

# Rice Fortification Pilot 2 Scale-up

## *Aspirational District : Gadchiroli, Maharashtra*

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# 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



## 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

## 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

## 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

# BRIEF OVERVIEW - RICE FORTIFICATION PILOT : KURKHEDA & BHAMRAGAD

## 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 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 1/10<sup>th</sup> 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 IIMR- 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

# BASE LINE SURVEY : SNAP SHOTS FROM FIELD

## Baseline & End Line Survey

Baseline : Blood drawn samples & weight , height measurement in 3 blocks



Baseline : Survey Questionnaire : Sarpanch, Household, Block Supply officer, Fair price shop owner



## Outcomes of the study & action plan for implementation of recommendation :

**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.

# BEHAVIOURAL CHANGE CAMPAIGN & COMMUNICATION

## 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



# BEHAVIOURAL CHANGE CAMPAIGN & COMMUNITY MOBILIZATION

## 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)



# BEHAVIOURAL CHANGE CAMPAIGN & COMMUNICATION

## 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.



Participants getting a gift for answering the right answer from Tahsildar : Shri Prakash Andil



# AWARENESS & INFORMATION COMMUNICATION COLLATERALS



महाराष्ट्र शासन  
अन्न, नागरी पुरवठा व ग्राहक संरक्षण विभाग  
जिल्हाधिकारी, गडचिरोली

**पोषणतत्व गुणसंवर्धित तांदूळ**



Gadchiroli

PROCESSED AT :  
M/s JENA AGRO, ARMORI  
GADCHIROLI

SUPPORTED BY  
**TATA TRUSTS**



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**पोषणतत्व गुणसंवर्धित तांदूळ**  
**सही पोषण देश रोशन**

लौह, फॉलिक एसिड व विटामिन  
ब १२, ब १ युक्त फोर्टीफाइड अन्नधान्य.

-  हृदयाचे आरोग्य सुधारते
-  बळकट आणि उत्प्रेरकपणा  
या अन्नसंप्ल्याकडून  
सुटकर होते
-  सकारात्मक प्रत्येकपुढे  
प्रमाण मितव्ययीत ठेवते



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GADCHIROLI

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Sample of Fortified blended Rice

**RICE FORTIFICATION PILOT 2 SCALE UP : 12 Blocks GADCHIROLI**  
**Collaborative partnership between**  
**Government of Maharashtra**  
**& TATA TRUSTS**

# RICE FORTIFICATION PILOT 2 SCALE UP : 12 Blocks

## 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



TATA TRUSTS

Government of Maharashtra

### 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 14<sup>th</sup> August 2019

## Building Capacity and Sensitizing Rice Miller Workshop 5<sup>th</sup> 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
- 1<sup>st</sup> Capacity building and training for QC Manager

## 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

# 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.

ACTIVITY	TARGET (Annual)	ACHIEVEMENT (Till June 2020)
Procurement of FRK	525MT	212.25MT
Distribution of fortified Rice	48660 MT	11556 MT
Completion of monitoring and evaluation of baseline and end line survey	2 Blocks	2 Blocks (Additional 10 Blocks for scale up)

# ENDLINE EVALUATION OF PILOT PROJECT

**Assessment & monitoring through baseline & end-line of pilot through reputed research institute IIMR- 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

Parameters**	Coverage (in the fiscal year 2019-20)	Cumulative figures (Status and plan till 2021)	
		Cumulative outreach [Since year of project operationalization up to March 2020)	Cumulative Target
Number and name of the state/s	01	01	05
No. of districts covered	01	01	05
No. of blocks covered	02	02	10
No. of villages covered	257	257	1688
No. of Households / families	3476	3476	59615
No. of individuals	121637	121637	792745
No. of BPL Beneficiaries	1020	1020	37486
No. of FPS shops for PDS supply of fortified rice	180	180	1196
No. of BPL (yellow) ration card holders	873	873	36613
No. of Antyodaya ration card holders	14669	14669	77801
No. of APL ration card holders	1453	1453	28946

# CAPACITY BUILDING WORKSHOP FOR LOCAL RICE MILLERS : 5<sup>th</sup> July 2019 GADCHIROLI



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



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



Testimonial by M/s Jena Agro Rice Mills – Shri Haider Panjwani – 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 21<sup>ST</sup> 2020 and MARCH 6<sup>TH</sup> 2020



**Markanda Shivratri  
Festival: Chamorshi  
Block**



**ICDS Anganwadi Sevika Meet during "POSHAN  
Pakwada" celebration: Aheri Block**



THANK YOU

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