



Food Fortification Resource Centre

Training on Wheat Flour Fortification

22nd March 2018, 10:00 am to 3:00 pm

HAFED mill, Taraori, Haryana

Food Fortification Resource Centre organised its first training at HAFED mill (Taraori, Haryana) on 22nd March 2018 from 10: 00 am to 3:00 pm with support from GAIN, Roller Flour Millers Federation and technical experts. The goal of this training was to build capacity of wheat flour millers in Haryana to initiate and scale up wheat flour fortification. The agenda of the training is attached at Annexure 1.

Participants

Over 25 participants from 8 mills including two mills of HAFED participated in the training. The detailed list is attached at Annexure 2.

Presentations

FFRC and GAIN started the training with setting the context for fortification and sharing its role in improving the nutritional health of the population. An interactive session was held where disease burden and malnutrition statistics especially anaemia from Haryana were shared with the millers. A tool kit containing FFRC brochure, FSSAI standards on fortification, Government directives on fortification, Wheat flour technical manual and FAQs, and list of NABL accredited labs was shared with all the participants.



Assessment

Before starting the training session, a pre-assessment questionnaire was distributed to understand the existing knowledge of the participants about fortification. Post the completion of the training, duplicate copy of the same questionnaire was asked to fill in again to gauge the effectiveness of the training and how much they have understood about the fortification. The assessment has been done as follows:

- Millers were requested to answer a series of 11 questions on the subjects of the training. The test was for 11 marks. 12 participants took the test.
- Pre-training assessment: Results before the start of the session indicate that the understanding on wheat flour fortification of the participants was not very appropriate; with only average of 8 correct replies. The questions on Fortification were answered correctly by most of the participants in the Pre Test. Answers pertaining to analysis of fortified wheat flour were correct
- Post-training assessment: After the completion of training, a round of participant evaluation was done and the average correct answers were found to be 10

The results show that the training helped in increasing the competency level of the participants.

Practical Session:

After introducing the millers to fortification and explaining them the entire process, they were taken to the mill to showcase demonstration of the wheat flour fortification. A live demonstration of the following was shown by the technical experts and discussed in the mill:

- 1) Mixing of wheat flour and premix in the required quantities to prepare a pre-blend
- 2) Process of adding pre-blend in the micro doser
- 3) Setting the RPM rate to discharge the premix at the required dosage level
- 4) List of Do's and Don'ts including the handling and storage of premix

Post the demonstration of the process of fortification, demonstration of iron spot testing was done to show the participants the presence of iron in fortified atta vs non fortified atta. Iron spot test kits were also distributed amongst the participants.

Discussion/Concerns

Following discussion and concerns were raised during the training:

- Concern regarding overdosing or increasing toxicity was highlighted. It was explained that as per the current standards fortification is done at level of 1/3rd of RDA, therefore there is no possibility of toxicity. Also, none of the toxicity case is being reported so far across the globe due to fortification. The fact was further reinforced by explaining that there is only 3% bioavailability of iron from fortified food
- Concerns over +F logo registration was highlighted and the process of it was explained in detail

- There was a lot of ambiguity of the ratio and rate of addition of premix and pre-blend in the wheat flour. This was resolved during the live demonstration of the fortification process
- Participants had lot of confusion of Iron spot testing; this was addressed by practically exhibiting the test

The response from the participants was enthusiastic as their questions were addressed satisfactorily. The training concluded successful with millers committing to start fortification soon.

Next Steps

1. FFRC in collaboration with development partner to prepare training modules and conduct more trainings to equip wheat flour millers
2. FFRC to support upcoming adopters of wheat flour fortification regarding technical trainings and FSSAI related queries.
3. FFRC to provide end to end support such as +F logo registrations, fortification labelling declarations, guidance and dissemination of fortification related directives

Annexure 1:

S. No	Agenda	Time	Speakers
1)	Registration and Tea	10:00 am – 10:30 am	
2)	Welcome Address and Setting the Context	10:30 am – 10:45 am	Ms Veena Sharma, Joint Secretary, Roller Flour Millers Federation of India
3)	Overview of Malnutrition in Haryana and Food Fortification	10:45 am – 11:00 am	Ms. Deepti Gulati, GAIN
4)	Technical Session on Sourcing of premix, handling and its storage	11:00 am – 11:30 am	Ms. Suman Gupta, Technical Expert
5)	Interactive session – Question and answers	11:30 am – 12:30 pm	FFRC (Ms. Nistha Lahoti, Ms Sakshi Jain) GAIN (Ms. Deepti Gulati)
LUNCH 12:30 pm – 1:30 pm			
6)	Demonstration on Wheat Flour Fortification Process at the mill	1:30 pm – 3:00 pm	Mr. Manish Mehrotra, Technical Expert
6)	Demonstration of qualitative test for iron in fortified wheat flour	3:00 pm – 3:30 pm	Ms. Veena Sharma, Technical Expert

Annexure 2:

List of participants:

- 1) Mr. Subhash Mittal, Ambala Foods
- 2) Mr. Preet Mohan Singh, Viyal Grains Limited
- 3) Mr. Naresh Garg, Shree Jee Jee Grains
- 4) Mr. Puneet Jain, Jay Jay Agro Industries
- 5) Mr. Surinder Kumar Bansal, Shri Ram Roller Flour Mills
- 6) Mr. Anil Ram, Amar Roller Flour Mills
- 7) Mr. Satish Sharma, Amar Roller Flour Mills
- 8) Mr. Anil Kumar, HAFED Ambala
- 9) Mr. Amit Rana, HAFED Ambala
- 10) Mr. S.K Hooda, HAFED Taraori
- 11) Mr. R.K Sachdeva, HAFED Taraori
- 12) Ms. Seema, HAFED Taraori
- 13) Ms. Shabnam, HAFED Taraori
- 14) Mr. Ravinder Kumar, HAFED Taraori
- 15) Mr. Chander Prakash, HAFED Taraori
- 16) Mr. Rakesh Kumar, HAFED Taraori
- 17) Ms. Suman Gupta, AQC Chemicals Limited
- 18) Mr. Manish Mehrotra, Flour tech
- 19) Ms. Veena Sharma, Roller Flour Millers Federation
- 20) Ms. Deepti Gulati, Global Alliance for Improved Nutrition
- 21) Ms. Soumya Tewari, Global Alliance for Improved Nutrition
- 22) Ms. Nistha Lahoti, Food Fortification Resource Centre
- 23) Ms. Sakshi Jain, Food Fortification Resource Centre