

BBRO Advisory Bulletin No 1 - W/C 2nd January 2017

As this is the first Bulletin of 2017 BBRO would like to wish you all a Happy New Year and we hope the forthcoming 2017 beet season is successful and profitable for you.

For many, of course, the current campaign is still underway with crop either still in the ground or in short term storage clamps. The recent run of sub-zero temperatures over the festive period delivered the first real frosts of the winter in some areas. However, it is unlikely that there will be any significant impact of these on crops, both those still in the ground and those in clamps. As you can see from the chart below temperatures need to be at $> -3-4^{\circ}\text{C}$ for more than 5 days before significant root damage is usually seen in crops in the ground.

Temp $^{\circ}\text{C}$	-1	-2	-3	-4	-5	-6	-7	-8
Days								
1	Green	Green	Green	Green	Green	Green	Green	Green
2	Green	Green	Green	Green	Green	Green	Yellow	Yellow
3	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red
4	Green	Green	Green	Yellow	Yellow	Red	Red	Red
5	Green	Green	Green	Yellow	Red	Red	Red	Red
6	Green	Green	Yellow	Yellow	Red	Red	Red	Red
7	Green	Green	Yellow	Red	Red	Red	Red	Red

No Damage	Crown and minor root damage	Extensive root damage
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Post-harvest storage losses – average losses are circa 0.1% of the total sugar volume per day. Typically, beet is in short term clamps for 5-10 days before being cleaned and delivered to the factory so this equates to between 0.5% & 1.0% sugar loss. BBRO work has shown that these losses can be significantly reduced by ensuring minimal root damage during harvesting and then avoiding any subsequent frost damage.

BBRO have been working closely with British Sugar during the campaign to make some assessment of harvest damage levels, identifying the main causes and the potential improvement, following intervention and remedial actions.

This work will be reported in full at the BBRO Winter Technical Meetings in February (see details later in this Bulletin). However, some assessments showed that in a few cases, more than 5% yield loss was occurring, both in losses left in the field and as root breakage. It is important to recognise that where root breakage has occurred roots will directly lose more sugar in response to the injury. Remember that both types of damage will increase the susceptibility of roots to subsequent frost damage and root rots.

Clearly, any crops destined for longer storage period (>2 weeks) will benefit from being covered when the temperature is forecast to be below -3°C. Further advice on clamps and clamp sheets, especially for longer periods of storage during the final few weeks of the campaign, can be found in the BBRO Sugar Beet Reference Book or on our [website](#).

Root rots – Root rots, particularly fusarium (with some rhizoctonia), have been identified in recently lifted fields on sandy soil types in East Anglia. We understand that these fields droughted during August and September when temperatures reached the high 20s/low30s which appear to have allowed pathogens to enter stressed plants via the crown potentially through leaf scars. Many of the roots have remained intact and have ended up in Maus clamps causing some growers significant delivery issues. If beet is still to be lifted please inspect crops to ensure that there are no major issues with roots that will cause issues once at the factory.



Soil sampling - if you still need to get land tested ahead of sugar beet in 2017 there is still an opportunity to do this ahead of key decisions about final variety choice, liming and fertiliser rates. Bear in mind some key observations from the 2016 crop:

- An increased level of BCN was seen in crops and reported at the BBRO Plant Clinic in 2016. This in part may reflect the wetter conditions which increased nematode activity in the spring and during crop establishment.
- There was an increase in the number of samples submitted to the Plant Clinic with low pH values during 2016.
- Increased use of manures and cover crops is being practiced which may lead to an increase in soil nitrogen levels which can depress sugar levels in some situations but perhaps more importantly can reduce the need for applied nitrogen to the crop. In some instances, where this was measured, soil nitrogen indexes of >2 were calculated.

Drill Operator Training - A successful sugar beet harvest begins with the preparation of the seed bed and ensuring optimum performance of both drill and operator. BBRO will be running two half day events in February aimed at drill operators and contractors based on the basic principles of seed bed preparation and drill set up. The events are supported by Germain's, Kverneland, Monosem and Vaderstad.

Monday 6th February 2017 - Morley Farms , Nr Wymondham. NR18 9DF

Friday 24th February 2017 – Mere Potato Stores, Bracebridge Heath. LN4 2HT

To book please contact Ches on 01603 672172 or email Francesca.Broom@bbro.co.uk.

BBRO Winter Technical meetings: Sugar Beet – realise its potential.

Our thought provoking Winter Technical Meetings will help you understand what influences crop growth, the threats, and more importantly the opportunities and tools to squeeze that bit more from your beet. The programme will include the following topics:

- Making every hectare count
- Precision nutrition
- Lifting the cover on cover crops
- Right choices for healthier canopies
- Harvesting more of your crop

Tuesday 14th February 2017 08:30 - 12:00
The Granary Estates, Parsonage Farm, Wooditton, Suffolk, CB8 9RZ

Thursday 16th February 2017 08:30 - 12:00
Cedric Ford Pavilion, Newark Showground, NG24 2NY

To book please email: info@bbro.co.uk or call the Agriculture helpdesk on 0870 2402314.

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

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