Nano urea fast-tracked for approval despite incomplete trials

Three seasons of assessment by ICAR is required to approve a new fertilizer

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Nano urea, a product developed by the Indian Farmers and Fertiliser Cooperative (IFFCO) and heavily advertised by the Central government as a panacea to reduce farmer dependence on packaged urea, is yet to be fully tested despite having been fast-tracked for commercial application. Normally, three seasons of independent assessment by the Indian Council of Agricultural Research (ICAR) is required for approving a new fertilizer, but in the case of nano urea this was reduced to two. Moreover scientists are still unclear if the product can on its own cut farmers' dependence on urea.

Crucial fertilizer

Nano urea is a patented and indigenously made liquid that contains nanoparticles of urea, the most crucial chemical fertilizer for farmers in India. A single half-litre bottle of the liquid can compensate for a 45 kg sack of urea that farmers traditionally rely on, it is claimed.

Rushed process: Despite nano urea, packaged urea is vital for the initial stages of crop development. ▪ VIJAY SONEJI

Minister of Health, Chemicals and Fertilizers Mansukh Mandaviya has claimed that by 2025, India's domestic urea production as well as production of nano urea would together mean India would be "self-sufficient" and would no longer require the 90 lakh tonnes that it imported every year and would save the country close to ₹40,000 crore.

The standard practice in the cultivation of crops such as wheat, rice, mustard is to use at least two 45-kg sacks of urea, which is an inorganic compound and the crops' main source of nitrogen. The first packet is applied during the early sowing or transplantation stage of the crop. The second stage application is done when the plant has sprouted a canopy of leaves, and is approaching the reproductive phase of plant growth.

However, a crucial point omitted in government communication around nano urea is that the traditional, packaged urea is still necessary during the initial stage, as basal nitrogen, of crop development. The nano urea could be useful once the plant grew after which the product could be sprayed on its leaves.

SPECIAL

"Based on the experiments, it was evident that 50% of the top-dressed urea (second stage application) could be replaced but not basal nitrogen," Dr. Trilochan Mohapatra, former Director General of the ICAR, told *The Hindu*, "In most cases yields weren't affected and some instances the crop yield increased."

Based on a year (two seasons) of experiments, in 2019-2020, ICAR reported results of field trials on crops that benefited from nano urea, to the Central Fertiliser Committee, which decides on whether to approve a chemical fertilizer for commercial use. The approval came through, in February 2021, during Dr. Mohapatra's tenure.

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