



Issued: 6th April 2022



## IN BRIEF

- Great progress has been made with drilling over the last week and it is estimated that more than 80% of crops are now drilled. Seedbeds have been exceptionally good with plenty of fine tilth and moisture. Some seedbeds are drying, and lighter land would benefit from some rain. Continue to monitor seed depth carefully and following rain, avoid drilling deeper than necessary if you have been drilling slightly deeper into dry soil.
- The warm temperatures last week have encouraged some rapid germination and some earlier drilled crops have emerged. There is some concern about emerged crops and the cold weather and frosts at the weekend but in most cases, these were not severe or persistent enough to cause damage, but it is worth checking crops for any signs of damage if plants were visible before last weekend.
- Many pre-emergence herbicides have or are being applied and thoughts are now turning to post-emergence programmes. Keep a close eye on weed growth in warm and moist conditions and don't delay spraying if problem weeds such as knotgrass, mayweed, redshank and pale persicaria are emerging.
- Some aphid activity on alternative overwinter host crops such as oilseed rape and brassicas has been observed, reinforcing the need to destroy growth on spoil heaps, or remaining beet piles so as not to provide a source of virus for aphids moving into beet crops.



## ADVISORY

### **Continue to monitor drill depth**

Keep checking seed depth to ensure it is placed into a moist layer of soil. Soil type and depth of cultivation will determine drilling depth to some extent but target seed at 2-3cm. In drier conditions, it is possible to drill at increased depth, up to 4-5cm, but no deeper. As soil moisture changes following rain or as it dries remember to reset depth. Don't go deeper than necessary.

Rolling after drilling can be a benefit to aid soil to seed contact, but it can also have negative outcomes. If you have achieved a good friable soil to drill into within the row, utilising clod pushers or row cleaners, rolling after drilling can push larger clods into the seed row, impeding

germination and establishment even if it looks better visually. The decision to roll should be considered when setting up a drill, especially with the use of clod pushers or row cleaners.

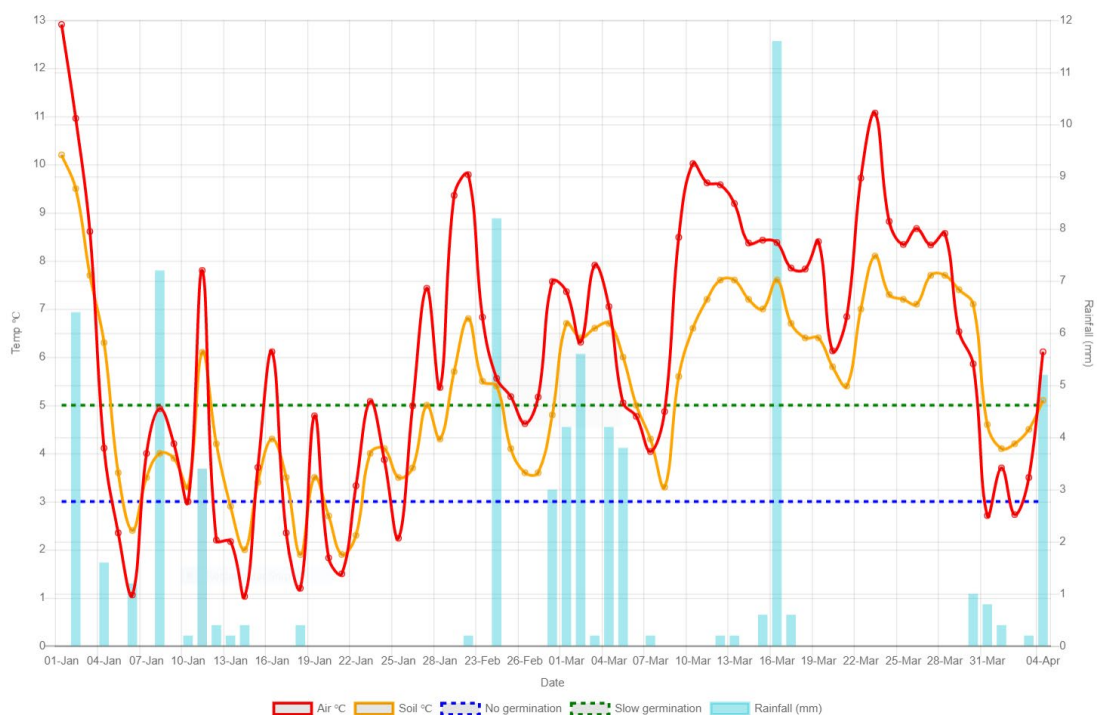
On headlands or in stony soils, mouse damage has been reported. Rolling in these situations will help reduce this.



*Fig 1: Signs of recent mouse damage at a BBRO trial site*

### Check on seed germination and emergence

The soil temperature graph below (courtesy of Germains) shows the large fluctuation in temperatures experienced over the last few weeks. This has encouraged rapid germination and emergence in some crops, but some recent frosts may be causing some concern. Check any crops which may have emerged or were close to emergence at the time of frost, especially lower lying or sheltered areas of the field. Any damage to seedlings will take several hours to show and will initially look like wilting before turning brown/black. Remember frost damage symptoms tend to stop at the soil surface as opposed to occurring deeper into the soil, the latter which may be indicative of root disease infection.



*Fig 2: Soil temperatures Bury St Edmunds (graph courtesy of Germains Seed Technology- Soil Temperature Guide on germains.com)*

At the cotyledon stage, the physiological make-up is designed to manage modest freezing conditions. Besides having thick, waxy cuticles, cotyledons contain high solute concentrations of minerals, sugars, and other compounds that act like a 'natural antifreeze' reducing the freezing point of the tissue. Older plants (2-4-leaf stage) do not have this elevated solute concentration, making them more susceptible to colder temperatures. If you are unsure on whether seedlings are going to survive mark out a length of drill and keep rechecking regrowth.



*Fig 3: Fully expanded cotyledons*

### **Don't delay with herbicides but watch weather conditions**

Don't miss the opportunity to use a pre-emergence herbicide. The use of a **pre-emergence** residual herbicide (ethofumesate, metamitron) can lengthen the time available to apply post-emergence sprays and may help sensitise weeds to post emergence application. In dry soils, pre-emergence activity will be reduced but will increase again with rain and will still add to the efficacy of any post-emergence sprays. Check latest label recommendations on timings and rates. Some products such as Obelix 500 , Effeckt and Ethofol (ethofumesate 500g a.i./L) have revised label authorisations which provide some wider options for use. Where blackgrass is expected then a pre-emergence spray containing ethofumesate should always be considered, unless the crop is on a black organic soil.

As beet crops begin to emerge, keep a close eye on weed growth and what weed species are present, especially if it is warm and soils are moist. **Don't delay in spraying post-emergence herbicides**, especially problem weeds such as knotgrass, mayweed, redshank and pale persicaria. Once these weeds reach the first true leaf stage, they are much harder to control. Remember to use adjuvants, where recommended, to help improve efficacy.

Keep a check on the beet crop growth stage bearing in mind that these may differ between varieties and avoid applying too early when the risk of damage may be higher. Additionally, keep a watch on the forecasted weather conditions, especially for periods of low temperatures, frost or high temperatures and light intensity as well as large fluctuations in day to night temperatures. These are some of the weather factors that can influence susceptibility to damage. In general, stressed crops are more susceptible to damage. Where there is a higher risk, it may be possible to reduce this by the choice of active and/or adjusting rates.

### **Tailor nitrogen rates**

A minimum of 30-40kg/ha of nitrogen at drilling will be sufficient to drive the early canopy growth to the 6-8 leaf stage, but don't delay in getting your additional nitrogen on to crops, especially if soils are becoming dry. Aim to ensure the remainder of your nitrogen is applied at around full emergence. Make sure there is sufficient time for top-dressed nitrogen to be washed into the soil and available to plants to drive rapid leaf growth. The high cost of fertiliser

means the economic optimum is below the standard recommendation of 120 kg N/ha. If you usually apply 120kg N/ha, consider reducing the overall nitrogen rate to 90-100 kg N/ha, especially if you have placed some of the nitrogen at drilling. Be more conservative in making reductions (use 100 kg N/ha) on very light or thin soils where the soil mineral nitrogen reserves may be lower.

### **Management of Cruiser & non-Cruiser seed stocks**

Remember that the maximum seed rate for **Cruiser SB treated seed is 1.15 units/ha** (115,000 seeds/ha). For non-Cruiser SB-treated seed, the standard seed rate recommendations can be followed. Remember to check the setting when switching between Cruiser and non-Cruiser seed stocks. If you have both Cruiser and non-Cruiser treated seed, ensure you keep the seed in the right boxes to avoid mixing these up and record where you have drilled different stocks. Remember, if you have to re-drill any crop, you must **not** use Cruiser-treated seed twice in the same field.

### **Remove all potential sources of virus**

As it becomes warmer, remember to keep checking around the farm for potential sources of virus (as well as other pests and diseases such as cercospora) for instance leaf growth on spoil heaps and any remaining beet clamps. Destroy immediately.



*Fig 4: Myzus persicae on broccoli, Suffolk (2<sup>nd</sup> April)*

BBRO has organised a network of over 40 monitoring sites across the sugar beet growing area and will be checking aphid numbers on both non-Cruiser and Cruiser-treated crops from the middle of April onwards. The Virus Yellows forecast anticipates the first peach-potato aphids to arrive from the 19<sup>th</sup> April onwards. This information will be reported weekly in the Advisory

Bulletin but more detailed information will be available via the BBROplus section of the BBRO website ([www.bbro.co.uk](http://www.bbro.co.uk)). Keep your eyes peeled for this information, as well as aphids in your own crops.

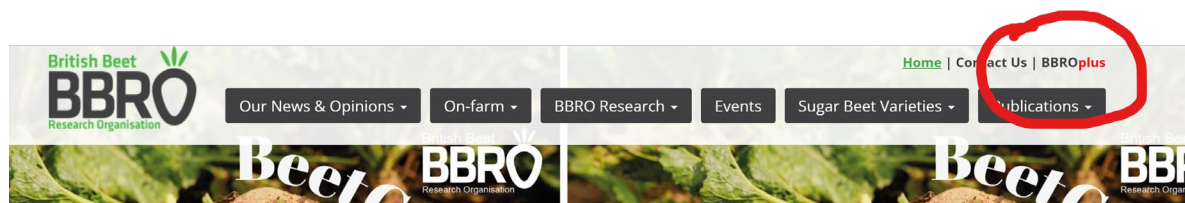


Fig 5: Register for access to the BBROplus site for more detailed aphid info.

## EVENTS

Coming soon: BeetField22, visits to Demo Farms across the region planned for mid May. Booking will be required.

## CONTACTS

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