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Hailir readies next-generation insecticide to tackle resistant crop pests

21 July 2026 | News

Chinese agrochemical company prepares commercial launch of proprietary GABA receptor-modulating insecticide, strengthening its innovation pipeline and resistance management portfolio

China's agrochemical innovation pipeline is gaining momentum as Hailir Pesticides and Chemicals Group Co., Ltd. moves closer to commercialising a new proprietary insecticide designed to combat some of agriculture's most persistent resistant pests. The company announced on June 30, 2026, that its self-developed active ingredient has entered the final pesticide registration trial stage in China, bringing it one step closer to market launch.

The new molecule, identified by CAS No. 3078478-16-4, marks one of Hailir's most significant research achievements in recent years and underscores the growing capabilities of Chinese agrochemical companies in developing proprietary crop protection technologies rather than relying on generic chemistries.

Development of the insecticide began in 2020, and the compound received its official Chinese common name in 2023. Unlike many widely used insecticides currently on the market, the new active ingredient belongs to a novel class of GABA chloride receptor modulators, offering a distinct mode of action from conventional diamide and arylpyrazole insecticides.

That differentiation could prove commercially important. As insect resistance continues to challenge growers worldwide, products with new modes of action are becoming increasingly valuable. According to Hailir, the insecticide has demonstrated no cross-resistance with major existing chemistries, enabling effective control of resistant lepidopteran pests and thrips that have become increasingly difficult to manage using conventional products.

The company said the insecticide has a broad spectrum of activity, targeting economically significant pests including striped rice stem borer, rice leaf folder, beet armyworm and multiple thrips species, while also providing supplementary control of spider mites. It is intended for use across a diverse range of crops, including rice, fruits, vegetables, cotton and tea,

positioning it as a versatile solution for both food and high-value horticultural production.

Beyond pest control performance, Hailir is positioning the product around efficiency and sustainability. The insecticide is designed to deliver high biological activity at relatively low field application rates while combining extended residual control with low mammalian toxicity, characteristics that align with the industry's growing focus on safer and more targeted crop protection solutions.

To reinforce its competitive position, Hailir has built an extensive intellectual property portfolio around the new active ingredient. The company has secured patent protection covering the molecule itself, its formulations and combination technologies, with core patent applications filed in both China and international markets. The strategy is intended to strengthen long-term market exclusivity and create barriers to generic competition.

Commercialisation plans are also supported by a 5 percent emulsion-in-water (EW) formulation developed primarily for controlling lepidopteran pests. Hailir said the product is compatible with widely used insecticides such as emamectin benzoate, indoxacarb and chlorfenapyr, allowing growers to incorporate it into tank mixtures that improve efficacy, reduce application rates and support resistance management through rotation of different modes of action.

The new insecticide forms part of a broader proprietary research pipeline that Hailir has been steadily expanding over the past several years. The company now has more than 10 self-developed compounds under development. Among them, fluchlordiamide has entered the pesticide registration stage, while the acaricide flufensulfone is also progressing through the regulatory approval process.

As global agriculture faces increasing pressure from resistant pests and tighter regulatory scrutiny over pesticide use, companies capable of bringing genuinely new active ingredients to market are expected to gain a competitive advantage. For Hailir, the forthcoming launch represents more than a single product introductionâ??it signals the company's ambition to evolve from a leading manufacturer into an innovation-driven developer of proprietary crop protection technologies, while expanding the portfolio of homegrown insecticides available to farmers in China and beyond.

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