Rice Fortification Pilot 2 Scale-up

Aspirational District: Gadchiroli, Maharashtra
BRIEF OVERVIEW - RICE FORTIFICATION PILOT: KURKHEDA & BHAMRAGAD

Assessing the Problem
- Prevalence of Anemia: 53%
- Production of Paddy: 12,65,000 quintals
- Average Consumption of Rice Intake: 6990 gms

Value Chain Model
Farm 2 Fork
Procurement of Paddy
Identifying Right Millers locally
Milling and blending locally
Supply and Distribution locally

PPP Model
On boarding of rice miller
Technical Assessment of Rice millers
Proposing modified cost efficient Blending System
Providing Assured Paddy as incentive to rice miller

Assessment & Monitoring Distribution
- Training QC for on-spot testing
- Training Rice miller
- Stock Keeping of FRK
- Random Sampling and Third Party Testing
- Baseline Study & End-line Study Completed for 3 blocks completed Bhamragad, Kurkheda and Etapalli

Quick Facts on Impact & Distribution
Fortified Rice Supplied till date: 47612 Quintals
Number of FPS: 174
Number of villages covered: 257
Total Number Ration cards: 47,493
Beneficiaries: 189,972 approx

Supported & Technical Implementation Partners: TATA TRUST
Duration: June 2018 – January 2021

Government of Maharashtra & TATA TRUSTS
OBJECTIVE:

- Food Fortification a complimentary strategy, aims at addressing the prevalence of anemia, through the supply of fortified rice through the public distribution system.

- Rice will be fortified with Iron, Folic Acid, and Vitamin B12, B1, micronutrient levels are as per the Gazette of India 2018.

Key highlights for Rice Fortification Pilot across First Aspiration District: Gadchiroli through the PDS in two blocks.

1. Gadchiroli pilot demonstrates a cost-efficient value chain model which can be scaled across the district.
2. PDS provides an effective method to reaching out to the entire household.
3. Strongly facilitates micronutrient intake, as end user does not need to modify behavior in any way.
4. No change in taste, preparation makes it a viable intervention at addressing anemia.
5. Successful PPP Model with onboarding Rice miller to invest in setting blending machine.
6. Using the existing government distribution, & supply chain logistics, reduces logistic challenges for implementation at scale.
7. Using the rice miller premises, ensures standardize processes, reduces operation challenges and improves cost efficiencies.
8. Setting up a modified blending system, which was 1/10th proposed cost of blending system, reduced the entry barrier of rice millers to participate in rice fortification.
9. Blending system was fabricated in Gadchiroli, using local existing vendors and fabricators.
10. Assessment & monitoring through baseline & end-line of pilot through reputed research institute IIHMR- Jaipur.
11. Continuous third party testing of Fortified rice produced every alternate month.
12. Community mobilization and sensitization workshops at the two block to address rumors and misconceptions.
13. Continuation supply of fortified rice in 2 blocks solely supported by Tata Trusts from January – December 2020.
Baseline: Blood drawn samples & weight, height measurement in 3 blocks

Baseline: Survey Questionnaire: Sarpanch, Household, Block Supply officer, Fair price shop owner
The quasi-experimental study was designed to study impact of Rice fortification in Gadchiroli on prevalence of anaemia in women, adolescent girls and children. As per the study following outcomes are indicative to continue the program:

- The prevalence of anaemia excluding sickle cell anaemia in intervention area was 58.9% at baseline and 58.3% in control area. The prevalence of anaemia was similar in both the intervention and control blocks at the time of baseline.

- The prevalence of anaemia was assessed at end line. It was 29.5% in intervention blocks and 50.3% in control block.

- Thus, there was a reduction in prevalence of anaemia by 29.4% points in intervention block and by 8.0% points in control block. Assuming that 8% point reduction was due to other factors in intervention blocks as observed in control block, the 21.4% point reduction in prevalence of anaemia in intervention blocks could be contributed to the rice fortification intervention.

- Hence it is important to continue the production & supply of fortified rice across entire Gadchiroli district & hence the procurement of FRK.

- Awareness & BCC campaigns towards acceptance of fortified rice has to be implemented aggressively with monitoring & evaluation.
RICE FORTIFICATION SENSITIZATION WORKSHOP : GADCHIROLI

Rice Fortification Sensitization workshop for FPS + Gram Panchayat + Block Supervisors
Location : Khurkheda Panchayat Samati Hall
Guest Speaker : Dr Ranjan Solanki – Associate Professor Community Medicine – AIIMS Nagpur
RICE FORTIFICATION SENSITIZATION WORKSHOP : GADCHIROLI

Rice Fortification Sensitization workshop for FPS + Gram Panchayat + Block Supervisors
Location : Khurkheda Panchayat Samati Hall
Community Sensitization through Women SHG : Indira Mahila Bachatgat in Kurkheda who cooked a meal from fortified rice (live Demonstration)
RICE FORTIFICATION SENSITIZATION WORKSHOP: GADCHIROLI

Rice Fortification Sensitization workshop for FPS + Gram Panchayat + Block Supervisors
Location: Bhamragad Tahsildar
Tahsildar: Shri Prakash Andil - Bhamragad
Guest Speaker: Dr Anaga Amte & Dr Lokesh from Lokbiradri Prakalp – Hemalkasa Bhamragad.
Sample of Fortified blended Rice
RICE FORTIFICATION PILOT 2 SCALE UP: 12 Blocks GADCHIROLI
Collaborative partnership between
Government of Maharashtra
& TATA TRUSTS
Quick Facts of Impact & Distribution in Gadchiroli
Number of FPS: 1196
Number of Villages: 1681
Number of Ration card holders (12 blocks): 193,758
Total Volume of Rice Fortified: 544800 Qtls (10 blocks) in Gadchiroli

Assessment & Monitoring Distribution
- Tata Trusts – to ensure monthly random third party NABL lab testing for Fortified rice
- Stock Keeping of FRK and MIS of Production of Fortified rice
- Spot testing of Fortified rice by QC
- Block level monitoring and FPS monitoring

Checks & Balance for Scale up
- FRK tender: 535500 kgs (4 Micronutrients)
- Central Deposit for FRK closest State warehouse in Gadchiroli
- Penalty for Rice millers for under usage and misuse of FRK

Building Capacity and Sensitizing Rice Miller Workshop 5th July 2019
- 32 Rice millers attended
- 27 Rice Millers voluntarily agreed to participate in scale up
- 25 Rice Mills Technical Assessment undertaken
- 11 Rice Miller selected and announced for scale up
- 1st Capacity building and training for QC Manager

Government of Maharashtra & TATA TRUSTS

Partnership and collaboration
GR – highlighting the collaboration and support of GoI, and TATA TRUSTS to scale up Rice fortification for all paddy procured in Gadchiroli 14th August 2019
OUTPUTS, OUTCOMES AND IMPACT:

Key Outputs and Outcomes of the program:

- **Product Development**: Product development will be the key output of this collaboration. It could be across a wide range and include ingredients, processing techniques, legislation, gauging consumer demands and preferences.
- **Government Advocacy**: The scale up across 10 blocks in Gadchiroli has been approved by the Department of Food Civil Supplies, and NITI Aayog. The project will be monitored and outcomes / impact measured against parameters set during the baseline.
- **Operational Pilot**: A comprehensive fortification strategy spanning food staples, such as, rice being supplied through the PDS, has been piloted in two blocks of Gadchiroli and, given the acceptance, the GoM has agreed to scale-up rice fortification across the entire district.

Intended Outcomes / Expected Impact:

The supply of approximately 476,000 quintals of fortified rice with Iron, Vitamin B12, Folic Acid, through the public distribution system across 10 blocks in Gadchiroli district over 12 months will result in a reduction in the prevalence of Iron deficiency anemia across 400,000 households.
ACHEIVEMENTS:

- PDS is an extension of the existing government distribution framework, and consequently, logistic challenges to implementation at scale are reduced.
- The use of miller premises ensures standardization in processes, which helps reduce operational challenges and improve cost efficiencies.
- The Gadchiroli pilot referenced to above, has demonstrated a cost efficient value chain model, where paddy is grown in Gadchiroli, is further milled at local mills in Gadchiroli, and is subsequently supplied through FPS to each of beneficiaries.
- It is proposed that the rice miller collaboration and support will bear at minimum 50% CAPEX cost to setting the blending system; wherein the miller is motivated to ensure high quality of blended fortified rice - a business model for them for further scale-up.
- Cost efficient, scalable and sustainable model. This pilot has been greatly appreciated and acknowledged by NITI Aayog, has been published in Best Case Success Story in Health and Innovation in March 2019.

<table>
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<tr>
<th>ACTIVITY</th>
<th>TARGET (Annual)</th>
<th>ACHIEVEMENT (Till June 2020)</th>
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<tbody>
<tr>
<td>Procurement of FRK</td>
<td>525MT</td>
<td>212.25MT</td>
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<tr>
<td>Distribution of fortified Rice</td>
<td>48660 MT</td>
<td>11556 MT</td>
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<tr>
<td>Completion of monitoring and evaluation of baseline and end line survey</td>
<td>2 Blocks</td>
<td>2 Blocks (Additional 10 Blocks for scale up)</td>
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Assessment & monitoring through baseline & end-line of pilot through reputed research institute IIHMR- Jaipur was successfully completed. The following were the end-line survey outcomes:

a. The mostly study indicators found a positive change in both intervention block and control block. The knowledge & awareness on fortified food increased over time due to discussion the issues at village/ community level.

b. Awareness on health & hygiene issues were also found positive change. The BMI status of mothers were also found improved in intervention blocks.

c. The status of adolescent girls was also found positive in awareness, knowledge and change behaviour on fortified food.

d. The child rearing practices /behaviour of women were also found improvement in the intervention blocks. Mostly children were register with the AWW centre & visited the centre in almost all the functional AWW days and enjoy the fortified foods. The full immunization status also found improved in both the intervention blocks.

e. The positive changes were found in all the indicators linked with consumption, awareness of Fortified Food.
## IMPLEMENTATION STRUCTURE OF THE PROGRAM: DIRECT IMPLEMENTATION & BENEFICIARY DATA

<table>
<thead>
<tr>
<th>Parameters**</th>
<th>Coverage (in the fiscal year 2019-20)</th>
<th>Cumulative figures (Status and plan till 2021)</th>
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<tbody>
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<td>Cumulative outreach (Since year of project operationalization up to March 2020)</td>
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<td>No. of districts covered</td>
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<tr>
<td>No. of blocks covered</td>
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<tr>
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<tr>
<td>No. of Households / families</td>
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<td>No. of individuals</td>
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<tr>
<td>No. of BPL Beneficiaries</td>
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<td>No. of FPS shops for PDS supply of fortified rice</td>
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<tr>
<td>No. of BPL (yellow) ration card holders</td>
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<td>No. of Antyodaya ration card holders</td>
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<td>No. of APL ration card holders</td>
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RAPID BIODEGRADABLE MATERIALS: 5th July 2019 GADCHIROLI

Address by District Collector: Shri Shrikar Singh, I.A.S.

Presentation by TATA TRUSTS: Project Manager Ms Sonal Desouza
Technical Consultant: Eminus International Pvt. Ltd
Mr. Bala Ganepphot G.

Testimonial by M/s Jena Agro Rice Mills – Shri Haider Panywani – Proprietor
Rice Millers present for the capacity building workshop

Testimonial from proprietor: M/s Jena Agro Processing Mill at Capacity Building workshop
COMMUNITY AWARENESS CAMPAIGN: FEBRUARY 21ST 2020 and MARCH 6TH 2020

Markanda Shivratri Festival: Chamorshi Block

ICDS Anganwadi Sevika Meet during “POSHAN Pakwada” celebration: Aheri Block
THANK YOU