

GOVERNMENT OF INDIA  
MINISTRY OF CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION  
DEPARTMENT OF FOOD AND PUBLIC DISTRIBUTION

**RAJYA SABHA**  
UNSTARRED QUESTION NO.727  
**TO BE ANSWERED ON 8<sup>TH</sup> DECEMBER, 2023**

**FORTIFICATION OF RICE**

727 SHRI MOHAMMED NADIMUL HAQUE:

Will the Minister of CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION be pleased to state:

(a) whether it is a fact that Government plans to expand the Iron Fortification Programme to all districts of the country by March 2024, if so, the details thereof;

(b) details of the scientific study conducted by Government on whether the programme can help in tackling issues of anemia and malnutrition;

(c) details of studies to support that fortified rice is richer in nutrition and effective as compared to locally grown paddy crops; and

(d) whether Government has conducted a thorough study of the side effects of consumption of iron-fortified rice among Sickle Cell Disease (SCD) and Thalassemia patients given the poor screening rates?

**A N S W E R**  
**MINISTER OF STATE FOR MINISTRY OF RURAL DEVELOPMENT AND**  
**CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION**  
**(SADHVI NIRANJAN JYOTI)**

(a): Government of India has approved the supply of fortified rice throughout the Targeted Public Distribution System (TPDS), Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) Scheme and Integrated Child Development Services (ICDS) Scheme and in Other Welfare Schemes (OWS) which include inter-alia Schemes for Adolescent Girl (SAG), Annapurna Scheme, Welfare Institutions and Hostels Scheme in all States and Union Territories (UTs) by March, 2024 in a phased manner.

(b) to (d): Indian Council of Medical Research (ICMR) has taken up a study to evaluate the impact of distribution of iron-fortified rice jointly with Development Monitoring and Evaluation Office (DMEO), NITI Aayog. The study covers 6 districts to evaluate the impact of iron-fortified rice on iron-deficiency anemia. A Cochrane review which included 7 Randomized Controlled Trial (RCT) studies from different countries has reported a lower risk of anemia and iron deficiency with iron fortified rice resulting in reduction of anaemia with fortified rice compared to no fortification.

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Fortified rice is made by adding essential micronutrients such as Iron, Folic Acid and Vitamin B-12 to normal rice. Hence, the fortified rice is richer in nutrition with respect to added micronutrients as compared to non-fortified rice. As per white paper on 'Efficacy and safety of iron fortified rice in India' published by Indian Council of Medical Research-National Institute of Nutrition (ICMR-NIN) in 2023, rice fortification can be a midterm strategy for controlling iron deficiency, a long term approach is to improve dietary diversity, which can also prevent other micro nutrient deficiencies.

No such case of adverse effects of fortified rice on patients suffering from Sickle Cell Anaemia and Thalassemia has been reported by any State/UT.

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