

China's latest insecticide registration pipeline signals strong shift toward advanced formulations and multi-active crop protection solutions

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The newest batch of 173 proposed insecticide registrations highlights growing demand for suspension concentrates, seed treatment technologies and premium active ingredients led by Clothianidin and Chlorantraniliprole



China's crop protection industry is entering another phase of product innovation, with the country's latest pesticide registration batch providing an early indication of where manufacturers are directing their investments. The sixth batch of insecticide products proposed for registration approval includes 173 products, comprising 165 formulation products, seven technical concentrate (TC) products and one technical material (TK) product, reflecting continued portfolio expansion across both formulation and technical manufacturing. Beyond the numbers, the registrations demonstrate a growing emphasis on differentiated formulations, combination chemistries and high-value active ingredients as companies compete in one of the world's largest agrochemical markets.

Among formulation technologies, Suspension Concentrates (SC) emerged as the dominant choice with 70 proposed registrations, accounting for the largest share of the pipeline. Granules (GR) followed with 27 products, while Flowable Concentrates for Seed Treatment (FS) ranked third with 17 products. The remaining applications span a broad range of formulation technologies, including Emulsion in Water (EW), Wettable Powder (WP), Micro Emulsion (ME), Emulsifiable Concentrate (EC), Ready Bait (RB) and other specialised formulations. The growing preference for suspension concentrates and seed treatment products reflects the industry's shift towards products offering better application efficiency, improved stability, reduced environmental impact and stronger crop establishment.

The latest registrations also reveal clear momentum around a handful of insecticide molecules. Clothianidin led all active ingredients with 34 proposed registrations, followed closely by chlorantraniliprole with 32 products, while dinotefuran also featured prominently across multiple formulations. The concentration of registrations around these molecules indicates continued demand for broad-spectrum insecticides capable of addressing resistance management challenges while delivering consistent field performance across major crops.

One of the strongest themes emerging from the latest registration batch is the rapid growth of combination formulations. Rather than relying on single active ingredients, companies are increasingly combining complementary chemistries to broaden pest control, improve efficacy and delay resistance development. The proposed formulations include combinations such as Beta-cyfluthrin + Cyantraniliprole, Thiamethoxam + Cyantraniliprole, Chlorfenapyr + Clothianidin, Fludioxonil + Chlorantraniliprole + Clothianidin, Lambda-cyhalothrin + Tiorantraniliprole, Cyantraniliprole + RH-5849, Abamectin + RH-5849, Hexaflumuron + Cyantraniliprole, Prothioconazole + Penflufen + Clothianidin, Permethrin + Transfluthrin, Abamectin + Indoxacarb, Difenconazole + Fludioxonil + Clothianidin, Pyriproxyfen + Clothianidin, Cyantraniliprole + Deltamethrin, Abamectin + Monosultap, Imidacloprid + Chlorantraniliprole, Dinotefuran + Cyantraniliprole, Abamectin-aminomethyl + Flonicamid, Cyromazine + Cyantraniliprole, Fludioxonil + Azoxystrobin + Thiamethoxam, Chlorantraniliprole + Clothianidin, Abamectin + Cyantraniliprole, Meperfluthrin + Alpha-cypermethrin, Fluopyram + Fludioxonil + Clothianidin, Fluxapyroxad + Metalaxyl-M + Clothianidin, Abamectin-aminomethyl + Methoxyfenozide, and Dinotefuran + Tolfenpyrad. The diversity of these combinations illustrates how manufacturers are designing products that target multiple pest complexes while supporting integrated resistance management strategies.

The technical-grade registration pipeline further highlights continued investments in domestic manufacturing capacity. The seven TC products and one TK product cover several important insecticide molecules, including Pyriproxyfen 98% TC submitted by Shandong Aokun Crop Science Co., Ltd., Lufenuron 98% TC from Ningxia Yifan Biotechnology Co., Ltd., Cyproflanilide 98% TC from Jiangxi Tianyu Chemical Co., Ltd., Clothianidin 98% TC proposed by Ningxia Nongjia New Material Technology Co., Ltd., another Pyriproxyfen 98% TC from Ningxia Yifan Biotechnology, Chlorantraniliprole 98% TC submitted by Hebi Baoruide Chemical Co., Ltd., Ethiprole 97% TC from Shanghai High Victory Fine Chemical Co., Ltd., and Spinetoram 82% TK proposed by Anhui Andifeng Technology Co., Ltd. These registrations demonstrate continued investment in upstream manufacturing capabilities and supply chain integration for both established and emerging insecticide chemistries.

The applications also underline the increasingly competitive nature of China's agrochemical industry. Henan Zhoukou Zhongke Chemical Co., Ltd. ranked first among applicants with five insecticide products proposed for registration approval, while companies including Brightmart Cropscience Co., Ltd., Jiangsu Gongcheng Bio-tech Co., Ltd., Ningxia Yifan Biotechnology Co., Ltd., Shanghai Huilian Biological Pharmacy (Xiayi) Co., Ltd., Shandong Shengtao Biotechnology Co., Ltd., Shandong Caoda Chemicals Co., Ltd., Shandong Zouping Pesticide Co., Ltd., Zhejiang Udragon Pesticides and Chemicals Co., Ltd., Shaanxi Meibang Pharmaceutical Group Co., Ltd., Shanghai Yuelian Biotech Co., Ltd., Hainan Limengte Biotechnology Co., Ltd., Yongnong BioSciences Co., Ltd., Kunming Pesticide Co., Ltd., and several others featured across multiple registration applications, illustrating the broad participation of domestic manufacturers in expanding product portfolios.

The registration data serves as an important early indicator of market direction for agrochemical producers, distributors, formulators and investors. The dominance of suspension concentrates, growing investment in seed treatment technologies, expanding use of combination formulations and continued focus on premium insecticide molecules suggest that Chinese manufacturers are increasingly prioritising innovation over volume alone.

Source: CCM-cnchemicals