

# Guidelines for Evaluation of Nano-based Agri-input and Food Products in India

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The Centre released guidelines for evaluation of nano-based agri-input and food products in the country. The Guidelines have been prepared jointly by Department of Biotechnology (DBT), Ministry of Science and Technology, Ministry of Agriculture and Farmers' Welfare and Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare through concerted **Inter-Ministerial efforts coordinated by DBT.**

## Guidelines for Evaluation of Nano-based Agri-input and Food Products

Nanobiotechnology has the potential to improve agricultural systems through **increase in plant productivity and better crop protection** for meeting the changing needs and requirements of providing food to the growing population. Compared to bulk form of chemical inputs in crops, use of nano-nutrients can **reduce nutrient run-off** into ground and surface water and thus can reduce environmental pollution.

The guidelines are aimed at **assisting in making policy decisions by providing information on the existing regulations for nano-based products in agriculture and food and also to ensure quality, safety and efficacy of the targeted products.** They will also encourage the Indian innovators and industries to develop and commercialize new nano-based formulations and products in these sectors. It will eventually pave the way for significant benefits for the mission on 'Doubling Farming Income by 2022' and 'National Mission on Sustainable Agriculture'.

These guidelines apply to the following two categories of products:

- **Agri-input products** in the nano form of finished formulation as well as active ingredient(s) (AI) of a new material (inorganic/organic/composite) or an already approved material (inorganic/organic/ composite) with altered beneficial properties, dimensions or phenomenon associated with the application of nanotechnology that is intended to be used in agriculture and allied sectors for crop production, protection, management, harvesting, post-harvesting and packaging.
- **Agri-products** in the nano form of finished food formulations, finished feed formulations, finished dairy formulations, food/feed formulations from marine resources, nano carriers for nutraceuticals delivery, nano processing aids, nanocomposites for food packaging and nano sensors for food/feed packaging, food/feed safety applications and for dairy products safety applications. These products have been termed as nano-agri products (NAPs).