

# COOKING AND TASTING DEMONSTRATION OF FORTIFIED RICE: Activity Report

## March, 2022 | 4 districts of Jammu & Kashmir

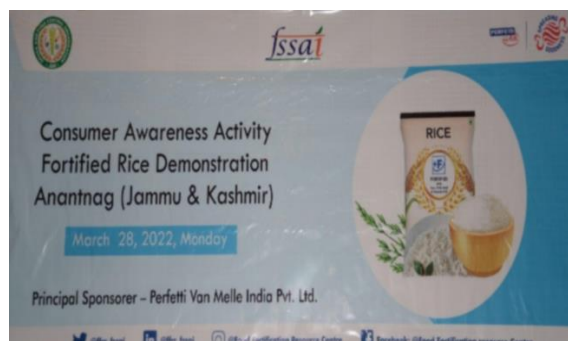
### BACKGROUND

In India as per NFHS-5(2019-21,) 67 percent of children had some degree of anemia (hemoglobin levels below 11.0 g/dl). 29 percent of children had mild anemia, 36 percent had moderate anemia, and 2 percent had severe anemia. Between 2015-16 and 2019-21, the prevalence of anemia in India among children aged 6-59 months has increased from 59 percent to 67 percent and continued to be higher among rural children. Anemia prevalence is higher among the children of anemic mothers than non-anemic mothers. Anemia prevalence has increased between NFHS-4 and NFHS-5, in the country.

In the Union Territory of Jammu and Kashmir the situation of Anaemia is more severe than the national average. The detailed data for the UT is provided below:

#### Anaemia Prevalence - Jammu & Kashmir

Indicators	NFHS-5	NFHS-4
Children age 6-59 months who are anaemic (<11 g/dl) (%)	<b>72.7</b>	53.8
Non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl) (%)	<b>67.3</b>	49.0
Pregnant women age 15-49 years who are anaemic (<11.0 g/dl) (%)	<b>44.1</b>	46.9
All women age 15-49 years who are anaemic (%)	<b>65.9</b>	48.9
All women age 15-19 years who are anaemic (%)	<b>76.2</b>	49.9
Men age 15-49 years who are anaemic (<13.0 g/dl) (%)	<b>36.7</b>	20.4
Men age 15-19 years who are anaemic (<13.0 g/dl) (%)	<b>53.5</b>	29.5



To address anemia and micro-nutrient deficiency in the country, Government of India approved the Centrally Sponsored Pilot Scheme on "Fortification of Rice & its Distribution under Public Distribution System" for a period of 3 years beginning 2019-20. Rice is consumed by 65% of the population in India. Currently rice is provided in all government safety net schemes and is a good vehicle to provide micronutrients

in the recommended quantity without any change in dietary habits.

The Kashmir region of UT of Jammu and Kashmir has 10 district out of which fortified rice is distributed in all the districts under PM Poshan Scheme and ICDS. Under Public Distribution Scheme (PDS) the distribution of fortified rice has started in aspirational districts of Kupwara and Baramula and in district Udhampur being high burdened district.

Though the scheme is operationalized, the success is dependent on the acceptability of the product by the end users. Due to lack of awareness about the appearance and benefits of fortified rice beneficiaries are not readily accepting and consuming it. Recently there were some misconceptions in the field that the fortified rice contains plastic rice. There is a need to sensitize people about the fortified rice kernel added in rice and cooking practice to be adopted for attaining maximum micronutrient levels in the cooked fortified rice.



## OBJECTIVE



The objective of conducting cooking demonstration activities was to create awareness about fortified staples especially fortified rice and bust myths to build trust among ICDS and MDM beneficiaries. This will also help in sensitizing beneficiaries that the colour, taste, smell and appearance of fortified rice is similar to normal rice. The objective of the exercise is also to generate evidence on overall acceptability by taking feedback from the participants about organoleptic properties of fortified rice.

## METHODOLOGY

Awareness campaign on food fortification with cooking and tasting demonstration activities specific to fortified rice were conducted in 4 districts in Jammu and Kashmir:

District	Date	Venue
Kupwara	22nd March 2022	Town Hall
Srinagar	24th March 2022	Gandhi Bhawan, Kashmir University
Anantnag	28th March 2022	Government Women College, Anantnag
Pulwama	30th March 2022	Government Degree Boys College, Pulwama

Approximately 500+ participants were present in the sessions including MDM supervisors, ZEOs, CDPO, Aganwadi workers and influencers. Lectures were delivered by experts on the benefits of food fortification, the regulations and current status along with the recommended method of preparation of the fortified foods. The queries and myths of the participants regarding fortified foods were also addressed. Souvenirs like masks, booklets and mugs were distributed among the participants for awareness and recognition of + F logo which is provided on fortified food packets for easy identification. The events were conducted by FSSAI (Fortification Division) in partnership with J&K State FDA and Perfetti Van Melle India Pvt. Ltd. The audience was served a hot meal prepared with fortified rice (Biryani). Thereafter, the participants were interviewed based on a predefined checklist asking about their sensory feedback and perception regarding fortified rice.

The questionnaire was based on a 5-point hedonic scale sensory evaluation to assess the acceptability of fortified rice among the beneficiaries. Sample questionnaire is attached at annexure 1. The participants were asked questions regarding texture, smell/aroma, taste, appearance and overall acceptability of fortified rice in 'Biryani'. The participants were asked to rate it on a scale of 1 to 5 and express their likeness /unlikeness of the meal prepared. The feedback was collected by the fortification division team using feedback forms manually, later the data was analyzed using MS Excel.



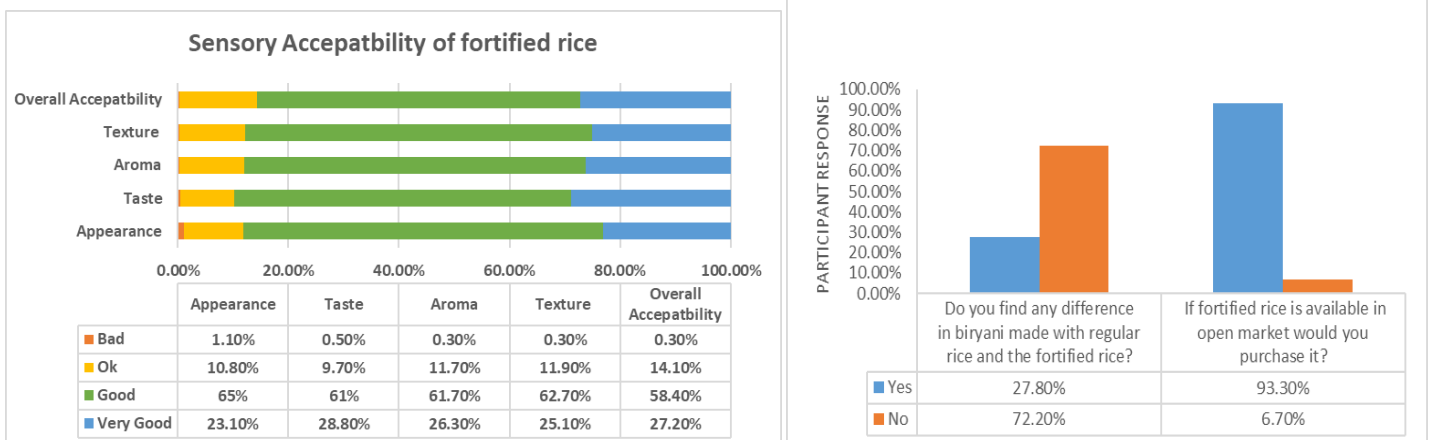
## OUTCOMES AND LEARNINGS



The event was attended by MDM officials, ICDS Officials, Government Officials, District Administration, State FDA, Head of the Education Institutions, Students, Media and other influencers. The Feedback form was filled by 830 frontline workers which includes 180 from Kupwara, 220 from Srinagar, 200 from Anantnag, 230 from Pulwama. The feedback form was filled by frontline workers only and 830 participants provided feedback about fortified rice.

The data was collected from all four districts on a predesigned questionnaire to assess the acceptability of Biryani on parameters like taste, texture, aroma, taste and appearance of the food prepared. The following graph depicts the sensory feedback about Biryani in all four districts.

**Graph 1: Sensory Feedback about Biryani at all our districts**



**Graph 2: Willingness of participants to buy fortified rice at all four districts**

Based on the analysis of the results it was found that 58% of the participants rated the dish prepared from fortified rice 'good' and 27.2% of the participants rated 'very good' on the overall acceptability. Further, 62.7% of the beneficiaries 'good' the texture of 'Biryani' and 61.7% rated it 'good' for the smell/aroma of the meal prepared. Around 89.8% of the

beneficiaries rated good and very good on the taste and 88.1% on the appearance of Biryani.

The participants were also asked about if they felt any difference in the biryani prepared from regular rice and fortified rice. Approximately three quarters of the participants responded that they have observed no difference. More than 93% of the participants were willing to buy fortified rice from the open market due to its nutritional benefits. However, some participants were concerned about the price of fortified rice available in the open market. Based on the analysis it can be concluded that the meal prepared was overall well-accepted by the beneficiaries in all four districts.



### Way Forward



The activity was a success due to the collaborative effort of State FDA, Fortification division and Perfetti Van Melle India Pvt. Ltd. The feedback received during the activity was very positive and participants were receptive to the fortified rice. The key takeaway from the activity is that there is a need for awareness building and tasting activities in various districts of the country to sensitize people about the benefits of fortified staples and increase the acceptability for effective implementation of the program. Similar activities need to be conducted in other

districts of Jammu & Kashmir and the model could be extended to other states in the country.