the weather in this period and this average also masks some variation between crops due to factors such as canopy health and vigour. Last season BBRO measured the range as between +21% and +45% on a sandy clay loam site.

On-going BBRO work is demonstrating how it may be possible to select varieties, based on potential yield production at later harvest dates:

- Crops with more upright canopies may be more effective at capturing later season sunlight.

- Crops with more vigorous tops have the potential to capture more sunlight.
- Crops with several senescing leaves at the base of plants tend to increase yields less in this period
- Higher foliar disease levels will reduce the potential yield in this period.

The photos below show how you could compare crops to help make the decision on which have the greatest potential.

Crop A is expected to have more potential than the others. Crop B has less vigorous top growth, Crop C has a less upright canopy and Crop D has more lower leaf senescence.

Crop A



Crop B



Crop C



Crop D



The crops above had low levels of foliage disease but remember that maintaining a healthy canopy is also key, so further fungicide application may be required, depending on the disease risk.

Harvesting

If soils remain dry and hard, harvesting will be challenging:

- A higher risk of tap roots being snapped off in hard ground (shear depth setting will be important to manage this).
- A higher proportion of small roots in crops this season will also increase risk of surface losses.
- Reduced soil flow on and through harvester, along with the need to remove clods will also increase the risk of whole beet losses.
- In some crops, especially where soil has become hard and compacted, a proportion of roots are likely to be sitting very proud of the soil surface compared to others. Topping and scalping will need to be set as a compromise between over-crowning and leaving top, especially on smaller beet.

With some good rainfall, some of these issues will have less impact but the crop will remain variable in terms of root size and position of roots in the ground.

It is important to check crops and soil conditions before harvesting. Consider your timelines and the trade-off between leaving small beet to increase in size, against harvesting on heavier land in potentially poorer conditions later in the year.

Additionally, check different varieties for root size variation, depth of root in the ground and how proud roots are sitting out of the ground. These could be variety specific.

It is going to be very important to monitor harvesting closely to manage this situation. As surface losses are expected to be higher this season, walk behind the harvester to assess the number of whole beet losses on the surface and check for any beet left in the ground. Check at the heap for over-crowning and the amount of top remaining. Remember, the cleaner loader can remove a lot of top material.

Most importantly, keep a regular dialogue with both your harvester operator/contractor on where settings need to be to optimise harvesting, and your BS Contract Manager.

BBRO Plant Clinic

Do you need help in identifying or confirming an issue in your sugar beet crop? We have facilities at our Norwich laboratory and glasshouses for microscopic investigation and virus detection. We would recommend that you submit at least one plant with the surrounding soil and if possible some photos of the surrounding area. A plant clinic form must be sent with each sample. This can be downloaded from the BBRO website <https://bbro.co.uk/research/plant-clinic/>

Please send samples to: BBRO, Plant Clinic, Innovation Centre, Norwich Research Park, Colney, Norwich. Norfolk. NR4 7GJ. Alternatively, email your query with photos to: plantclinic@bbro.co.uk



EVENTS

Demonstration Farm Network

The autumn programme includes sessions on:

- Harvesting and storage
- Seed varieties
- Crop nutrition
- Fungicides & insecticides

Invitations will be issued to local growers but please feel free to book a place <https://bbro.co.uk/events/>

16th Oct. – Rougham

30th Oct. – Morley

16th Nov. - Newborough

Winter Technical Events (bookings via <https://bbro.co.uk/events/>)

5th February – Newmarket Racecourse

7th February – Belton Woods

British Beet Research Organisation, Innovation Centre, Norwich Research Park, Colney Lane, Norwich, NR4 7GJ

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Two NRoSO points in total (not per bulletin) have been allocated between 01/06/2018 and 31/05/2019 reference NO465447f. To claim these points please email NRoSOPD@cityandguilds.com