**PRESS RELEASE: Fera Science’s deep dive into biopesticides**

Despite widespread support across the sector, biopesticides aren’t yet realising their potential and stakeholders found out why, at a recent webinar hosted by Fera Science.

From the challenges of formulating new regulation and developing meaningful ecotoxicity guidelines, to the opportunities emerging from industry collaboration and farmer-to-farmer knowledge transfer, the session explored the present and future of biopesticides.

“Biopesticides have huge potential,” said Aoife Dillon, Principal Scientist of Crop Protection at Fera Science Limited. “These naturally occurring substances and micro-organisms, offer a wide range of safe and sustainable tools to help rebalance pests or disease populations in food production.”

Presenting the results of a recent Fera Science survey, Aoife revealed how efficacy concerns are preventing adoption of the technology. “Nearly 58% of respondents cited this as the biggest barrier to using biopesticides,” she said. “Cost and uncertainty about how to integrate biological controls with conventional plant protection products were also frequently mentioned.”

Over 67% of respondents said they wanted more research and advice on IPM. 58% indicated better regulatory understanding and guidelines for use would encourage greater adoption of more biological crop products.

Amanda Porter, Pesticides Policy Scientific Advisor for Defra noted that the new National Action Plan on the Sustainable Use of Pesticides (NAP) will be published this year, and that IPM will be at the heart of the plan. Amanda explained that the use of lower risk pesticides, including biopesticides, will play an important part in that picture.

The proposals in the NAP have built upon the responses that the team at Defra has received through consultation and in direct conversation. For biopesticides, it was noted that three areas were highlighted in these responses: regulation, training and use, and research and development. The team at Defra are now looking towards delivery – and Amanda emphasised the importance of continuing those conversations with stakeholders going forwards.

Demonstrating how impactful policy change can be, Jennifer Lewis, Executive Director of International Biocontrol Manufacturers' Association (IBMA) pointed to Brazil.

“Around the world, wherever we have national biological policy, we see faster change,” she said. “In 2014, Brazil made drastic changes to its policy and the country has seen 42% compound market growth which is anticipated to continue.”

In just a few years, the number of products at growers’ disposal quadrupled and number of hectares treated with biocontrols more than doubled, reaching 23 million by 2021. Today, over 40% of the country’s nematicides are biocontrols, as are 30% of its insecticides and 10% of its fungicides.

But, according to Jennifer, adaptations in policy needs to be supported by incentivising and rewarding change, as well as sharing best practice.

“When it comes to ‘learning from the best’, the ‘best’ is often the grower. We’ve some great examples here in the UK. Crop Health North, for example, has recently grown wheat using biocontrols from the horticulture sector, maintaining yields.

“We make huge steps forward when there’s farmer-to-farmer learning,” she notes.

Bringing the growers’ perspective to the webinar Ali Capper, apple and hop grower and NFU Horticulture Board member: “Farmers and growers need an ‘enabling framework’ – whether you’re talking about biopesticides, pesticides, fungicides. We need clear, certain, navigable regulation, and most in the industry don’t feel that we are there yet.”

“Our businesses move at a pace, and we need regulation that is agile. We need to be able to react to weather and changes in pest populations. Too often, when faced with an emerging pest or disease threatening crop yields, we get product approval when we’re harvesting. That’s too late and not good enough.”

Since the demise of AHDB horticulture, the sector has been facing a gap to continue the work around EAMUs and emergency approvals. That work will now continue with Ali sharing details of the new not-for-profit organisation, Horticulture Crop Protection Ltd. Ali will be chairing the board, made up of growers and technical experts from the crop associations. “By transferring the experts at AHDB and using the residual funds, while we work out how to best raise a voluntary levy or subscriptions, we’ll also have the means to react if there is an awful emerging pest or disease,” she said.

At the other end of the biopesticides supply chain, Mark Whittaker, Managing Director of Applied Insect Science Ltd described the issues with assessing the risks of biopesticides.

“No thought was put into the development of microbial ecotoxicity testing methods, or into the selection of the relevant test species,” he said. “It is a direct copy and paste of the chemical pesticide legislation which was designed for synthetic molecules that don’t naturally exist in the environment and that have rapid and toxic modes of action.

“Microbial active substances are at the other end of spectrum, having been isolated from the environment, often having co-existing with non-target organisms over an evolutionary timescale. They have slower, pathogenic modes of action. It’s wrong to assume the same testing is appropriate for both.”

In order to develop meaningful ecotoxicity testing for microbials three disciplines need to come together - ecology, entomology and microbiology – and we need to identify which species it makes most sense to test and then think about how best to test them. “We need to stop looking at biopesticides as chemists and start looking at them as biologists,” he concluded.

While there are many deep and complex challenges associated with what’s being described as the second ‘green revolution’ in agriculture, the willingness and passion to move towards a scientific risk-based approach to enable the approval and use of biopesticides was clear from all sides. “This webinar is just a start of a longer, deeper conversation in the industry,” summarised Aoife. “It takes collaboration to make change of this scale happen, and Fera Science is delighted to have been able to provide the platform.”

To watch the webinar visit: <insert link>

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