



7th June 2024



IN BRIEF

- The first 2024 virus yellows symptoms have been observed in Norfolk and Suffolk.
- **If aphid threshold reached and a third spray required we do now have EA Approval for Insyst as a third spray for non-Cruiser SB treated sugar beet.**
- In general, Cruiser seed treatment has held aphid populations. **Expect Cruiser treatment to be effective for 8-10 weeks from drilling.** If nearing or beyond 8 weeks check crops, especially if below the 12-leaf stage.
- Over last 7 days the generally cooler and windy weather has helped limit further aphid build up. However, don't be complacent as with any warmer weather forecast, numbers could still increase. Continue to monitor crops particularly in sheltered areas.
- Beneficial insects can now be found easily in most fields.
- Multicrowning evident in some crops. This is usually down to earlier thrips or bird damage removing the main growing point of the plant.
- Crop development remains variable across the beet area. More advanced crops are at 8-12 leaves and beyond, but some are at the 4-6 leaf stage (and relatively small). Colder soil types and poorer soil conditions, along with a lack of warmth and sun is holding back leaf production and expansion in some crops. Foliar nutrition may help slower crops develop.
- Some further pest and disease issues being found in crops (downy mildew, aphanomyces, leaf miner, nematodes and bacterial leaf spot).
- Some cases of herbicide damage have been identified following the use of Lenacil.
- [Aphid Survey – now live](#)



ADVISORY

Virus yellows and aphid update

The first virus yellows symptoms have been recorded in commercial crops in both Norfolk and Suffolk this week, reflecting aphid activity and virus infection about 4-5 week ago.

To date 1535 aphids have been tested of which, 4 were found positive for beet poleroviruses.

Aphid numbers have dropped in the yellow water pan network with no *Myzus persicae* or *macrosiphum* identified in the 30th May catch and only 6 *Myzus persicae* identified so far in the 3rd June catch.

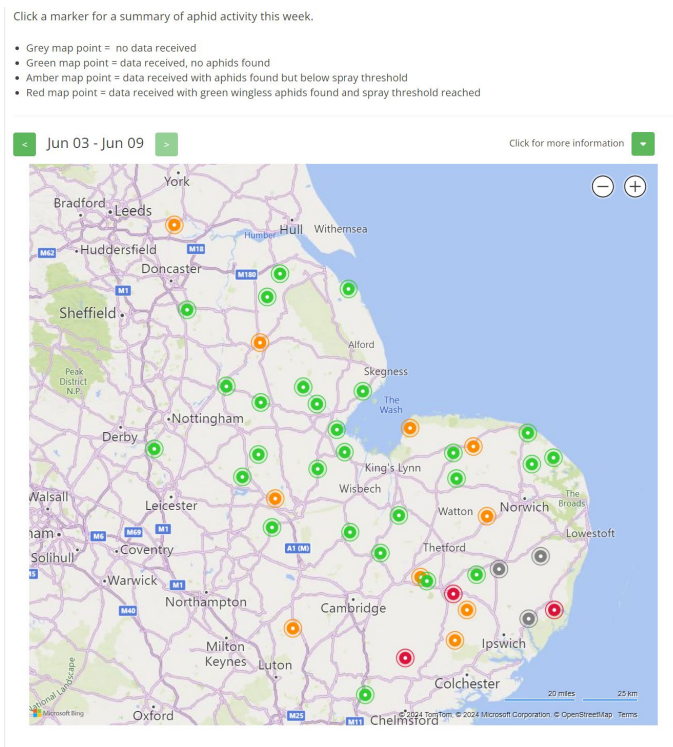


Figure 1: Aphid survey map from the 7th June 2024.

Pests and diseases

Leaf miner

Both eggs and larvae have been found in the crop, but currently at a relatively low level. The cigar shaped eggs can be found under the leaf but the main tell-tale signs are translucent patches on the leaves where the larvae have burrowed between layers, these patches will then turn necrotic. Once the larvae enter the leaf they are very hard to treat, but the first generation are not normally an issue. Where we have seen widespread problems in the past has been with generation 2 and 3 with higher levels of leaf damage. Currently, CruiserSB treated crops will have some incidental protection against this pest, the only other registered treatment would be with a pyrethroid, so please consult your agronomist before any action is taken, especially as 80% of *Myzus persicae* are resistant to this active ingredient.



Figure 2a: leaf miner eggs



Figure 2b: Leaf miner larvae inside the leaf Figure 2c: Early season leaf miner damage

Downy Mildew

The first signs of downy mildew have been recorded in the crop and in most years it is usually first seen at the end of May/June. It is usually a sporadic issue and is probably being favoured by recent weather. The classic symptoms are a purple/grey fungal bloom in the heart leaves. With time this can also lead to yellowing on older leaves which could be confused with virus yellows symptoms.



Figure 3: Downy mildew

Bacterial leaf spot

Bacterial leaf spot has been reported in some crops over the last week.. This has again been caused by the recent wet and mild 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, and therefore 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



Fig 4: Bacterial leaf spot - note the more irregularly-shaped lesions.

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.

Crop development and nutrition

Whilst most of the earlier crops, drilled into good soil and seedbed conditions are now rapidly developing canopies, some of the later crops, sown into wetter conditions and where there has been subsequent significant rainfall (particularly on heavier soil types), are slow to develop leaf canopy. A range of pests are grazing on crops (both above and below, including some free-living nematode feeding on roots which are also contributing to some slow and backward growth.

Where the growing point has been damaged, or eaten (e.g. thrips, bird damage or even fertilizer prills sticking in the heart leaves burning the growing point), the plant may respond by producing multiple new secondary growing points. This is called multi-crowning. Plants usually grow away to produce normal roots but can initially develop a squatter, bush-like growth habit.



Figure 5: Multi-crowning in 2021 showing how plants grow on to produce normal roots despite large number of petioles.

Blackleg symptoms (Aphanomyces) are evident in some fields too and resulting in areas of backward plants across fields. Severe cases of aphanomyces, on lighter soil types, are leading to significant plant loss.

Figure 6: Aphanomyces image from BBRO Plant Clinic





Root damage by both free-living and cyst nematodes may also be stunting growth in parts of fields. Immature white cysts of BCN may now be visible on infested roots as shown Figure 7 - left

It is important to optimise the supply of nutrients to crops to assist with leaf growth, especially where root systems have been compromised by current weather and/or pest and disease.

- If you have had a large amount of rainfall, some of the applied nitrogen may have been lost from the rooting zone of young plants. Plants may appear stunted with small leaves (with little progressive growth after period of warmth) pale and may show redding and the petioles. Applying a small additional amount of top-dressed nitrogen may still be an option.
- Apply 10-20 kg N/ha will ensure availability in the topsoil profile. Be mindful to keep within the limits of N-Max (120kgN/ha)
- Apply manganese and magnesium as **foliar** sprays as soon as there is sufficient canopy (4-6 leaf stage). Don't delay and do not wait until symptoms appear.
- Where crops appear persistently backwards and/or are affected by pests, check the potential cause by looking at the root system. Applying some foliar nitrogen and phosphorus along with the manganese and magnesium as a **foliar** treatment can help with getting nutrients into the plant to encourage growth.
- Manganese and magnesium products are also likely to provide some sulphur. If not, consider applying some sulphur. Boron and zinc may be low in crops on sandy, thin, and higher pH soils but unlikely to be essential to many crops at this stage.
- If applying foliar nutrients, target a programme of application of 1-3 kg/ha of each nutrient at each application. Remember, foliar feeding is best undertaken as a 'little but often' approach. Avoid applying foliar nutrients to plants in hot sunny conditions.

Emergency Authorisation approved. ([See here for full details](#))

This Emergency Authorisation allows a second foliar spray of 'InSyst' on non-Cruiser SB treated sugar beet crops to aid control of the peach-potato aphid (*Myzus persicae*) and prevent virus yellows infection. Key points:

1. Application must only be in sequence - following a first foliar spray of 'InSyst' and a second foliar spray of flonicamid (e.g. Teppeki);
2. This EA is for non-Cruiser SB treated crops only. You **MUST** not spray Cruiser SB treated crops, in accordance with the stewardship agreement ([Cruiser stewardship](#));

3. As part of the stewardship agreement around this EA, the following information must be recorded by the user and submitted to British Sugar by 30 August 2024;
 - The date(s) and location(s) of any second application of 'InSyst' and the number of hectares treated in accordance with this emergency authorisation
 - Aphid counts and crop growth stages at the time of decision
 - The basis of the decision making on whether to apply foliar spray(s) during the susceptible growth stage period, including any 3rd foliar application (i.e. a second application of 'InSyst').

Weed control

We have received an increasing number of damage reports from the use of lenacil this year (please see Advisory Bulletin No 9), and will shortly follow this up with a video from the BBRO herbicide trials

Summary of Lenacil information:

- We caution against using lenacil on sands, stony or gravelly soils and soils with more than 10% organic matter, especially as the majority of the beet growing area is experiencing higher than average rainfall this season
- Where using lenacil on other soil types take care with tank mixes and make sure they are fully supported by manufacturers. In particular, make sure mixes that contain clopyralid and triflusaluron-methyl are supported before using
- Check that adjuvants rates are used according to weather conditions
- Crops that are at 2 to 4 leaves and growing fast can be just as sensitive to herbicide damage as younger plants so take care with sprays when spraying in warm conditions and cloudless skies
- In the majority of cases injured plants will recover. In a few cases, generally in spray overlaps plants may not survive, check to see if growing points are still present and viable before taking the decision to re-drill

Stewardship of Cruiser SB crops - reminder

There are several key conditions summarised below that must be adhered to:

- A maximum seed rate of 1.15units/ha of treated seed. If there are concerns about poor establishment and a higher rate of seed is required, untreated seed can be used but the rate of Cruiser SB treated seed must not exceed 1.15 units in each hectare drilled. It is essential to make accurate records of where all Cruiser SB treated seed is drilled within fields.

- Careful and targeted use of herbicides is required to minimise the number of flowering weeds in treated sugar beet crops and reduce the risk of indirect exposure of pollinators to neonicotinoids. The use of BASIS recommended herbicide programmes must be adopted by growers and their agronomists. Ensure all drill operators are aware of the [guidelines associated with the use of Cruiser SB treated seed](#), particularly ensuring all drilled seed is covered.
- No thiamethoxam seed treatment i.e. Cruiser SB may be used on the same field area for 46 months from the date of sowing treated sugar beet seed in 2024.
- **No Cruiser SB treated seed can be used after 1 June 2024**, this includes placing the product on the market, use, storage and disposal of unused stocks. This is regardless of any unfavourable weather conditions, e.g. extreme wet, that may result in a delay to drilling and also includes any re-drilling of treated sugar beet from crop loss (due to wind blow or capping) on the same field area for 46 months from the date of sowing treated sugar beet seed in 2024. This is to minimise the risk of residues being acquired by succeeding flowering crops or weeds and hence exposing bees and/or other pollinators to neonicotinoid seed treatments.



EVENTS

Find us at the Morley Innovation Day – 20th June. Please see below to book.

Morley Innovation Day 2024




Morley Innovation Day
including the
AHDB Strategic Cereal Farm East Open Day

Thursday 20th June 2024
Opens at 10am
Last tour starts at 2pm

Morley Farms, Deopham Road,
Morley, Wymondham, NR18 9DF
Free lunch and refreshments.

what3words: responses.tucked.defender

The event and parking are ½ mile from the main farm.
Follow the signs on the day.



The Morley Innovation Day showcases the latest arable advice and research from UK agricultural businesses and research organisations. This free-to-attend event features a mix of field-based demonstrations and static exhibits, enabling attendees to interact with leading industry experts. This event is made possible by the unique relationship between The Morley Agricultural Foundation and NIAB, delivering farmer-facing long-term agronomy research.

NIAB Field Demonstration Tours
Access NIAB's latest agronomy and soils research and demonstrators at Morley Farms, alongside regional variety and agronomy advice from our regional agronomy team and crop specialists. Tour groups start in the demonstration fields at regular intervals from 10am through to 2pm, and include:

- Winter wheat varieties - Clare Leaman
- Barley varieties - Patrick Stephenson
- Cereal disease management - Aislinn O'Donoghue

EVENT TIMETABLE

9.30am	Registration open
10.00am	NIAB field demonstration tours start
12.00-1.30pm	Lunch
2.00pm	Final field tours
4.00pm	Event closes

Please register on the NIAB website:
bit.ly/MorleyInnovationDay2024



NIAB Soils and Farming Systems Team 

NIAB Soils and Farming Systems team will be on hand to discuss the latest research on assessing how diverse wheat lines meet regenerative agricultural practices. In addition to the Morley Soil and Agronomy Monitoring Study (SAMS) and other long term experiments at Morley.

The Morley Agricultural Foundation 

Some of the current cohort of TMAR funded PhD students will be demonstrating their work to date. The subjects include: wheat genetic improvement to rooting, nitrogen efficiency, and septoria resistance.

AHDB Strategic Farm East 

AHDB will present the research underway at the new AHDB Strategic Cereal Farm East, hosted by David Jones at The Morley Agricultural Foundation. Topics will include cultural control of grassweeds, decision support for managing BYDV risk and improving nutrient use efficiency.

BBRO (British Beet Research Organisation) 

BBRO will be on hand to discuss topical issues of the season, including Virus Yellows.

Maize Growers Association 

The Maize Growers Association (MGA) proudly presents a diverse range of trials at Morley Farms, showcasing innovative approaches to maize growing. These trials address key challenges growers face, aiming to optimise yield, enhance crop quality, and promote sustainable practices. Come and speak with us as we delve into distinct areas of investigation: Pre-Emergence & Post-Emergence Weed Control, Foliar Applied Nitrogen, Soil Nitrogen Mineralisation, Unconventional Maize, Reduced Herbicide Usage, Deep Drilling and Alternative Seed Dressings.

Agrovista 

A long term supporter of the Morley Innovation day, Agrovista technical staff will be on hand to discuss Project Lamport which is a series of long term trials. They investigate cultural controls to reduce the reliance on pesticides particularly to manage blackgrass and improving soil health, with a aim to continue profitable crop production.

Adams & Howling 

Adams & Howling will be discussing Malting barley both winter and spring and current market requirements.

Openfield 

Openfield will be in attendance to discuss grain marketing information. We are also very grateful to Openfield for sponsoring lunch.

John Innes Centre 

The John Innes Centre is a plant and microbial research centre based in Norwich. Visit us on the John Innes Centre stand to find out about our latest research highlights such as tackling Virus Yellows disease in sugar beet, identifying resistance to cabbage stem flea beetle in oilseed rape, using genome editing to improve future crops, development of Flerty Sense nitrogen sensors for understanding nitrogen availability and timing of fertiliser applications and Frezing solutions to disease in potato.

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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

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