



Issued: 6<sup>th</sup> May 2020



## IN BRIEF

- Recent rain has assisted with later germination of seed as well as encouraging rapid growth of emerged plants. Many crops are at variable stages of development with two-stages of emergence apparent.
- The BBRO aphid monitoring programme (via BBROplus) depicts that numbers continue to increase particularly in East Anglia. Threshold has been reached in many crops, even though they may only be at the 2-4-leaf stage and foliar insecticide programmes need to commence. It is vital to assess each crop carefully for threshold.
- Globular springtails are abundant and are, at times, being misidentified as aphids. If in doubt check with the BBRO.
- Leaf miner egg numbers are increasing in crops. Check for these too.
- Many crops have had their first T1 post-emergence herbicide application. The rain has encouraged a 'flush' of weed growth and weeds such as fat hen need careful monitoring for timings of subsequent applications.
- Potato volunteer are also growing rapidly so keep a watch on the size of these, especially where clopyralid is going to be used.
- Make sure crops have their full nitrogen requirement once the crop is fully emerged and beginning to develop. Rapidly growing crops may also require manganese to assist with new leaf growth.



## ADVISORY

### Aphid control

Aphid numbers continue to build rapidly, despite the cooler, damper weather at the end of last week. Many crops are now close to or at threshold. Some crops have already had their first aphicide treatment and we at the BBRO have already had to spray several of our trials to limit the build-up of aphids and future virus spread. Please check crops as a matter of priority and treat if above threshold (see below). The warm settled weather forecast until Sunday (10<sup>th</sup> May) will encourage further large flights of aphids into spring crops such as beet.

The BBRO aphid tracker tool is available to all UK growers and sugar beet agronomists on BBROplus. If you are not registered please do so as the information is updated daily as counts become available.

In addition, BBRO is monitoring winged aphids in the yellow water pans too, although we are unable to test all the aphids for virus this year due to the COVID-19 situation. Each week we are analysing a selected number of aphids caught from across the six BBRO trials sites as well as from

other locations across the four factories. Of 92 aphids collected up to 30<sup>th</sup> April 2020 (from BBRO and Bury factory area sites) none were found to be carrying BMV.



*Pic 1: Check your crop for green wingless aphids. Photo courtesy of Martin Cox, Blackthorn Arable Photography.*

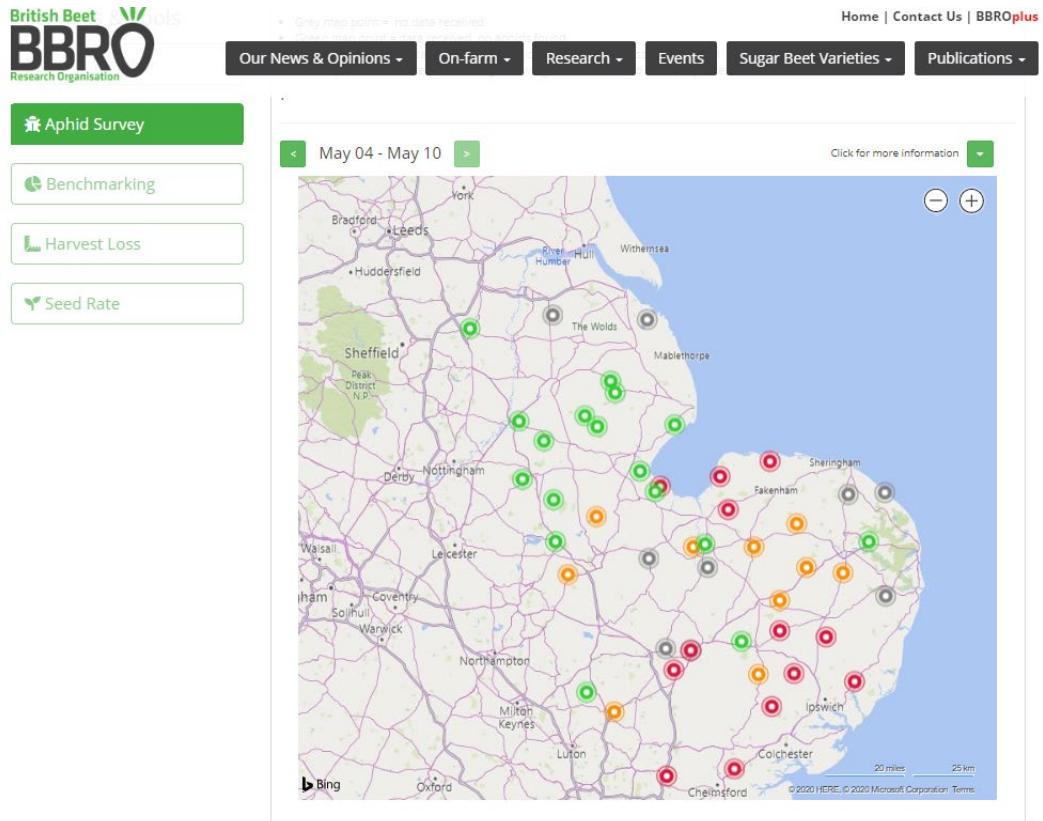
It is imperative that all foliar insecticides are applied at the threshold **of 1 wingless aphid per 4 four plants** up to the 12-leaf stage.

It is important to look at plants closely as recent rain may have forced aphids into the heart of plants, additionally, aphids are not evenly distributed across fields. When checking for aphids in crops, check sheltered field margins, especially the leeward (downwind) of shelter belts and the leeward side of any hills and in hollows. This is where aphids can often be found in greater numbers. Also, if there is oilseed rape grown in proximity, check in areas of the field nearest to this as this may be the local source of aphids.

Evidence indicates that very young plants are highly susceptible to virus transmission, so an early application of foliar insecticide may be required. **2020 insecticides options include Biscaya, Teppeki and InSyst.** Alternating insecticides with different modes of action is a recognised anti-resistance strategy., The advice remains to begin with a neonic – either Biscaya or InSyst – then switch to Teppeki for the second spray and back to a neonic for the third. If a fourth spray is needed, it will have to be another neonic, which is not ideal, but the only option.

Make sure you:

- Follow the label and EA conditions regarding water volumes.
- Avoid applying insecticides with herbicides, especially at low water volumes.
- If you are looking to add an adjuvant with the insecticide you should check all labels carefully for details.



Pic 2: Aphid Survey data available via [BBROplus](https://www.bbropius.com) provides timely information to UK growers and their agronomists.

### Leaf miner eggs and larvae

Increasing numbers of first-generation leaf miner eggs are now being reported. These are just starting to hatch, the larvae will mine into leaves over the coming days causing blistering and leaf damage as the larvae grow. Leaf miner eggs and emerging larvae may be indirectly controlled by the neonicotinoid sprays if beet are being treated for green wingless aphids but the emergency authorisations for Biscaya and Insyst do not cover their use for leaf miner control. Several pyrethroid products do have leaf miner control on their label but their use can impact beneficial insects that will be crucial this year. It highlights the challenges the crop faces this year, with limited plant protection products, following the mild winter.



Pic 3: Increasing number of leaf miner eggs being found across the area.

The threshold for leaf miner control is when the **number of eggs and larvae exceeds the square number of true leaves**. For example, a plant with four true leaves would need a population of 16 or more eggs and larvae to warrant any treatment.

### Seed germination and development

- The dry conditions in April have resulted in some variable germination. Emerging seedlings have also been affected by soil pest damage (e.g. flea beetle, pygmy beetle, symphylids and leather jackets) and bird grazing. Consequently, some crops are looking quite variable.
- Any large blocks of seed which has not germinated needs to be investigated. Check for signs of the seed cracking and hypocotyl (shoot) and radicle (root) development. Recover any intact seed and place on moist tissue in a warm environment to check for germination.
- Make sure you have a note of the seed treatment, variety, and the seed lot number. All relevant information is on the seed label on the box of seed.
- This can be checked against the official germination tests undertaken on the seed.
- BBRO also drill and grow plots of most commercial seed stocks and this can be used as a reference point if issues with seed suspected.



## EVENTS

### **BeetField20 – Virtually Live! 6<sup>th</sup> – 10<sup>th</sup> July**

Watch-out for our programme of short presentations being released as of the 6<sup>th</sup> July, culminating with a live webinar with Prof Mark Stevens, Dr Simon Bowen and the wider BBRO team on Friday 10<sup>th</sup> July – all streamed directly to a screen near you!

#### **Monday 6<sup>th</sup> July: RL 2021 varieties and Conviso technology**

Presented by Mike May (RL Board Chairman) and Daniel Godsmark (BBRO)

#### **Tuesday 7<sup>th</sup> July: Varietal traits: Pest & disease resistance and drought tolerance**

Presented by Dr Alistair Wright (BBRO) and Georgina Barratt (PhD student with University of Nottingham)

#### **Wednesday 8<sup>th</sup> July: Soil Management; variable drilling, drill testing results and nutrition**

Presented by Dr Simon Bowen (BBRO) and Stephen Aldis (BBRO)

#### **Thursday 9<sup>th</sup> July: Putting the ABC (Aphids-Beneficials-Control) into IPM**

Presented by: Prof Mark Stevens (BBRO)

#### **Friday 10<sup>th</sup> July: Beeting Change with BBRO**

Join us via our website link to speak to the team and hear growers' questions.



## CONTACTS

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

**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 01/06/19 and 31/05/20 reference **CP/84954/1920/g**. To claim these points please email [michele@basis-reg.co.uk](mailto:michele@basis-reg.co.uk)

Two NRoSO points in total (not per bulletin) have been allocated between 01/06/2019 and 31/05/2020 reference **NO466952f**. To claim these points please email [NRoSOCPSD@cityandguilds.com](mailto:NRoSOCPSD@cityandguilds.com)