British Beet BBRO Research Organisation

Advisory Bulletin

Issued: 9th June 2020

IN BRIEF

- **Most crops have now received some much-needed rain with most areas receiving more than 12mm over the weekend. Spring 2020 has been the fifth driest and the eighth warmest spring on record for the UK. Additionally, records show 696 hours of bright sunshine in England, the highest on record by some 102 hours (Met office data).**

- **Crop canopies will develop rapidly following the rain. Make sure all crops have received all their nitrogen fertiliser and that foliar manganese is applied as new leaves expand and develop**.

- **The rain and strong winds will help to suppress aphid numbers, but numbers are likely to remain high and it is important to re-assess crops for thresholds. Check the range of growth stages across fields and use the youngest growth stage as your guide. Check areas of the fields were crops are more backward.**

- **The first reports of virus yellowing in crops have now been received.**

- **There is still uncontrolled beet growth on old beet clamps and spoil heaps. These MUST be controlled to prevent any further spread of virus into crops.**

- **The rain will re-activate residual herbicides, but some larger weeds may grow away and not be fully controlled. There may also be a flush of new weed growth. Monitor weeds carefully over the next 5-10 days to decide on the need for any further herbicide applications.**

ADVISORY

Aphids and virus-transmission

Aphid numbers remain high, although the recent rain and cooler blustery weather has helped to suppress activity. Last week, in untreated plots within the BBRO aphicide trials, green wingless aphid numbers had reached 60 per plant at Bracebridge (near Lincoln) and over 10 per plant at Rougham, near Bury St Edmunds, although there was evidence to suggest that numbers were declining naturally by the second assessment last Friday. Numbers of all predators appear to be building.

The first symptoms of virus yellows have been reported in the Bury St Edmunds and Wissington factory areas.

Continue to assess your crops, particularly late sown or mixed growth stage crops, for aphids and adhere to spraying advice taking action as soon as threshold is reached, that is, 1 green wingless aphid per 4 plants up until 12 leaf stage or one green wingless aphid per plant above the 12 leaf stage.

Aphid data remain available to all growers and agronomists on the BBROplus website and a more detailed aphid/aphicide Q&A is available in Advisory Bulletin 7.

Leaf Miner activity

Few new reports of leaf miner activity have been received. Earlier damage remains visible on the oldest leaves but it is more than likely we are between the first and second generation of this pest at present. It is important to remain vigilant and check your crop frequently.

Downy mildew

Low levels of downy mildew have been observed over the last 10 days, although we do not anticipate this disease to be a major problem this year due to the dry weather in April and May.

Nutrition

Ensure crops receive sufficient manganese when leaves are growing rapidly. More than one spray is generally recommended. Manganese does not move well from leaf to leaf and when new leaves are being produced it is important to ensure the news leaves receive manganese. Make applications 7-10 days apart.

Pic 1: Manganese deficiency

Check for any boron deficiency especially on sandy and alkaline soils. The dry conditions may have caused deficiencies. Symptoms may include proliferation of small centre leaves with some black necrosis in the growing points. Leaves may show netting and cracking of the petioles (see below) Plants may also show a flat prostrate growth habit. A range of soluble forms of boron can be used as foliar applications. Symptoms may disappear, especially on new growth following the rain, so keep a careful watch.

Pic 2: Boron deficiency

Ensure all the nitrogen has now been applied to the crops.

Magnesium and sulphur may also be in short supply in some crops, especially those on light soils. In most cases, this will be due to the previous dry conditions and as plants pick up moisture and grow, symptoms will disappear.

A three-year series of BBRO trials on the use of foliar biostimulants (amino-acids, phosphites, seaweed and humic acid -based products) has shown that there was no consistent yield response to a range of different products when applied to healthy growing crops. This was across a range of soil types, locations, and varieties.

In backwards crops, especially where rooting is poor, crops may respond to a general foliar nutrition spray but BBRO has little data to support this. A foliar spray containing a range of macro (N, P,K) and micro nutrients (Mn, Mg, S, B, Ca, Zn, Fe, Cu, Mo) is likely to be the most cost-effective approach.

Herbicides

Weed control remains problematic with larger weeds, especially black bindweed and fat hen, growing away and a potential new flush of weeds expected following the rain. Ensure you tailor your active mix and rate to what is growing. The table below shows the strengths of key beet herbicide actives.

Active	Strength
metamitron	mayweeds, knotgrass, annual nettle, fat-hen, annual meadow grass
phenmedipham	black-bindweed, fat-hen, charlock, ivy-leaf speedwell, volunteer OSR
ethofumesate	cleavers, knotgrass, black-bindweed,
trifsulfuorn-methyl	volunteer OSR, fool's parsley, mayweeds, cleavers, brassicas
clopyralid	volunteer potatoes, thistles, mayweeds, black-bindweed
lenacil	brassica species, blach-bindweed, knotgrass

Check all product labels for maximum permitted dose, and latest date of applications.

Continue to be careful with the use of adjuvants such as mineral oils. Firstly, it is important to check there is approval for use on beet but also check temperatures, crop growth stage and rate of use information. Any crops under stress will be more susceptible to potential checks in growth.

EVENTS

BeetField20 – Virtually Live! 6th – 10th July
Watch-out for our programme of short presentations being released as of the 6th July, culminating with a live webinar with Prof Mark Stevens, Dr Simon Bowen and the wider BBRO team on Friday 10th July – all streamed directly to a screen near you!

Monday 6th July: RL 2021 varieties and Conviso technology
Presented by Mike May (RL Board Chairman) and Sarah Cook (ADAS)
Tuesday 7th 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 8th July: Soil Management; variable drilling, drill testing results and nutrition
Presented by Dr Simon Bowen (BBRO) and Stephen Aldis (BBRO)
Thursday 9th July: Putting the ABC (Aphids-Beneficials-Control) into IPM
Presented by: Prof Mark Stevens (BBRO)
Friday 10th July: Beeting Change with BBRO **LIVE DISCUSSION SESSION**
Join us via our website link to speak to the team and hear growers' questions.

Click here to REGISTER

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BASIS POINTS

Two BASIS points in total (not per bulletin) have been allocated for the period between 01/06/20 and 31/05/21 reference **CP/100686/2021/g**. To claim these points please email michele@basis-reg.co.uk

City and Guilds are currently closed due to Covid19. NRoSO points will be made available as soon as possible.