



Issued: 29th September 2021



IN BRIEF

- Crops continue to retain good crop cover providing the potential for further root yield and sugar increases.
- However, foliar diseases such as cercospora and ramularia have increased in some crops, especially where second fungicides have not been applied or the interval between the first and second sprays has become extended. Rust levels remain relatively low although now increasing in some crops.
- At this late stage, make sure you maintain fungicide programmes in line with expected harvest date and check harvest intervals before application.
- Keep checking for any root rots during harvesting and ensure these are delivered as soon as possible to avoid further losses.
- During harvesting, undertake regular checks for surface losses, over-crowning, and root breakage to avoid unnecessary yield losses.
- Make sure root breakage is kept to a minimum especially in crops which are likely to be placed in short term clamps for more than 5-10 days. Prioritise crops with higher damage levels for delivery.



ADVISORY

Foliar Diseases

Foliar disease levels have increased, especially following the recent rain. Cercospora and ramularia are being found in many crops, there are some signs of phoma too. Rust levels are relatively low but are also slowly increasing.



Fig 1: Cercospora (left) and Ramularia (right) on two adjacent plants in North Norfolk.

Most crops have received two fungicides, and this will provide adequate protection up to end of October and into early November.

T3 fungicides - the decision for a third fungicide will depend on your target harvest date and the level of foliar disease present. BBRO trials and BYC data have indicated that crops being harvested after the end of November and into the new year, can benefit from a third application. Consider the current diseases level and varietal susceptibility (use the RL Rust & Powdery Mildew scores) when making the decision.



Fig 2: Rust infection

Be aware of specific label restrictions such as the maximum number of applications and harvest intervals. For products such as Escolta this means only two applications can be made.

Pay attention and adhere to the **Harvest Interval**. Be aware that these vary between products and range from 21 days (Escolta) to 36 days (Mirador Xtra).



Fig 3: Advanced Cercospora infection level at which fungicides will be less effective.

Harvesting 'watch-outs'

Whilst temperatures remain warm, it is important to keep storage time and associated sugar losses to a minimum, making the most of just in time delivery. Make sure there is good communication between harvesting and haulage operations.


Minimising root breakage when harvesting in relatively warm conditions is key to avoiding accelerated sugar losses. The average sugar beet clamp loss rates are usually at 0.1% of total sugar volume/day but in poorly harvested and handled crops sugar loss can be 3-4 times greater. Follow these guidelines to minimise sugar losses:


- Excessive dirt – this reduces ventilation in the clamp by limiting airflow between the beet although some dirt can help “cushion” beet during loading.
- Excessive green material – Similar to too much dirt, too much green matter can limit air flow in the clamp. Whilst the cleaner loader will remove a lot of excessive top material, poor ventilation in the clamp prior to cleaning will accelerate sugar loss.
- Damaged beet- minimise the amount of root breakage. Keep turbine speeds and drops as low as possible.
- Scalping- don't over-top the sugar beet crop by removing too much crown, otherwise this can accelerate sugar loss and lead to rotting, mould development or bacterial infection.

- Root rots - avoid storing contaminated beet crops which contain fungal rots such as fusarium, rhizoctonia and violet root rot as this will inevitably raise the clamp temperature, leading to greater respiration rates and increased sugar loss. Any parts of a field which are infected by rots should be managed separately and not mixed in the main clamp.
- Regular feedback from the condition of beet at the clamp/pile to the beet harvester operator is key.

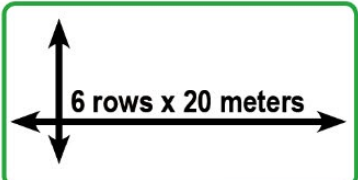
Follow our 3-step guide below to assessing harvesting losses to help maximise yields and returns:

Guide can be downloaded




3 Step Guide to Assessing Harvesting
MONITOR LOSSES TO FIND YOUR GAINS




1. SURFACE LOSSES
Collect whole beet left on surface from set area.


6 rows x 20 meters

6 kg of root equates to 1 t/ha of lost yield

Surface loss (kg)	Yield loss (t/ha)
6	1
9	1.5
12	2
15	2.5


WWW.BBRO.co.uk/on-farm

<https://bbro.co.uk/publications/harvesting-assessment-guide>

If you have registered for BBROplus via the main BBRO website (available to all growers and UK sugar beet advisors) then you can also access our Harvest Loss calculator. By entering your row spacing, yield (or estimated yield) and approx. crown, surface, and root breakage losses you will be assess how much yield is being lost overall. Register here: www.plus.bbro.co.uk

2. CROWNING LOSSES

UNDER-CROWNED
Petiole > 2cm
Target < 5%

OPTIMAL CROWNING
Petiole < 2cm | Defoliated
Target < 90%

OVER-CROWNED
Crown material removed
Target < 5%

Over crowning causes the highest level of yield losses, with approximately 1 t/ha lost for every 5% of beet over-crowned. For more details and latest test results visit: www.bbroy.co.uk/on-farm

3. ROOT BREAKAGE

Measure the diameter of root damage in at least 20 representative roots, ideally 100 roots per sample

Root breakage diameter (cm)	For every 10% of roots in each sample	Yield loss t/ha
2-4	10%	0.5
4-6	10%	1.0
6-8	10%	2.0
8-10	10%	3.0

Scale: 0.0 to 10.0 cm. Target diameter: 2.0 cm.

EVENTS

Next events: BeetTech22
8th February (Norfolk Showground)
10th February (Newark Showground).

CONTACTS

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