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BeetTech23 Advisory Bulletin Special

It was great to see so many of you at the BBRO BeetTech23 events. We thought it useful to provide a summary of the key practical take-home messages as well as signposting some further information on the topics covered. Click the associated images to access the video of the presentation or read on for the key points.

Emerging Pest threats and IPM strategies – Prof Rosemary Collier, Warwick University



Beet moth (*Scrobipalpa ocellatella*)



- The beet moth is not uncommon to the UK but usually restricted to coastal areas and not previously linked to damage to sugar beet. Significant increase in numbers were reported inland in 2022 with extensive feeding damage to crown and young leaves in an area centred on Bury St Edmunds.
- Prefers hot, dry conditions as opposed to wet and humid. Outbreak likely to be related to the extreme drought conditions. Optimum plant density and moist microclimates will be less conducive to the moth. No clear indication of differences between varieties but those with fuller, more vigorous canopies may create a more humid microclimates which are less attractive to the beet moth.
- Overwinter survival is possible, so any crops close to outbreaks in 2022 may be at higher risk in 2023. Ploughing /deep burial of trash from infected crops will help reduce numbers.
- BBRO will using pheromone trapping to monitor adults as an early warning in 2023.
- Limited efficacy of foliar insecticides due to difficulties in targeting caterpillars in crown of plants. Early treatment with high water volumes may help improve control.

Aphids and Virus Yellows - Prof Mark Stevens, BBRO



- 2023 forecast will be available on the 1st March 2023. The threshold for Cruiser EA to be used is 63%. This accounts for control conferred by foliar insecticides.
- Average temperatures in Jan and Feb are making prediction very difficult. However, aphid arrival dates are expected to be later than last season.
- Cruiser was very effective in 2022 with 82% of treated crops having less than 0.1% virus. 85% of non-treated crops had less than 5% of virus, highlighting the role foliar insecticides played.
- The virus forecast in 2022 was 69%. First flight prediction of aphids was highly accurate.
- It is vital to destroy any source of virus, especially any frost-affected crops left in the ground, growth on spoil heaps and old clamps. Ensure cover crop are fully destroyed 5-6 weeks ahead of drilling to avoid a green-bridge.
- Focus on drilling into a good seedbed to encourage optimum populations. Remember, aphids are attracted to patchy crops.
- Depending on the predicted date of first arrival, using under sown barley as a camouflage crop may be an option but this is a challenging technique to get right, so wait until the virus forecast is known.
- BBRO will have its aphid monitoring network established across the beet area again in April 2023 (<https://plus.bbroy.co.uk/on-farm/member-area/aphid-survey/aphid-survey-dashboard/>). Make sure you keep in touch with aphid numbers from drilling onwards.
- Variety testing for virus resistance remains a key priority for BBRO. Potential new varieties with improved resistance are being identified. Remember there are three key viruses affecting sugar beet. Resistance to BYV (beet yellows virus) the most damaging variety is proving more difficult to progress.
- Testing of current RL varieties was challenging in 2022, as crop yellowing resulted from many different causes, especially the drought as the season progressed. Testing showed that relative variety performance was similar to 2021. [See project Verde results.](#)
- It is worth giving consideration to drilling the more susceptible varieties first in order to allow these to gain more maturity before aphids arrive. However, remember to check bolting susceptibility if drilling early.
- New innovative BBRO work on variations between strains of viruses has identified differences and this knowledge is now being used to support variety testing work.

[Click here to view the other presentations relating to our virus trials work.](#)



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