GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

RAJYA SABHA
UNSTARRED QUESTION NO-1138
ANSWERED ON- 16/12/2022

GHG EMISSIONS FROM WHEAT AND PADDY FARMING

1138. SHRI S NIRANJAN REDDY:

Will the MINISTER OF AGRICULTURE AND FARMERS WELFARE be pleased to state:

(a) whether the rice and wheat cropping systems in the country consume a high quantity of water and chemical fertilizers, thereby releasing high Green House Gas (GHG) emissions;

(b) whether agriculture alone contributes 21 per cent of the country's total GHG emissions, if so, whether Government intends to bring Standard Operating Procedure (SOP) to reduce GHG emissions from wheat and rice cultivation; and

(c) whether Government has undertaken any research regarding GHG emissions from agriculture in the country, if so, the details thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE

(SHRI NARENDRA SINGH TOMAR)

(a) and (b): The agriculture sector contributed only 14 per cent of the total Green House Gas (GHG) emissions in 2016 as per Biannual Updated Report- III. The contribution to GHG emissions from rice cultivation was 17.5% of the agriculture sector contribution to Green House Gas emissions. Rice cultivation consumes high quantity of water and chemical fertilizers and under transplanted rice, leaching losses of nutrients occur to a great extent. Indian Council of Agricultural Research (ICAR) has developed several climate resilient technologies that help in reducing emissions from agriculture sector.

(c) ICAR under National Innovations in Climate Resilient Agriculture (NICRA) project has been studying GHG emissions from agriculture sector at different locations. Technologies such as alternate wetting and drying in rice with short duration variety, neem coated urea with soil health card and leaf colour chart reduces GHG emission from rice by 40-50%. With Direct Seeded Rice (DSR), the emission can be reduced up to 70%. Crop diversification of rice-wheat with rice-maize has potential to reduce GHG by 70-80% and conservation agriculture has potentials to reduce GHG by 30-40%. Flux networks have been established at ICAR institutes to study the seasonal changes of GHG emissions under changing climate in different cropping systems including rice-wheat system.

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