International Journal of Agronomy

Hindawi

Special Issue on

Effects and Mechanism of New Fertilizer Products and Plant Biostimulants

CALL FOR PAPERS

This topic aims to bridge the gap between potential advancements in listed and unlisted agrochemical products, while advances in plant mechanisms behind their application effects. The innovation in agro-input is an important program to improve the efficiency of plant nutrient use, which is considered to be the solution to the problems of global population growth, resource shortage, and environmental crisis.

The updated and upgraded agrochemicals, including plant biostimulants and fertilizer products, play a crucial role in improving plant productivity and promoting agricultural sustainability.The excessive use and improper application of agrochemicals not only lead to the wastage of valuable resources, but also contribute to environmental pollution and ecological imbalance. Since chemical fertilizers were invented based on the theory of mineral nutrition for a higher plant, the available nutrient content of fertilizer products has been greatly increased, and the effect of promoting the increase in yield of field crops has become more and more extensive. Recent advances in plant biostimulants, fertilizers, and other agrochemicals offer significant opportunities for more scientific management of plant nutrition through their application effects and innovative mechanisms. For example, the products of biostimulants have emerged in an endless stream and have been used more and more widely in horticultural crops. Value-added fertilizers, produced by incorporating bioactive substances into conventional fertilizers, are on the rise. Organic substances applied to plant production also enrich the theory of organic plant nutrition. Furthermore, innovative agricultural inputs such as coated fertilizers, nano fertilizers, fertilizer additives, and microbial preparation have the potential to improve crop production while reducing the dependence on traditional chemical inputs.

This Special Issue welcomes original research and review articles on the topic to advance research and provide insights on how to reach the potential of new fertilizer products and plant biostimulants.

Potential topics include but are not limited to the following:

- Creation and characterization of new type of agrochemicals
- Role of new fertilizer products in promoting low-carbon agriculture
- Potential to boost crop production while reducing reliance on less chemical fertilizers
- Novel theories for plant biostimulants

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.wiley.com/submit?specialIssue=755386.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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