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Further blight complications

BP2023

Once every two years, anyone with a serious interest in the potato industry heads to the Yorkshire Event Centre for a specialist trade show. CPM attended BP2023 in Harrogate for insight into the latest sector developments, including what's happening with EU_43_A1.

By Janine Adamson

Attendance at industry trade shows can often be up and down, depending on whether field operations have to take priority and how pressured the day-job is. But with the continued threat of a Danish blight strain, BP2023 in Harrogate proved a lively platform for discussion.

Experts first highlighted the problem of EU_43_A1 in January 2023, with stewardship advice promptly issued from Syngenta due to the strain's resistance to the carboxylic acid amide (CAA) group of fungicides, including mandipropamid (found in Revus).

The advice included always mixing CAA fungicides with a partner product, alternating sprays with different modes of action, and to limit the number of CAA fungicides within the blight programme (as

recommended by FRAC guidelines).

Then in June it was announced that the Fight Against Blight (FAB) service which monitors genotypes and shifts in fungicide sensitivity was to continue after securing industry sponsorship.

No population change

FAB project leader Dr David Cooke from the James Hutton Institute presented this year's results live at BP2023. He says there have been no significant population changes in GB during 2023, with 36_A2 (51%) and 6_A1 (34%) still dominating the 830 genotypes isolated from 1,500 samples sent to FAB. As for EU_43_A1, according to the screening, it remains elusive.

Furthermore, sensitivity testing of the main GB genotypes against key fungicide actives (ametoctradin, amisulbrom, oxathiapiprolin, propamocarb and zoxamide) found no efficacy concerns this year.

However, Corteva Agriscience recently confirmed EU_43_A1 resistance to oxathiapiprolin (OXTIP) in some parts of northern continental Europe – as found in products such as Zorvec Enicade. And confirmation of a single finding of the strain in a sample taken at Teagasc's research station at Carlow, Ireland, further fuels concern, says the firm.

Harper Adams University's Dr Matthew Back says although the EU_43_A1 genotype hasn't been recorded in the UK, there's always risk from incursions via airborne sporangia. "These can travel distances over 40km and have been

“The introduction of new, non-clashing chemistry is essential.”

detected at 1km from the ground.

“If detected, it's important that the principles of integrated disease management are applied — paying ▶




Corteva recently confirmed EU_43_A1 resistance to oxathiapiprolin in some parts of northern continental Europe.

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David Cooke says the 36_A2 and 6_A1 strains of blight still dominate within GB but EU_43_A1 remains undetected.

► attention to sources of *Phytophthora infestans* such as dumps/cull piles and groundkeepers. It sounds simple, but these sources aren't always under the best management," explains Matthew.

James Cheesman, technical manager at Certis Belchim (sponsors of FAB), says that similar to advice from earlier in the year, growers must use all modes of action available when constructing balanced programmes. He stresses that fungicide groups should be mixed and alternated as much as possible, and incorporating multisite inhibitor mancozeb will also be important.

So on reflection, it could be argued that BASF launching a new late blight fungicide

at BP2023 was timed to perfection.

Matthew Goodson, BASF specialties market manager, says the two active ingredients found in Privest (ametoctradin+ potassium phosphonates) offer a synergistic effect when it comes to controlling the disease. "The aim is to build resistance early in the programme by working with the plant," he explains.

Ametoctradin is classified under the QoSI chemistry group, which Matthew Goodson says sets it apart from all other actives including traditional CAA and Qil chemistry options, meaning Privest is in a 'league of its own'. This is combined with potassium phosphonates to boost the plant's natural defences. ►

DeCyst developments

The latest results from the ongoing Defra/Innovate UK-funded DeCyst project were unveiled at BP2023.

The project focuses on factors that affect the performance of three solanaceous trap crops used for potato cyst nematode control — *Solanum sycmbriifolium* (DeCyst-Prickly), *Solanum scabrum* (DeCyst-Broadleaf) and *Solanum chenopodioides* (DeCyst-Podium).

Grown optimally, DeCyst-Prickly can reduce PCN populations by more than 75%, but inconsistent establishment has impacted adoption on-farm.

So far, results have been mixed due to seasonal extremes within the trial period, although this has presented an opportunity to understand the sensitivities of DeCyst products, says Produce Solution's Dr Bill Watts.

"We're pretty confident in the main variables to consider when planting DeCyst trap crops — moisture in the top layers of the soil at drilling and



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early establishment, seedbed consolidation for moisture retention and seed-to-soil contact, and consistency and control of drilling depth in the top 10mm of the soil.

"This means that drilling method is actually pretty flexible, as long as the soil conditions are correct," he says.

The project has also identified the importance of weed control due to solanaceous trap crops being highly susceptible to competition during early establishment.

"Once up and away, DeCyst products are very competitive, however limiting weed competition in the first few weeks after drilling is vital. We've investigated several herbicides and combinations and have subsequently identified a suitable active.

"Because there isn't an authorisation for this specific application, we're working with the manufacturer to apply for an Extension of Authorisation for Minor Use (EAMU)," says Bill.

In terms of the best DeCyst products for use in commercial farming systems, Produce Solution's James Lee says the answer could lie in blends.

"This is something that became apparent at our grower demonstration sites.

"Mixing DeCyst products together could increase the likelihood of a good stand and therefore greater opportunity for PCN control. Where one species may be challenged by seasonal conditions, another should succeed, in our experience."

Some might argue that funded research of this type fails to address real-life on-farm problems, however James says this hasn't been his experience. "Outreach has been an integral part of the project work — we've conducted two knowledge exchange events at our trial sites this year, a range of grower site visits and hosted retailers.

"Interest in trap crops continues to grow among



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growers and agronomists. As an industry, we must do all we can to support the continued approval of fosthiazate, however if we lose it, we still retain a number of IPM tools which will have to be used in a co-ordinated approach, throughout the farm rotation.

"The remaining nematicides will play an important role in this and, while breeding has focused on PCN resistance and tolerance for a number of years, we still only have a handful of truly sustainable varieties," stresses James.

"Our most recent trials have built on the work of 2022 and are showing the route forward quite clearly — we now have much improved agronomy guidelines which I'm confident hold the blueprint to success," he concludes.

The DeCyst project is a collaboration between Produce Solutions, Crop Health and Protection (CHAP), Harper Adams University and VCS Potatoes, supported by four potato growers — TC & N Taylor Ltd, J.M. Bubbs & Son, ME Furniss & Sons (Farms) and James Foskett Farms Ltd.

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According to Luke Pollard, tuber treatment *Honesty* not only gives comprehensive disease control, it also brings physiological benefits to the crop.

▶ “Privest introduces much-required variety to blight control programmes which is essential both for mitigating the risk of resistance development and efficacy,” adds Matthew Goodson. “We believe it gives the best start to a blight programme by going in early and strong, freeing up the ability to use other products later in the season.”

Specialities business development manager, Paul Goddard, agrees that EU_43_A1 and the associated limitations to CAA chemistry serve as a stark reminder of how swiftly disease evolution can impact crop protection. “That’s why the introduction of new non-clashing chemistry, like Privest, is so essential.”

Also under the spotlight was liquid tuber treatment, *Honesty* (fluxapyroxad). The SDHI fungicide targets a range of diseases including rhizoctonia, silver scurf and black dot, as well as having incidental activity

against dry rot and gangrene.

A rather eye-catching shade of bright blue, *Honesty* is approved for use on all potato crops whether that’s seed for seed, for ware or for processing. BASF’s Luke Pollard says the blue hue gives growers reassurance of consistent coverage, but the real magic is in the product itself.

“We’re really excited about *Honesty* because not only does it give comprehensive disease control, it also brings physiological benefits to the crop giving more even stolon initiation which results in more marketable grade out.”

Electric weeding

For something completely different, BP2023 attendees had the opportunity to learn about Nucrop — a hybrid herbicide concept that combines a conductive liquid called Volt fuel with electro-physical weeding. The all-in-one-pass solution is being developed by Nufarm and German ag-tech start-up, Crop.Zone.

In terms of potatoes, it’s hoped Nucrop could be the answer to the ongoing desiccation conundrum following the revocation of diquat in 2019, providing an alternative to chemical control or flailing.

Nufarm’s marketing manager Louise Dalgliesh says the concept works by pre-treating plants with the conductive liquid and then applying an electrical charge to desiccate. As a result, the operation is achieved with a high degree of efficiency but lower energy consumption than conventional weeding technologies.

And compared with conventional desiccation techniques, one Nucrop application is equivalent to two chemical passes, explains Louise. Nucrop is initially



An update on the DeCyst project was provided as part of BP2023’s seminar programme (for further information, see box on page 70).

focussing on potato desiccation, but the plan is to expand applications to include wider weed control.

Over in the seminar hall, topics included the latest agri-tech case studies, tackling storage challenges, and British potato market trends. Echoing the message from the main exhibition hall, ADAS’s Dr Faye Ritchie presented the findings of a three-year project led by a consortium of industry players including ADAS.

The field experiment aimed to provide evidence to determine and rank the effectiveness of fungicide resistance management strategies, which include blocking, alternation, and with and without a solo/multisite fungicide. The trial was based around the presence of EU_37_A2 and fluazinam use.

Summarising the results, Faye says the trial showed repeated and sequential application of a single site mode of action increases selection for fungicide insensitivity. Equally, mixture partners and alternation are two of the most effective resistance management tools for late blight.

However, Faye stresses the role of non-chemical control methods such as choosing cultivars with resistance, improving out-grade pile management and effectively controlling volunteers. She believes these can often be over-looked yet remain valuable. ■



BP2023 remains a popular show among growers and industry experts alike.

Biostimulant field trials

A series of trials have indicated the potential of using a brown seaweed-based biostimulant to improve the marketability of potato crops. Revealed at BP2023, the results show that three 1.0 l/ha applications of Algifol produced a 29.6% increase in tuber numbers when applied to a crop of Melody. In particular, there were 27.3% more tubers at 40-64mm — the ‘sweet spot’ for packing potatoes.

Another trial on a crop of Accord increased the uniformity of the crop, and boosted weight by 18%, when compared with the standard farm practice.

Finally, a third trial was conducted on Accord and Lady Rosetta at a farm near Hull. Across the two field trials, Algifol increased

tuber numbers by 13 and 7%, again compared with the farm standard.

The product is distributed in the UK by MJP Supplies. Director Marcus Palmer says the trials were conducted in challenging growing conditions, making the results even more stand-out.

In terms of grower feedback, Driffield farmer Andrew Meginson says he’s experienced good results from using the biostimulant. “The canopy stayed green throughout the season despite challenging weather, which I’m sure caused stress to the crops not treated with Algifol. Yield was up and we were pleased with the size uniformity and overall quality of the crop when it was lifted,” he says.