

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

**LOK SABHA**  
**UNSTARRED QUESTION NO.3812**  
TO BE ANSWERED ON THE 9<sup>TH</sup> AUGUST, 2016

**DECLINING PRODUCTIVITY OF ARABLE LAND**

3812. SHRI SUBHASH PATEL:  
SHRI ANTO ANTONY:  
DR. K. GOPAL:  
SHRI CHANDRAKANT KHAIRE:  
SHRI D.K. SURESH:  
SHRI BADRUDDIN AJMAL:  
PROF. CHINTAMANI MALVIYA:  
SHRI KANWAR SINGH TANWAR:  
SHRI SUMEDHANAND SARSWATI:

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

- (a) whether the productivity of arable land in the country has declined on account of over cultivation and prolonged use during the last three years and the current year and if so, the details thereof, State/UT-wise along with the efforts made by the Government to address the said situation;
- (b) whether millions of hectares of arable land in the country has become barren due to non-judicious land management and if so, the details thereof and the corrective measures taken by the Government in this regard;
- (c) whether the earthworm which plays a vital role in preserving the nutrients of the soil naturally and is called farmer's friend is on the brink of extinction due to excessive use of chemical fertilizers, insecticides and other toxic chemicals in the agricultural fields and if so, the details thereof and the steps taken/proposed to be taken by the Government to protect earthworms for sustainable development of farming sector; and
- (d) the measures taken/being taken by the Government for the promotion of organic manure and integrated nutrient management of soil to sustain productivity of arable land and prevent its transformation into unfertile/barren land in the country?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्रालय में राज्य मंत्री (SHRI S.S. AHLUWALIA)

(a): The productivity of the food grains in the country during the last three years has been fluctuating depending on weather and rainfall conditions, soil moisture, temperature, etc. However, details of the productivity of Food grains during the last three years in the country are

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given in the **Annexure**. For the current year, i.e. 2016-17 as per the First Advance Estimates of production (covering only Kharif crops) are normally released in September and, therefore, it is too early to have a firm assessment of production of food grains.

In order to increase production and productivity of agricultural crops in the country, the Government of India is implementing through State Governments, several Crop Development Schemes/Programmes such as National Food Security Mission (NFSM), Rashtriya Krishi Vikas Yojana (RKVY), Bringing Green Revolution to Eastern India (BGREI), National Mission on Oilseeds and Oil Palm (NMOOP), National Mission for Sustainable Agriculture (NMSA), Pradhan Mantri Krishi Sinchai Yojana, Soil Health Card Scheme etc.

Further, Indian Council of Agricultural Research (ICAR) is having research programmes in different crops in 24 commodity/theme based research institutes. These institutes undertake basic and strategic research programmes related to crop improvement, crop production and protection technologies in different crops. The technical information so developed is used by 31 crop related All India Coordinated Research Projects (AICRPs) to develop location specific varieties and technologies for different agro-ecological needs to enhance production and productivity. Improved varieties/hybrids of major crops such as rice, wheat, maize, sorghum, pearl millet, pulses etc. have been released to ensure supply of quality seed to farmers.

These varieties and hybrids are being promoted through Front Line Demonstrations and other promotion programmes/schemes through State Agricultural Universities and Krishi Vigyan Kendras (KVKs). Besides, integrated nutrient, water and weed management strategies have been developed by Crop Institutes of ICAR to meet location-specific requirements to achieve higher productivity.

(b): Despite shift of area to non agricultural uses, there is no significant decline in the agricultural land in the country. As such, there is no evidence to show conversion of agricultural land into barren land.

(c) & (d): There is no systematic study that has been carried out to evaluate the impact of excess use of chemical fertilizers, insecticides and other toxic chemicals in the agricultural fields on the population of earthworms. However, researches show that earthworm plays vital role in preserving soil fertility as well as the physical and biological health of the soil. The ICAR recommends soil test based balanced and integrated nutrient management through conjunctive use of both inorganic and organic sources (Vermi compost, manure, biofertilizers etc.) of plant nutrients to ensure judicious use of chemical fertilizers preventing deterioration of soil health including earthworm activity. The ICAR has developed improved technology for preparation of quality vermicompost from various organic wastes. The ICAR imparts training to educate farmers on these aspects.

Organic manures/compost are eco-friendly and not only provide nutrients maintaining soil fertility but also improve soil physical & biological health. In order to promote use organic manures in the country, the council has developed technologies to prepare various types of organic manures such as phosphocompost, vermincompost, bio-enriched compost, municipal solid waste compost, etc. from various organic wastes. These organic manures have been tested on different soils using various crops and found useful in improving soil health and crop productivity.

Besides, the ICAR has developed improved and efficient strains of biofertilizers specific to different crops and soil types under Network project on **Soil Biodiversity-Biofertilizers**. Liquid Biofertilizer technology with higher shelf-life has also been developed. Besides, the

Council has developed technology to prepare bio-enriched compost using various organic wastes fortified with biofertilizers. Biofertilizers can improve crop yields by 10-25% and supplement costly chemical fertilizers(N,P) by nearly 20-25% in most of the cases when used along with chemical fertilizers. When biofertilizers are applied along with compost @ 5t/ha or vermicompost @ 2t/ha, fertilizer saving is almost 50%.

All these technologies are part of integrated nutrient management practices and being popularized among the farmers through Front Line Demonstrations (FLDs), farmers trainings, publishing extension materials in local languages.

Further, the Government is implementing Soil Health Management (SHM) and Soil Health Card (SHC) Schemes for promotion of integrated nutrient management of soil to sustain the productivity of arable land and prevent its transformation into unfertile/ barren land in the country.

**Annexure****Annexure referred to in reply to part (a) of Lok Sabha  
Unstarred Question No.3812 due for reply on 09.08.2016****State-wise Productivity of Foodgrains during 2013-14 to 2015-16**

States	Productivity (Kg/hectare)		
	2013-14	2014-15	2015-16*
Andhra Pradesh	2552	2648	2555
Assam	1916	2021	1995
Bihar	2018	1964	2135
Chhattisgarh	1523	1474	1395
Gujarat	2097	2016	1973
Haryana	3855	3427	3665
Himachal Pradesh	1962	1896	1990
Jammu & Kashmir	1915	1275	1490
Jharkhand	1891	1871	1544
Karnataka	1620	1689	1393
Kerala	2528	2823	2819
Madhya Pradesh	1603	1856	1935
Maharashtra	1207	988	797
Odisha	1625	1738	1226
Punjab	4500	4054	4273
Rajasthan	1334	1529	1393
Tamil Nadu	2554	2720	3090
Telangana	2798	2723	2300
Uttar Pradesh	2484	1972	2278
Uttarakhand	1995	1811	1967
West Bengal	2721	2698	2783
Others	2121	2130	2181
All India	2120	2028	2056

\* As per Fourth Advance Estimates.

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