

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

LOK SABHA
UNSTARRED QUESTION NO. 440
TO BE ANSWERED ON THE 20TH JULY, 2021

IMPACT OF CHEMICAL FERTILIZERS ON FARMING

440. SHRI PARTHIBAN S.R.:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government has conducted any study to ascertain the ill effects of use of chemical fertilizers in farming;
- (b) if so, the details thereof;
- (c) whether chemical fertilizers contaminate ground water and environment?
- (d) if so, the details thereof; and
- (e) the details of steps taken/being taken to protect ground water and environment from chemical fertilizers?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री

(SHRI NARENDRA SINGH TOMAR)

(a) & (b): There is no scientific evidence of loss of soil fertility with judicious use of chemical fertilizers. However, indiscriminate and imbalanced use of chemical fertilizers coupled with low addition of organic matter and neglect of micro and secondary nutrients over years may cause multinutrient deficiencies and deterioration of soil health particularly in intensively cultivated areas. Results of All India Coordinated Research Project on 'Long Term Fertilizer Experiments' over five decades at fixed sites have revealed that continuous use of nitrogenous fertilizer alone had deleterious effect on soil health and crop productivity showing deficiencies of other major and micro nutrients. Even with recommended doses of NPK, deficiency of micro and secondary nutrients has become yield limiting factors over the years.

(c) & (d): There is possibility of nitrate contamination in groundwater above the permissible limit of 10 mg NO₃-N /L due to excessive use of nitrogenous fertilizers particularly in light textured soils.

(e): Steps taken to protect ground water and environment from chemical fertilizers are given below:

(i) Soil Health Card Scheme is implemented to provide soil test based information on nutrient status to farmers along with recommendations on appropriate dosage of nutrients to be applied for improving soil health and fertility. Financial assistance is provided under Soil Health Card (SHC) for imparting farmer's trainings and field demonstrations on balanced use of fertilizers.

(ii) The Indian Council of Agricultural Research (ICAR) is recommending soil test based balanced and integrated nutrient management through conjunctive use of both inorganic and organic sources (manure, bio-fertilizers etc.) of plant nutrients with 4Rs approach i.e right quantity, right time, right mode and right type of fertilizer for judicious use of chemical fertilizers to prevent deterioration of soil health and contamination of groundwater. In addition, split application and placement of fertilizers, use of slow releasing N-fertilizers and nitrification inhibitors, growing leguminous crops and use of Resource Conservation Technologies (RCTs) are also advocated.

(iii) Government is focusing on creating awareness and educating the farmers about organic farming practices (including use organic sources of plants nutrients) under the Paramparagat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development of North Eastern Region (MOVCDNER) schemes.

(iv) Awareness generation programs/workshop on various aspects of ground water including preventing ground water pollution and safe use of contaminated water are being conducted by Central Ground Water Board periodically.
