

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

RAJYA SABHA
UNSTARRED QUESTION NO. 2247
TO BE ANSWERED ON THE 07/08/2026

IMPACT OF CHEMICAL FERTILIZERS AND PESTICIDES ON CULTIVABLE LAND

2247. SHRI RAJNEESH KUMAR AGRAWAL:

Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

- (a) the extent of total cultivable land in the country affected due to the use of chemical fertilizers and pesticides, leading to an impact on the quality of produce;
- (b) whether any study has been conducted by the Ministry in this regard, if so, the details thereof; and
- (c) if not, any action plan of the Ministry in this regard?

ANSWER

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
(SHRI RAMNATH THAKUR)

(a): Before inclusion in the Fertilizer Control Order, 1985, all fertilizers undergo bio-efficacy and toxicity trials. These trials are reviewed by Central Fertilizer Committee consisting of technical experts. Only, fertilizers meeting the required standards are notified under FCO, 1985. The Government promotes judicious use of fertilizer through various programmes including Soil Health & Fertility Scheme. The scheme provides Soil Health Cards (SHCs) for farm holdings, to promote balanced and integrated nutrient management for improving productivity and soil fertility. Soil samples are processed as per standard procedures and analyzed for parameters such as pH, Electrical Conductivity, Organic Carbon, available Nitrogen, Phosphorus, Potassium, Sulphur, and micronutrients (Zinc, Copper, Iron, Manganese & Boron). Since 2014-15, 26.26 crore Soil Health Cards have been generated/ distributed as on date across the country. 1,30,627 farmer's trainings, 7.17 lakh demonstrations, 7,425 farmer's Melas/ campaigns on soil health card recommendations have been organized across the country to promote balanced use of fertilizer.

The Registration Committee, constituted under Section 5 of the Insecticides Act, 1968 registers pesticides after considering its efficacy and safety to human beings, animals and environment. Pesticides used as per the approved label claims and leaflets are unlikely to cause any harm. In addition, technical reviews are carried out from time to time to assess the safety of pesticides for their continued use.

Judicious use of fertilizer and pesticides is promoted through Integrated Nutrient Management (INM) and Integrated Pest Management (IPM) for sustainable agriculture. INM ensures balanced crop nutrition by integrating chemical fertilizers with organic manures, crop residues, bio-fertilizers, and other biological inputs to improve soil fertility, nutrient use efficiency, and crop productivity. IPM emphasizes environmentally sound pest management through preventive, biological, cultural, mechanical, and need-based chemical control measures, reducing pesticide dependence and protecting beneficial organisms. The Government of India has also notified Organic fertilizers, Bio-fertilizers, De-oiled cake, Organic Carbon Enhancer and Nano fertilizer in The Fertilizer Control Order, 1985 to ensure quality sale of these fertilizers.

(b) & (c): No such study has been conducted by Ministry of Agriculture & Farmers Welfare. However, Government is promoting Natural Farming and Organic Farming as alternatives to chemical farming for sustainable agriculture and human wellbeing. Organic farming in the country is implemented through Paramparagat Krishi VikasYojana (PKVY) in all the States/UTs other-than North Eastern States, and Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) exclusively for North Eastern region since 2015-16, PKVY promotes organic farming by providing end-to-end support covering production, processing, certification, and marketing. So far, 18.93 lakh hectares area have been brought under organic farming, and 33.63 lakh farmers have been benefited till date. Farmers are provided assistance from production to marketing under the organic farming schemes. Under MOVCDNER, 2.36 lakh hectares area have been brought under organic farming and 2.74 lakh farmers have been benefitted till date. Further, the Union Cabinet approved the National Mission on Natural Farming (NMNF) on 25 November 2024, to promote chemical-free, nature-based farming practices using on-farm inputs. 23.13 lakh farmers have been registered, and 11.44 lakh hectares area have been covered under natural farming.
