



IN BRIEF

- Whilst yield potential is clearly being lost in current dry conditions, the majority of crops are maintaining canopies and eventual rainfall will see a return to active leaf and root growth. Some leaf damage and senescence is occurring in crops on lighter land and whilst these plants retain the potential for new leaf growth, this will be at the expense of root growth.
- If later summer and autumn conditions remain conducive to growth, beet crops have the potential to recover a good proportion of this lost yield potential. However, later harvest dates will be required to realise this potential. Keeping canopies healthy now and into the late summer period will be key to ensuring yield recovery.
- Foliar diseases remain broadly absent in crops and it is unlikely that many crops require fungicides yet. However, remain vigilant. Current conditions are more favourable for powdery mildew than rust. Make sure you check varieties with lower powdery mildew and rust disease ratings (as shown on the RL list) as a priority.
- There are signs of the silver Y caterpillar feeding on leaves; crops need checking for these.
- Weed beet and bolters are emerging in many crops and need controlling.
- Some crops are showing signs of nutrient deficiencies, especially where top dressed nitrogen was applied in dry conditions and has not been washed sufficiently into the soil profile.



ADVISORY

Pests

- *Myzus persicae* numbers remain low at all BBRO monitoring sites except at Morley and Feltwell.
- Assessment of BBRO aphicide trials in Norfolk and Lincolnshire over the last 10 days show few green aphids remain on untreated beet but black aphids were found in varying numbers on most plants in equivalent plots. Under current conditions, these aphids were rapidly succumbing to predators or disease. Therefore, treatments on the commercial crop for both species are not warranted.
- Silver Y caterpillars were evident on trials in Lincolnshire and reports have been received from elsewhere. The current threshold for treatment is 5 caterpillars per plant, but treatments will potentially have a negative impact on beneficial insects and could lead to an increase in spider mite problems later in the season.

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

In February and March 2018, 23 ground frosts were recorded at the base weather station at Broom's Barn, Suffolk. Consequently, the powdery mildew forecast indicated that only 18% of the national crop is at risk of infection from this disease. However, with recent hot dry weather, these conditions are more favourable for powdery mildew than rust. Also, when applying fungicides, these must ideally be applied to a non-wilting crop, so early morning applications are probably best when the crop has potentially recovered from the previous heat of the day, although some crops are now permanently wilting due to the prolonged dry spell.

When it comes to foliar disease control in 2018 the following will be important:

1. Know what disease(s) are in your crop in order to select the best fungicide options (see BBRO 2018 pest, disease and weed guide).
2. Cercospora leaf spot appears to be an increasing problem in the UK and strains of this fungus are potentially resistant (due to QoI resistance) to strobilurin fungicides. If in doubt contact the BBRO for help with disease identification.
3. As seen from BBRO trials in 2017, do not apply fungicides too early, wait for symptoms to show especially if a one spray approach is being used.
4. Conversely, do not apply products too late otherwise effective disease control will be difficult for the remainder of the season.
5. Always follow label recommendations for applying products at the correct growth stage.
6. Ensure the gap between the first and second (or second and third applications) is kept to within 28 days to prevent significant re-infection occurring between treatments.
7. Ensure water volume recommendations are adhered to and are not cut back.
8. Know where specific varieties are sown within fields to monitor any variety-disease interactions.

Nutrient deficiency

Avoid the temptation to apply any foliar nutrient feeds to drought stressed crops. Active leaf growth is required for the uptake of these nutrients. Apply just before or after rain when plants are actively growing. Where canopy cover permits, top dressing with fertiliser may be an option, again just before or after rain. Be mindful of the total permissible amounts of nitrogen to the crop and minimize the risk of scorch damage by avoiding applying in hot sunny conditions.

Weed-beet/Bolters

Weed beet and bolters continue to emerge above the canopy and will need controlling if massive seed return is to be avoided. Weed beet stems are also appearing from groundkeepers on old loading sites and land left fallow after beet last year. These need removing too. If spraying fallow land to kill any green cover, check the rules relating to crop destruction and try to destroy weed beet before the seed set. Just one weed beet, bolter or tall weed per square metre can reduce crop yields by 11% through shading.

Hand pulling is the most effective method of control. If the weed beet and bolters are either pre-flowering or just in flower (see photos below) stems can be pulled, broken and left in field. If they have completed flowering they need to be removed from the field.

Weed wiping and cutting are options but are generally less effective than hand pulling. Details of these approaches can be found in the BBRO reference book <https://bbro.co.uk/publications/reference-book/>

Key stages of weed beet control

Pre-flowering



Open flower



At this stage weed beet and bolters should be pulled, have the stem broken close to the root and left on top of the crop to die.

Post-pollination



Maturing seed



After flowering, plants will potentially have set seed and should be removed from the field to prevent mature seed falling in the field.

Details of weed beet contractors can be found at British Sugar Online (www.bsonline.co.uk).



EVENTS

Dates for the Autumn Demo Farm Programme will be released shortly.

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

Dr Mark Stevens mark.stevens@bbro.co.uk 07712 822194

Dr Simon Bowen simon.bowen@bbro.co.uk 07718 422717

General Enquiries info@bbro.co.uk



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