

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

LOK SABHA
UNSTARRED QUESTION NO. 3581
TO BE ANSWERED ON 17TH DECEMBER, 2024

DEVELOPMENT OF CLIMATE-RESILIENT PADDY VARIETIES

3581. SHRI GAURAV GOGOI:

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

- (a) whether the Government has assessed the vulnerability of different paddy-growing regions to climate change, if so, the details thereof;
- (b) whether the Government is conducting any research to develop climate-resilient paddy varieties which can withstand extreme weather conditions and pests;
- (c) the details of the specific strategies which are being implemented to help farmers adapt to climate change; and
- (d) whether the Government is considering any measures to support farmers financially to help them to cope with the adverse impacts of climate change and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि और किसान कल्याण राज्य मंत्री (SHRI BHAGIRATH CHOUDHARY)

- (a): Yes, the Government through ICAR flagship network project 'National Innovation on Climate Resilient Agriculture' (NICRA) assessed the vulnerability of different paddy growing regions to climate change by conducting integrated simulation modelling studies. The study revealed that in the absence of adaptation measures, climate change is likely to reduce rainfed rice yields by 20% in 2050 and 47% in 2080. Irrigated rice yield may reduce by 3.5% in 2050 and 5% in 2080.
- (b): Since 2014 to 2024, a total of 668 varieties of rice (paddy) have been developed, out of which 199 varieties are extreme climate resilient, which can withstand extreme weather conditions, the details of which are as follows: 103 rice varieties are drought and water stress tolerant; 50 rice varieties are flood/ deep water/ submergence tolerant; 34 rice varieties are salinity/ alkalinity/ sodicity tolerant; 6 rice varieties are heat stress tolerant and 6 varieties are cold tolerant. Further, out of 668 varieties of rice developed, 579 varieties are tolerant to pests and diseases.
- (c): The technology demonstrations and capacity building programs on climate resilient technologies were conducted under Technology Demonstration Component of NICRA in 448 climate resilient villages of 151 vulnerable districts. Some of the specific climate resilient technologies related to paddy are: demonstration of climate resilient varieties, alternate methods of rice cultivation such as aerobic rice, direct seeded rice and drum seeding, green manuring with *Dhaincha* before paddy transplanting, community nurseries for delayed monsoon etc. to minimize the impact of variable climatic situations.
- (d): To encounter the adverse impact of climate change in the country, the Government of India implements National Mission for Sustainable Agriculture (NMSA), which is one of the Missions within the National Action Plan on Climate Change (NAPCC). The Government of India provides financial assistance to the states through the NMSA to cope with the adverse impacts of climate change.
