



BASF launches new nitrification inhibitor in China to improve nitrogen efficiency

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The new nitrification inhibitor is designed to reduce nitrate leaching and nitrous oxide emissions while giving fertiliser manufacturers greater flexibility to develop higher-efficiency nitrogen products



BASF Agricultural Solutions has launched a new nitrification inhibitor in China, targeting one of agriculture's most persistent challenges: improving the amount of applied nitrogen that crops can actually use while reducing losses to the environment. The new product, Ampliqan, is being introduced to China's fertiliser industry in 2026 as BASF seeks to strengthen its nitrogen-management portfolio and support the development of climate-smart agricultural practices. The technology is designed to protect fertiliser nitrogen against nitrate leaching and nitrous oxide emissions, while giving fertiliser manufacturers another tool to differentiate their products in an increasingly efficiency-focused market.

Nitrogen remains fundamental to crop productivity and quality, but a significant share of the nutrient applied to fields never reaches the crop. BASF estimates that, on average, only about 50 per cent of applied nitrogen is taken up by plants. The remainder can be lost to the atmosphere as ammonia or nitrous oxide, a potent greenhouse gas, or move into water systems through nitrate leaching. These losses reduce the economic return on fertiliser investments while contributing to climate warming, acidification, eutrophication and smog.

Ampliqan is designed to address this gap by slowing the conversion of ammonium into nitrate. Based on the active ingredient DMP5A-K2, the nitrification inhibitor suppresses the activity of nitrifying bacteria, allowing ammonium to remain stable for longer in the soil. The objective is to retain more nitrogen within the root zone and improve its availability to crops when demand is highest.

The technology could also create value beyond nitrogen retention. According to BASF, ammonium-based plant nutrition can improve the availability of certain micronutrients and phosphate in soil, factors that can influence crop development and quality. For farmers, the combination of improved nitrogen availability and greater flexibility in fertiliser application could potentially translate into higher yields, better crop quality and more efficient use of inputs.

Markus Schmid, Director and Head of Key Account Management, Nitrogen Management, BASF Agricultural Solutions, said the launch reflects the company's focus on connecting nitrogen efficiency with both farm economics and environmental performance. Ampliqan, he said, provides a ready-to-use solution that can help fertiliser manufacturers and farmers pursue higher yields while reducing greenhouse gas emissions, supported by BASF's long-standing expertise in fertiliser and nitrogen management.

The China launch also underlines BASF's strategy of working more closely with fertiliser manufacturers rather than positioning nitrogen-management technology solely as a farm-level input. By incorporating the inhibitor into fertiliser products, manufacturers can offer differentiated formulations designed around nutrient efficiency and environmental performance, while farmers gain access to the technology through existing fertiliser supply chains.

Jackson Wang, Vice President, BASF Agricultural Solutions Greater China, said the launch strengthens BASF's nitrogen-management portfolio and its role as an innovation partner for fertiliser manufacturers in China. He highlighted the opportunity to help customers improve product performance, create differentiated value and support the industry's broader transition towards greener production and agricultural practices.

A key feature of the formulation is its compatibility with a broad range of nitrogen fertilisers. Ampliqan can be used with urea, ammonium nitrate formulations, diammonium phosphate, monoammonium phosphate, NPK fertilisers and liquid fertilisers. This broad compatibility is intended to make adoption easier for manufacturers that operate across multiple fertiliser categories.

The product can be incorporated at fertiliser production facilities or further along the supply chain using standard batch and continuous blending equipment. BASF said the formulation also offers strong storage stability across a broad temperature range, while treated fertilisers can retain a long shelf life. That gives manufacturers and distributors greater flexibility in production, storage and movement through the supply chain.

The commercial logic behind the launch is increasingly important as fertiliser markets face pressure to deliver more output with lower nutrient losses. Improving nitrogen use efficiency has become a central component of efforts to reduce the environmental footprint of crop production without compromising yields. For fertiliser companies, technologies that can improve nutrient performance also offer an avenue to move beyond commodity fertiliser and develop higher-value, differentiated products.

China provides a significant market for this transition, given the scale of its fertiliser industry and the continuing need to improve nutrient-use efficiency. BASF's launch therefore places nitrification inhibition at the intersection of farm productivity, fertiliser innovation and emissions reduction.