



Issued: 27th July 2023



## IN BRIEF

- Monitoring of temperature and humidity has now triggered high risk warning for cercospora in many areas. **It is essential that crops are monitored very closely for cercospora, and other foliar diseases and fungicides applied at the first symptoms of disease.**
- The incidence of other foliar diseases such as rust and powdery mildew have been low to date but the risk of these will also now be higher. A few crops have received a fungicide.
- Virus symptoms remain low with a few primary infection plants visible in crops. Later drilled crops may still require some more time to show extent of symptoms.
- Cool rainy conditions have resulted in more bacterial leaf spot, especially where crop growth has been stressed. Early infection stage of bacterial leaf spot could be confused with cercospora.
- A few isolated cases of beet moth feeding in the crop have been recorded. The crop should be more resilient to any damage compared to last season but remain vigilant.
- A few crops are struggling to grow away and, in some cases, linked to root damage such as nematode infection. White females are still visible on infected roots, pull a root gently to check.



## ADVISORY

### Foliar diseases

**Cercospora high risk** - The recent wet weather has increased the risk of cercospora developing in crops. The chart below indicates where the risk is highest as of 27<sup>th</sup> July, but please check the BBRO website or watch out for individual text alerts as the situation will change. High risk areas are where the temperature and humidity conditions result in a DIV value of 6 and above (squares highlighted in red).

Keep a very watchful eye for the first symptoms in crop. Apply fungicides at onset of disease and ensure the gap between the first and the second application is kept between 28 days. A shorter interval may be required if disease pressure is high.

Cercospora symptoms may be confused with those of bacterial leaf spot. Cercospora tends to form smaller, more discrete regular circular spots. The centres of the spots are light grey/tan often with black stromata which resemble black pepper grains. The borders surrounding the spots are typically reddish-purple. Aim to apply a fungicide as soon as the first spots/lesions are found and especially if conditions are warm and wet. Leaf wetness in particular encourages cercospora and the disease can progress very quickly.

Fig 1: Recent high cercospora risk areas

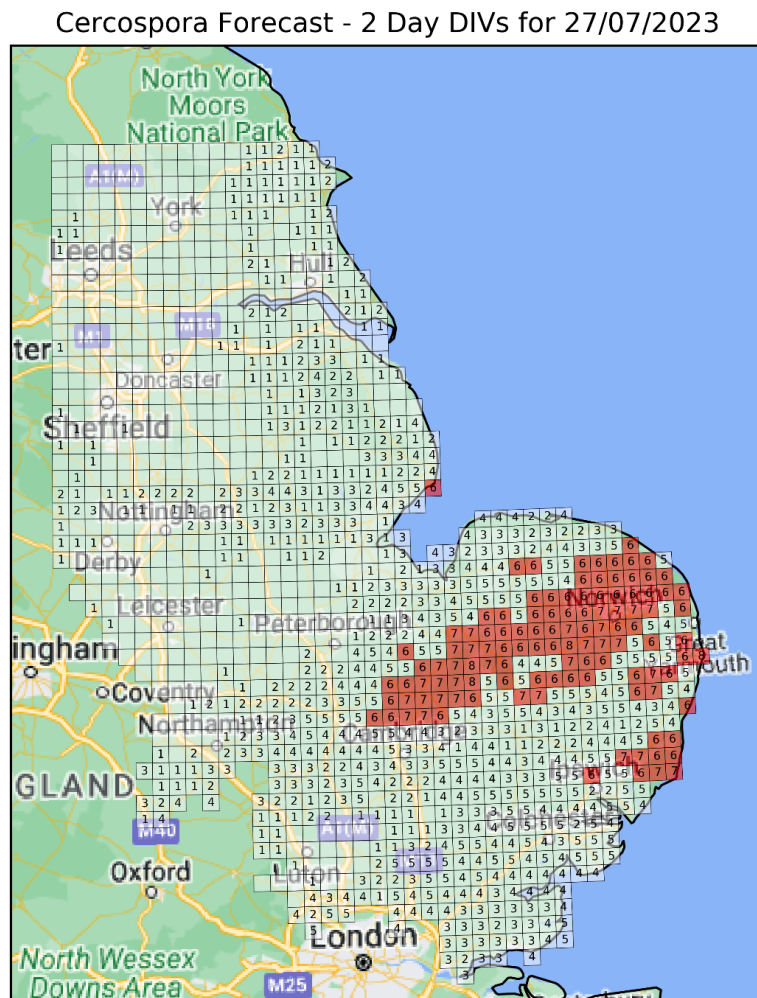
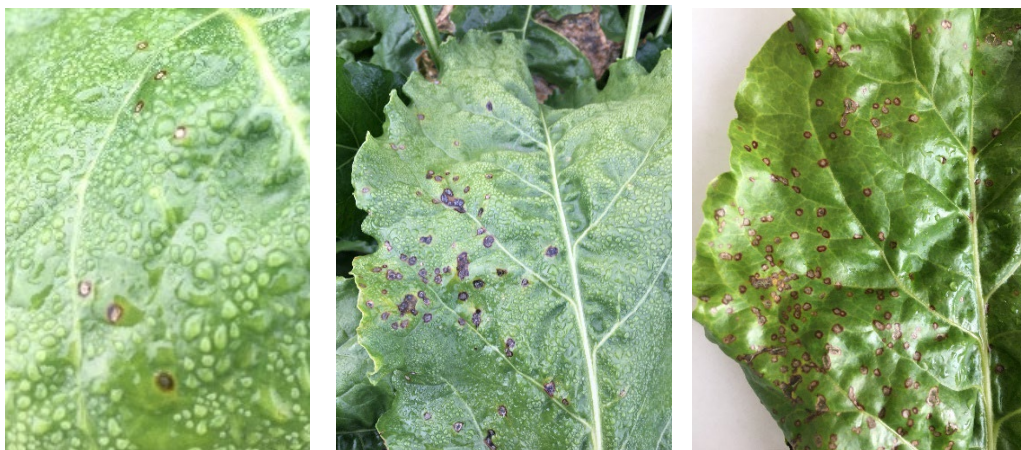


Fig 2: Cercospora symptoms. Aim to apply a fungicide at first signs of symptoms (photograph on left) as it will be harder to manage as the disease progresses.



Remember to monitor for other foliar diseases as well.

Fig 3: From left to right: downy mildew, rust and powdery mildew.



The chart below provides a summary of the fungicide options for 2023. Where the risk is high avoid cutting rates as efficacy and persistence will be compromised. Revystar XE has been found to be more effective on cercospora at the higher rate of 1 litre/ha (not 0.8 litre/ha). The Impact product label only claims moderate control of cercospora and ramularia for up to 2 months and may provide insufficient activity in situations where disease is established, and pressure is high.

Product	Max No. Apps	Max Ind. Dose l or kg ha/yr	Max Total Dose l or kg ha/yr	Active (triazole)	g ai l or kg	Active (strobilurin)	g ai l or kg	Active (SDHI)	g ai l or kg	HI (days)	Water Volume l/ha	Spray Quality
Angle, Priori Gold	2	1	NS	difenoconazole	125	azoxystrobin	125			35	200-400	Medium
Caligula	1	1.2	1.2	prothioconazole	125			fluopyram	125	7	200-300	Medium
Impact	1	0.5	0.5	flutriafol	125					28	Min 200	Medium
Kumulus DF, SOLFA	2	10	NS	sulphur						End Aug	Min 250	Medium
Microthiol Special	2	10	NS	sulphur	800					End Sept	200-600	Medium
Revystar XE	2	1.0	NS	mefentrifluconazole	100			fluxapyroxad	47.5	28	150-400	Medium
Thiopron (be aware of buffer zone restrictions)	2	9.7	NS	sulphur	825					NS	200-600	Medium

Product Example	Powdery Mildew	Rust	Ramularia	Cercospora*
Angle/Priori Gold	✓	✓	✓	✓
Caligula	✓	✓	✓	✓
Impact	✗	✗	✓	✓
Revystar XE	✓	✓	✓	✓
Sulphur (e.g. Kumulus, Microthiol)	✓	✗	✗	✗

\* Potential decrease in efficacy of some products, if resistant strains are present

Fig 4: Fungicide options for 2023 (View [BBRO Crop Protection options-2023](#))

**Bacterial leaf spot** - more bacterial leaf spot in crops has been reported this season than usual, especially where crops are or have been stressed. This will be due to the warm and wet conditions. Remember that this is a bacterial disease and fungicides will not provide any control. Therefore, be careful not to confuse bacterial leaf spot symptoms with those of cercospora, applying a fungicide unnecessarily. Bacterial leaf spot symptoms are more irregularly-shaped spots/lesions than cercospora, with a tan centre and deep brown/black borders. These often occur more frequently on the leaf margins compared to cercospora and there is usually some yellowing of the leaf around the infected spots/lesions. The spots can coalesce into areas of necrosis which may then collapse leaving holes in the leaf.



Fig 5 Bacterial leaf spot - note the more irregularly-shaped lesions

#### **Patches or areas of poor growth and yellowing in fields.**

Poor areas of growth, especially if occurring in patches may be nematode related although poor soil structure or low pH or nutrient deficiency may also be factors. Lift plants very carefully and check roots for any signs of the immature white female BCN cysts. These are the size of 'pin heads' and just visible without magnification. Damage may also be due to free living nematode which are not visible to the human eye. Recent rain will have encouraged nematode activity. Mark-up any suspected nematode patches area for soil sampling in autumn. Where root systems are damaged and small, nutrient uptake will be compromised. Foliar feeding with essential nutrients can help crops. Remember, on land where BCN is present, consider growing nematode tolerant varieties as part of your control strategy.



Fig 6: Canopy feeding damage. Tortoise beetle (left) caterpillar feeding damage (centre) and beet moth damage (right)

**Leaf feeding pests** - there are signs of feeding damage to leaves but at this stage, this is not expected to cause significant yield loss. Tortoise beetle have been found again this year in crops. This is an uncommon pest. It tends to form more regular circular holes in the leaf when feeding than other leaf-feeding caterpillars. Some Silver Y moth caterpillars have been observed in crops but not at a level not associated with significant yield loss, especially where healthy canopies exist. A threshold of 5 caterpillars per plant is usually associated with yield loss and the possible need for control.

**Beet moth** – a couple of isolated cases of feeding damage have been reported in Suffolk, one at a location where there was previous incidence in 2022. Overall, the incidence remains low. Remember to check in the crown of plant for signs of feeding and especially the black frass produced by the larvae. Mark up areas where feeding is suspected and revisit regularly to keep a check on damage.



## EVENTS

**Our next in-field events will take place on Tuesday 12<sup>th</sup> September and Thursday 14<sup>th</sup> September. Booking will be opening shortly.**



## CONTACTS

British Beet Research Organisation, Centrum, Norwich Research Park, Colney Lane,  
Norwich, NR4 7UG

**Prof 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

**Stephen Aldis** [stephen.aldis@bbro.co.uk](mailto:stephen.aldis@bbro.co.uk) 07867 141705

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



## BASIS POINTS

Two BASIS points in total (not per bulletin) have been allocated for the period between 01/06/23 and 31/05/24 reference CP/126447/2324/g. To claim these points please email [cpd@basis-reg.co.uk](mailto:cpd@basis-reg.co.uk)

Two NRoSO points in total (not per bulletin) have been allocated between From 1st June 2023 to 31st August 2023 - NO500858f and from 1st September 2023 to 31st August 2024 - NO500860f. To claim these points please email [nroso@basis-reg.co.uk](mailto:nroso@basis-reg.co.uk).