

Chinese agrochemical innovation delivers breakthrough against devastating cabbage disease

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A new generation of crop protection innovation emerging from China's agrochemical sector is attracting attention after field demonstrations revealed exceptional control of Chinese cabbage soft rot—one of the most destructive bacterial diseases affecting vegetable production across Asia.

Developed by Shandong United Pesticide Industry Ltd, a wholly owned subsidiary of Sino-Agri United Biotechnology, the proprietary bactericide fluquinomatoate (P) demonstrated control efficacy of up to 98 per cent during large-scale field trials conducted in Dongtai City, Jiangsu Province.

The demonstration, organised under the auspices of the China National Agricultural Science and Technology Research Team, brought together researchers, technical experts and industry stakeholders to evaluate the product's performance under commercial farming conditions.

Conducted across a 40-mu Chinese cabbage cultivation area at Yushe Farm in Jianggang Town, the trials provided a comprehensive assessment of disease incidence, pathogen behaviour, application protocols and comparative treatment outcomes. Participants were given detailed insights into pathogen isolation, infection dynamics and the practical field management of soft rot, a disease capable of causing significant economic losses for vegetable growers.

Results from the trials were particularly noteworthy.

When applied as a 20 per cent suspension concentrate at a dosage of 30 grams per mu, fluquinomatoate (P) achieved a disease control rate of 98 per cent. A lower application rate of 25 grams per mu delivered a 94 per cent control effect. Both treatments significantly outperformed conventional products currently used by growers in the region.

Equally important, researchers reported no visible phytotoxicity or adverse impact on crop growth, highlighting the product's favourable safety profile under recommended field-use conditions.

Beyond Chinese cabbage, early-stage evaluations conducted across multiple locations suggest that fluquinomatoate (P) possesses broad-spectrum potential against a range of economically significant bacterial diseases. Preliminary findings indicate promising efficacy in controlling bacterial blight in rice, potato black shank and other bacterial infections affecting major food crops.

Experts attending the demonstration described the product as a highly active and fast-acting bactericide capable of rapidly suppressing disease outbreaks while delivering lasting protection throughout the crop cycle.

According to the evaluation committee, the product's extended residual activity could help farmers reduce the frequency of pesticide applications, lowering production costs while simultaneously mitigating environmental pressure associated with repeated chemical interventions.

The expert panel further noted that the commercialisation of fluquinomatoate (P) could play a critical role in strengthening emergency response capabilities against bacterial disease outbreaks, which continue to present major challenges for growers worldwide.

To accelerate adoption, the panel recommended fast-tracking product registration procedures while expanding technical outreach programmes aimed at educating farmers on effective application practices. Additional field demonstrations and extension activities were also encouraged to support wider deployment across key agricultural regions.

The breakthrough represents more than a successful field trial. It highlights the growing innovation capacity of China's agrochemical industry, which is increasingly shifting from generic manufacturing toward the discovery and development of proprietary crop protection technologies.

From active ingredient discovery and formulation science to field validation and commercial scalability, fluquinomatoate (P) exemplifies the industry's broader ambition to create high-value agricultural innovations with global relevance.

As bacterial diseases continue to threaten crop productivity and food security across multiple geographies, products capable of combining efficacy, safety and sustainability are expected to play an increasingly important role in modern agriculture.

For Sino-Agri United Biotechnology, the successful demonstration marks a significant milestone in that journey—one that could potentially position fluquinomatoate (P) as an important new tool in the global fight against bacterial crop diseases.