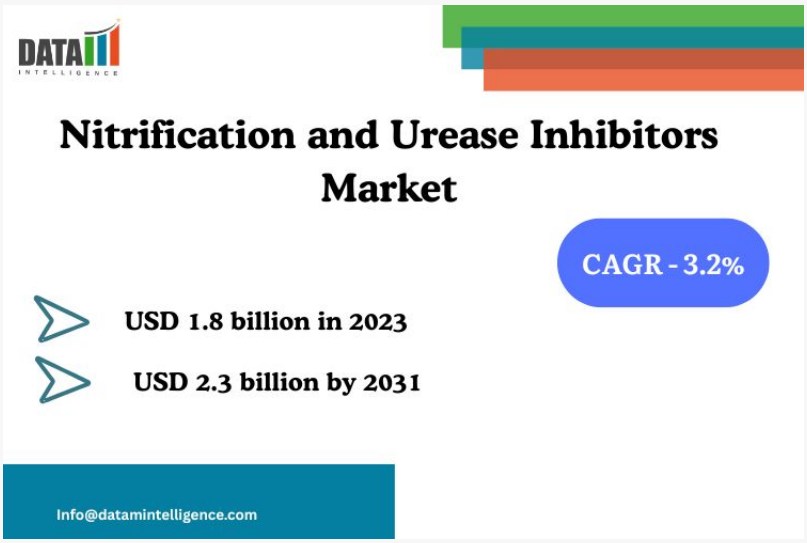
Nitrification and Urease Inhibitors Market Set to Reach $2.3B by 2031 with 3.2% CAGR Growth | DataM Intelligence

Nitrification and urease inhibitors reduce nitrogen loss, enhance soil health, and align with global trends in sustainable and precision farming.



Nitrification and Urease Inhibitors Market

AUSTIN, TX, UNITED STATES, June 4, 2025 /EINPresswire.com/ -- The nitrification and urease inhibitors market was valued at approximately USD 1.8 billion in 2023 and is projected to reach around USD 2.3 billion by 2031, expanding at a CAGR of 3.2% during the forecast period (2024–2031). This steady growth reflects a rising global awareness of sustainable agricultural practices and the crucial role these inhibitors play in improving fertilizer efficiency and reducing environmental harm.

As food demand continues to grow due to a rising global population and declining arable land, improving nitrogen use efficiency (NUE) in fertilizers has become a critical priority. Nitrification and urease inhibitors serve as powerful tools in reducing nitrogen losses from the soil, ensuring that crops receive more nutrients while minimizing environmental risks such as groundwater contamination and greenhouse gas emissions.

> With the nitrification & urease inhibitors market set to reach $2.3B by 2031 at a CAGR of 3.2%, these eco-friendly tools are key to boosting nitrogen efficiency and crop yield globally."
>
> *DataM Intelligence*

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Why These Inhibitors Matter

Nitrification inhibitors delay the conversion of ammonium to nitrate, reducing leaching losses and nitrous oxide emissions. Urease inhibitors, on the other hand, slow down the hydrolysis of urea, preventing the rapid release of ammonia into the atmosphere. Together, they help retain more nitrogen in the soil for plant uptake, resulting in higher yields and better soil health.

Regional Outlook

North America
North America continues to dominate the nitrification and urease inhibitors market, with a significant portion of global revenue originating from the United States. Farmers in the U.S. are increasingly turning to these solutions to meet federal sustainability goals and improve crop productivity. The integration of these inhibitors with advanced technologies like precision agriculture is accelerating adoption across the region.

Europe
Europe represents a mature yet innovation-driven market. With strong environmental policies in place, such as the EU's Farm to Fork Strategy, the use of eco-friendly and nitrogen-efficient solutions has been strongly encouraged. Germany, France, and the Netherlands are particularly active in implementing nitrogen management practices that include the use of these inhibitors.

Asia-Pacific
The Asia-Pacific region is witnessing the fastest growth, fueled by rising food needs and government-led sustainability initiatives. Countries like China and India, with their large agricultural economies, are pushing the adoption of inhibitors through education programs and subsidies. Additionally, increasing awareness among farmers about nitrogen loss and fertilizer efficiency is helping the market expand rapidly in this region.

Latin America & Middle East
While smaller in market share, these regions show promising potential due to evolving agricultural policies, water conservation needs, and increasing interest in soil-friendly farming techniques. Brazil and Argentina are showing interest in enhancing nitrogen use in soybean and corn cultivation, while Middle Eastern countries are exploring these technologies in water-scarce, high-efficiency farming systems.

Leading Market Players

BASF SE

Compo Expert Gmbh

Dow

DuPont Inc

Eco Agro

Evonik

Koch Fertilizer, LLC

National Fertilizers Limited

Nico Orgo Manures

Solvay SA

Latest News from the USA

In the United States, there has been growing policy and research focus on reducing nitrogen-related emissions from agriculture. The USDA and several land-grant universities are promoting nitrification and urease inhibitors as viable tools for both large-scale and smallholder farmers. Recently, several agricultural cooperatives have begun integrating these inhibitors into standard fertilizer packages, especially in states like Iowa, Nebraska, and Illinois where corn production is intensive.

Moreover, new crop insurance benefits are being discussed at the federal level for farmers using enhanced-efficiency fertilizers, which includes inhibitors. These developments are signaling stronger institutional support and market stability for the use of such technologies.

Latest News from Japan

Japan, known for its precision-driven and technology-intensive agriculture, is also seeing increased use of nitrification and urease inhibitors. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has launched a pilot program encouraging rice and vegetable farmers to adopt fertilizer enhancers that reduce environmental degradation. This includes tax incentives and access to specialized advisory services.

In recent months, Japanese researchers from top universities have collaborated with agri-tech firms to develop next-generation inhibitors tailored to Japan’s diverse climatic zones. There's also rising integration of inhibitors into smart fertilization systems, leveraging IoT-based soil sensors to apply the correct dosage at the right time.

Market Segmentation

By Type: Type of Nitrification Inhibitor (Nitrogen CRFs, Ammonia, Nitrate, Urea, Others.

Type of Urease Inhibitors: Phenylphosphorodiamidate (PPD/PPDA), N-(2-Nitrophenyl) phosphoric triamide (NPPT), N-(n-Butyl) thiophosphoric triamide (NBTPT or NBPT), Others).

By Nutrient: Nitrogen, Ammonia, Nitrate, Urea, Others.

By Crops: Cereals, Millets & Oilseeds, Cotton, Fruits & Vegetables, Plantation Crops, Pulses, Others.

Conclusion
The nitrification and urease inhibitors market is gaining strong momentum globally as agriculture shifts toward sustainability, efficiency, and environmental stewardship. With increasing adoption across developed and emerging regions, coupled with innovations from key players, the market is well-positioned for steady growth over the coming years. As governments and private sectors continue to align on climate-smart agriculture, these inhibitors are becoming not just optional but essential tools for modern farming.

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