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IN BRIEF

- Both wingless aphid numbers on plants and winged aphid numbers in yellow water pan traps have continued to build over the last 2 weeks. Indications are that aphid numbers are now beginning to increase in earlier drilled Cruiser-treated crops.
- Black bean aphids have also increased markedly too.
- Where there have been heavy rain showers, this may have reduced aphid populations. Re-assess crops after rain before deciding on the need for a foliar insecticide.
- Despite some crops now approaching the 12-leaf stage, it is essential to keep monitoring aphid numbers as the change to mature plant resistance is gradual.
- For crops with less than 12-leaves the threshold for aphicide is 1 green wingless aphid per 4 plants (5 green wingless aphids per 20 plants). Remember that where crops are at the 12-leaf and beyond, the threshold is 1 green wingless aphid per plant.
- Aphid predator numbers have increased in line with building aphid populations. Predation is very effective in controlling aphid numbers.
- Despite recent dry conditions, canopies have continued to develop, especially where moisture can be found in the ground. In many instances, crops are growing away from earlier impact of pest and herbicide damage and *Aphanomyces* infection. Persistently slow crops may still benefit from application of foliar nutrients.
- Monitoring for adult beet moth has identified the first winged adults in crops in Norfolk, Suffolk and Cambridgeshire.
- Weed beet and bolters continue to increase and need controlling.
- BBRO started monitoring conditions for cercospora from the beginning of June. No high-risk periods recorded during recent warm and humid weather. Check the BBRO website for details.



ADVISORY

Aphid monitoring

The BBRO aphid monitoring network provides a guide to the number of aphids in your area. Wingless aphids are being counted on plants at 46 sites. (Please refer to the BBRO website for latest information [Aphid Survey Dashboard - BBRO](#)).

- Grey map point = no data received
- Green map point = data received; no aphids found
- Amber map point = data received with aphids found but below spray threshold
- Red map point = data received with green wingless aphids found and spray threshold reached.

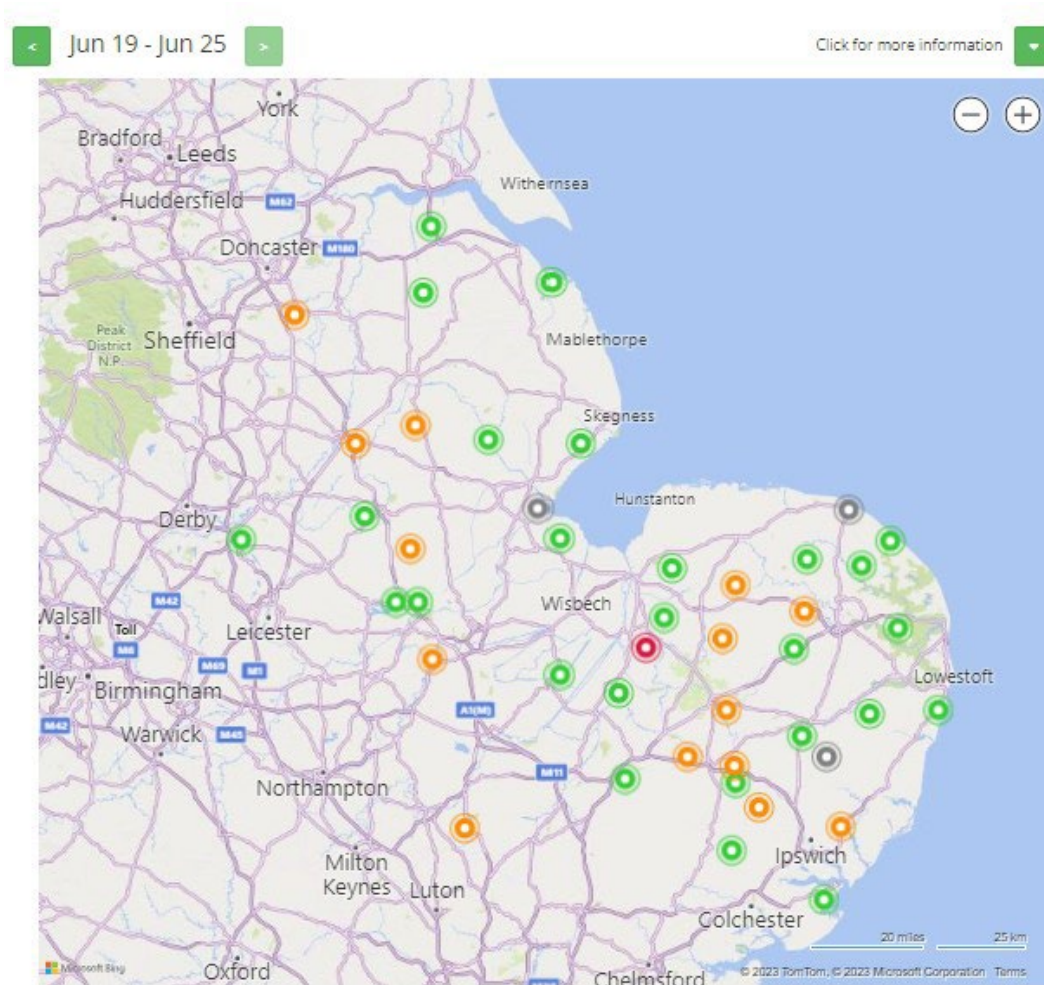


Fig 1: BBRO aphid monitoring map on 20th June

Aphid numbers are variable across the monitoring network, but we have seen a general increase over the last two weeks with more sites registering number above the threshold for spraying. Experiences show that where there has been heavy rainfall, aphid numbers may decline so it will be worth re-checking any crops after rain before deciding on the use of a foliar insecticide.

It is essential to now check both non-Cruiser and Cruiser treated crops for aphids. Cruiser - treated crops will be reaching the end of their Cruiser protected period, especially those crops drilled before the middle of April.

To date, there has been a lot of diversity in the species of aphids being found in crops. With regards to virus transmission in sugar beet, there are three species that can be vectors: the peach-potato aphid (*Myzus persicae*) the potato aphid (*Macrosiphum euphorbiae*) and the black bean aphid (*Aphis fabae*). **However, *Myzus persicae* is the key species as a vector of virus.**

For more info on aphid identification see <https://www.bbroy.co.uk/media/50728/aphid-id-home-print.pdf>

Remember that the BBRO network is a general guide to aphid numbers. We know that these can vary greatly between fields and even within. It is essential therefore that you assess your individual crops for aphids.

Ladybird and other beneficial/predator populations are also increasing, reflecting the low abundance of aphid prey.



Fig 2: Ladybird larvae enjoying an aphid banquet

Beet Moth

BBRO are monitoring adult beet moth numbers on each of the 12 main monitoring sites. The moth traps use a pheromone to attract adult beet moths but as this is an emerging pest in the UK we don't have historic data to help us make decisions about critical numbers and how accurate the traps are in attracting the beet moth adults. However, we have identified the adults in traps over the last two weeks and will continue to monitor numbers. Where adults are identified, vigilance will be required for caterpillars feeding in the canopy. We don't recommend using adult numbers as a basis for applying an insecticide. If caterpillar damage develops (leaf shredding or loss of new leaves in the crown) control may need to be considered. There is no precise caterpillar threshold established in the UK for controlling and there is only one product approved (Cythrin 500) for control of caterpillars in sugar beet. It is a pyrethroid and requires a high-water volume (min 600l/ha) to be effective. More importantly, remember its use will reduce aphid beneficials at a time where their predatory activity is greatest.

BBRO monitoring of adults and any caterpillar damage is on-going and we will continue to share information in the Advisory Bulletin.

Fig 3: Adult beet moth (right)



Fig 4: The adult beet moth is very small.

Adults are most active in the evening, night, and morning hours. They are small (micro) moths with a wingspan of 12-14mm. Forewings of the moth are narrow, pointed, grey-brown, with a yellow pattern and small black spots. Hindwings are light grey, with a fringe of long cilia (feather like 'hair'). Eggs are oval, white, with an iridescent tint and 0.5 mm in length. Females lay typically 2-3 eggs on both sides of beet leaves and on the petioles.

The caterpillars emerge approximately 5-10 days after eggs are laid and tend to feed on lower leaves in the canopy to avoid predation and where they are protected from extreme heat and rain. The caterpillars have a grey green body with vague reddish-brown length lines and a light brown head. They often hide at the petiole base or within bent edges of young leaflets of the central rosette. They can braid the central leaves together with cobwebs and eat through holes along the middle vein of the leaf. Typically, they develop to adults in 20-30 days, passing 5 instars before pupating. At final instar caterpillars are 10-12 mm long and grey-green in colour.

Caterpillars often pupate in the soil at a depth of 2-5 cm within small oblong cocoons covered with soil particles. Moths of the new generation can appear in 10-20 days depending on conditions.



Fig 5 & 6 Beet moth caterpillars, up to 12mm in length (often surrounded with black frass).

Fig 7: Shredded heart leaves, indicating presence of Beet moth larvae



Weed control (Courtesy of Pam Chambers, British Sugar)
Groundsel and mayweed control

Groundsel is not normally considered a problem in sugar beet but this season it seems to be appearing in quite a few fields and at high levels in some. For those with salad crops/herbs in the rotation control can be crucial. The active clopyralid (e.g. Shield Pro) is very useful on groundsel and also mayweed and would be first choice to include in a programme if either of these weeds are present at the post-emergence timings.

Sugar beet herbicides, important reminders

It is impossible to cover all key information, but Table 1 provides a few reminders. With labels becoming more complicated and differences occurring between products (although they contain the same actives) it is essential to check individual labels. In particular check the intervals between application and following crop drilling dates. Some of these restrictions are ‘Specific Restrictions’ and this means they must be followed. Also remember to check Harvest Intervals (HI) with some of the late drilled crops this season and especially if you are growing an ‘Early Beet Delivery’ crop as this will be more relevant than in other years.

See Table 2 for HI’s for some graminicide products, again remember to check individual product labels.

Table 1. Key information for sugar beet products

Active	Example Products	Specific Restriction (Unless stated otherwise)	Comments
clopyralid	Shield Pro Vivendi 200	Applications should be completed by end of June	Applies to all products containing clopyralid
clethodim, propaquizafop, cycloxydim, quizalofop-p-tefuryl,	Centurion Max, Falcon, Fusilade Max, Laser, Panarex, Conviso ONE	To avoid the buildup of resistance do not apply products containing an ACCase	Applies to all ACCase inhibitor herbicides

quizalofop-p-ethyl, fluazifop-p-butyl, formasulfuron + triflusulfuron-methyl		inhibitor herbicide more than twice to any crop.	
ethofumesate	Efeckt, Ethofol, Oblix MT, Betanal Tandem.	A maximum permitted total dose of 1.0 Kg/ha of active over a three-year period on the same field.	Applies to all products containing ethofumesate
ethofumesate	Efeckt, Ethofol, Oblix 500.	No food or feed crops except sugar beet, fodder beet, mangel and red beet may be grown within 120 days of treatment with ethofumesate	A specific restriction that applies to some ethofumesate containing products but not all, check individual labels.
lenacil & triflusulfuron-methyl	Safari Duo Active	The maximum total dose of lenacil must not exceed 450 g lenacil /ha and must not exceed 45 g triflusulfuron methyl /ha in any three-year period in the same field. A minimum interval of 6 months must be observed prior to the planting of a succeeding cereal crop, following treatment.	Restrictions are specific to Safari Duo Active
lenacil	Venzar 500 SC	A maximum total dose of 500 g/l lenacil per hectare may only be applied every third year on the same field.	Note the maximum total dose differs to that quoted for Safari Duo Active. Interesting!
foramsulfuron and thien carbazole-methyl	Conviso ONE	The following is advisory:- In the year of application, only winter wheat can be sown after the beet has been harvested. Plough or cultivate to 20 cm prior to planting, otherwise crop damage may occur.	

Table 2. Harvest Intervals for key sugar beet graminicides

Active	Example product	
clethodim 120 g a.i./litre	Centurion Max	56 days
clethodim 180 g a.i./litre	Varsity	Crop cover complete: leaves cover 90% of ground
clethodim 240 g a.i./litre	Juniper Max	Beginning of crop cover: leaves cover 10% of ground
cycloxydim	Laser	56 days
fluazifop-p-butyl	Fusilade Max	56 days Before 50% ground cover and harvest interval.
formasulfuron + triflusulfuron-methyl	Conviso ONE	90 days Before 8 leaves unfolded stage.
propaquizafop	Falcon	60 days
quizalofop-p-ethyl	Pilot Ultra	60 days
quizalofop-p-tefuryl	Panarex	60 days



EVENTS

**BBRO will be attending:
Royal Norfolk Show – 28th and 29th June (Innovation Hub)**

Summer Demo Farms will be held on the 18th and 20th July. Details will be issued shortly.



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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 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 [nrroso@basis-reg.co.uk](mailto:nroso@basis-reg.co.uk).