

BASF Unveils Apthema in UK to Strengthen Biological Pest Control and Advance Integrated Crop

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The novel biological attractant harnesses aphid alarm pheromones to recruit beneficial insects, reinforcing BASF's expanding biologicals portfolio and supporting sustainable crop protection



BASF Agricultural Solutions has launched Apthema in the UK, an innovative biological crop protection product designed to strengthen Integrated Pest Management (IPM) programmes by naturally enhancing the activity of beneficial insects that prey on aphids.

The new solution leverages (E)- β -farnesene (EBF), a naturally occurring aphid alarm pheromone released when aphids are disturbed. Beneficial predators and parasitoids—including ladybirds and lacewings—have evolved to recognise this chemical signal as an indicator of prey, allowing Apthema® to attract these natural enemies into crop fields and improve biological pest suppression.

By amplifying naturally occurring ecosystem services, BASF believes the technology can help growers reduce reliance on conventional insecticides while addressing mounting concerns over pesticide resistance and tightening regulatory restrictions on chemical crop protection products.

"Our biological portfolio represents a strategic pillar of BASF Agricultural Solutions," said Richard Corden, Head of Solutions and Services, Agricultural Solutions UK & Ireland. "Biological innovations such as Apthema complement our crop protection, seed technologies and digital agriculture platforms, enabling integrated production systems that improve both productivity and sustainability."

The launch comes as aphids continue to inflict substantial economic losses on global agriculture through direct feeding damage and the transmission of devastating plant viruses. According to Professor Tom Pope, Applied Entomologist at Harper Adams University, biological approaches are becoming increasingly important as the range of available insecticides continues to narrow, increasing selection pressure for resistance.

Describing Aphena® as an important addition to the IPM toolkit, Pope said the product offers significant value when deployed alongside complementary biological and agronomic interventions, creating synergistic effects that strengthen natural pest regulation.

The innovation is underpinned by BASF's proprietary encapsulation technology, overcoming one of the principal limitations of (E)-farnesene—its high volatility and rapid degradation under field conditions. Encapsulating the active ingredient enables its controlled release over 20 to 30 days, providing extended field efficacy while maintaining formulation stability. BASF said the microcapsules are manufactured using natural, inert ingredients and contain no microplastics, reinforcing the company's sustainability objectives.

Field evaluations have demonstrated encouraging biological performance. Controlled laboratory studies showed ladybirds exhibited a strong behavioural preference for Aphena over untreated controls. Commercial field trials further indicated an 18 per cent increase in plants hosting beneficial insects in pea crops, while aphid incidence in sugar beet declined from an average 2 per cent to 0.5 per cent, highlighting the product's potential to improve biological control under practical farming conditions.

BASF said Aphena becomes rainfast within 24 hours, requires no buffer zone and has no maximum application limit, providing growers with greater operational flexibility. The company recommends applications every 14 days at 0.3–0.5 litres per hectare, while noting the product remains compatible with approved crop protection products where additional intervention is required.

The introduction of Aphena further reinforces BASF's long-term commitment to expanding its biologicals portfolio. The company has significantly increased investment in biological crop protection, recently commissioning a dedicated BioHub fermentation facility in Ludwigshafen while strengthening its capabilities through acquisitions such as AgBiTech. BASF's UK biologicals portfolio already includes Integral Pro, Serifel and the Nemasys beneficial nematode range, with additional biological innovations—including Velifer—currently progressing through its development pipeline.