



Feasibility Study to Introduce Low Cost Fortified Energy Foods In India Through Private Sector Participation

Volume 2: Appendices

Transmittal Letter



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Date: November 15, 2018

Subject: Comprehensive Final Report for Feasibility Study to Introduce Low Cost EDF in the Market with Private Sector Participation

Dear Madam,

This refers to the Request for Proposal dated Aug 04, 2017 issued by you, our proposal for services dated Sep 05, 2017, the Work Order issued to us dated Oct 16, 2017 ('the Contract').

We appreciate the opportunity to assist Karnataka State Rural Livelihood Promotion Society ("you") by providing Feasibility Study to Introduce Low Cost EDF in the Market with Private Sector Participation ('Services').

This report is our final report and signifies completion of our Services as described in the Contract. This report has been updated basis the feedback provided by you on the draft report. The performance of our Services and the report issued to you pursuant to the Services are based on and subject to the terms of the Contract.

This report is solely for your benefit and information and is not to be referred to in communications with or distributed for any purpose to any third party without our prior written consent. We have been engaged by you for the Services and to the fullest extent permitted by law, we will not accept responsibility or liability to any other party in respect of our Services or the report.

It has been our privilege to work with you, and we look forward to continuing our relationship with you.

For KPMG Advisory Services Private Limited

Signature.....



Name: Amit Dutta

Title: Director

Date: Nov 15, 2018

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Disclaimer and Notice to Reader

- 1 This report has been prepared exclusively for Karnataka State Rural Livelihood Promotion Society ("Client") based on the terms of the Request for Proposal dated Aug 04, 2017 issued by you, our proposal for services dated Sep 05, 2017, the Work Order issued to us dated Oct 16, 2017 ('Contract').
- 2 The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.
- 3 This report is confidential and for the use of management only. It is not to be distributed beyond the management nor is to be copied, circulated, referred to or quoted in correspondence, or discussed with any other party, in whole or in part, without our prior written consent.
- 4 This report sets forth our views based on the completeness and accuracy of the facts stated to KPMG and any assumptions that were included. If any of the facts and assumptions is not complete or accurate, it is imperative that we be informed accordingly, as the inaccuracy or incompleteness thereof could have a material effect on our conclusions.
- 5 While performing the work, we assumed the genuineness of all signatures and the authenticity of all original documents. We have not independently verified the correctness or authenticity of the same.
- 6 We have not performed an audit and do not express an opinion or any other form of assurance. Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- 7 While information obtained from the public domain or external sources has not been verified for authenticity, accuracy or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. We assume no responsibility for such information.
- 8 Our views are not binding on any person, entity, authority or Court, and hence, no assurance is given that a position contrary to the opinions expressed herein will not be asserted by any person, entity, authority and/or sustained by an appellate authority or a Court of law.
- 9 Our report may make reference to 'KPMG Analysis'; this indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the veracity of the underlying data.
- 10 In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.
- 11 In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.
- 12 By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

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Acronyms and Abbreviations

Abbreviations	Description
ANC	Ante Natal Check-up
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
ASHA	Accredited Social Health Activist
AWW	Aanganwadi Worker
BMI	Body Mass Index
BPL	Below Poverty Line
C&F	Carrying & Forwarding
CAGR	Compound Annual Growth Rate
CAPART	Council for Advancement of People's Action and Rural Technology
CARE	Cooperative for Assistance and Relief Everywhere
CHC	Community Health Centre
CINI	Child In Need Institute
DAC	District Administrative Center
EDF	Energy Dense Food
FGD	Focus Groups Discussions
FHW	Female Health Worker
FMCG	Fast Moving Consumer Goods
GI	Gastro Intestinal
HFD	Health Food Drink
HYV	High-Yielding Variety
ICDS	Integrated Child Development Services
INR	Indian Rupee
JSDF	Japan Social Development Fund
KNM	Karnataka Nutrition Mission
KSRLPS	Karnataka State Rural Livelihoods Promotion Society
MAM	Moderate Acute Malnutrition
MCP	Mother-Child Protection
MNT	Medical Nutrition Therapy
MTC	Medical Treatment Centre
MUAC	Mid-Upper Arm Circumference
NCT	National Capital Territory
NFHS	National Family Health Survey
NIPI	National Iron Plus Initiative
NRC	Nutrition Rehabilitation Centre
P&M	Plant & Machinery
PHC	Primary Health Centre
POSHAN	Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India
NGO	Non-Governmental Organization
R&M	Repairs & Maintenance
RBSK	Rashtriya Bal Swasthya Karyakram
RTM	Route To Market
RUTFs	Ready to eat Therapeutic Foods
SAM	Severe Acute Malnutrition
SKU	Stock Keeping Unit
SS	Super Stockist
UNICEF	United Nations Children's Fund
WCD	Women and Child Development

Appendix 1: Approach & Methodology

1.1 Detailed Sampling Plan

The detailed sampling plan for each of the three levels as mentioned is as follows:

Level - 1: Identification of States

Figure 1 presents the states in which data collection was undertaken. The states were selected on the basis of following 8 parameters. These parameters were taken from National Health Survey Report, 2015-16, Government of India:

- Children under 5 years (who are stunted)
- Children under 5 years (who are wasted)
- Children under 5 years (who are underweight)
- Infants (who were exclusively breast fed)
- Children under three years (who have low birth weight)
- Adolescent girls 15-18 years of age (who are with low Body Mass Index)
- Fully immunized
- State has an operative National Health Mission

Figure 1: State covered for Primary Data Collection



States were selected and ranked based on their performance across these 8 parameters. Table 1 provides rank of states covered for primary data collection and their ranks on the above mentioned parameters:

Table 1: States selected for Primary Survey and parameters for selection

S.No.	State	Parameters where states underperform
1	Gujarat	Children under 5 years (who are stunted); Children under 5 years (who are wasted); Children under 5 years (who are underweight); Children under 3 years (who have low birth weight); Adolescent girls 15-18 years of age; Fully immunized
2	Uttar Pradesh	Children under 5 years (who are stunted); Children under 5 years (who are underweight); Infants (who were exclusively breast fed); Children under three years (who have low birth weight); Fully immunized
3	Odisha	Children under 5 years (who are stunted); Children under 5 years (who are wasted); Children under 5 years (who are underweight); Adolescent girls 15-18 years of age (who have low body mass index)
4	Maharashtra	Children under 5 years (who are wasted); Children under three years (who have low birth weight); Adolescent girls 15-18 years of age (who have low body mass index)
5	Karnataka	Infants (who were exclusively breast fed); Adolescent girls 15-18 years of age (who have low body mass index)

Level - 2: Selection of districts from each identified state

From each identified State, two districts were selected for data collection, on basis of their performance on health and malnutrition parameters. The parameters for selection of districts are provided below:

- Children from 0 to 5 years (who are stunted, wasted and underweight)
- Women from 15 to 49 years age group (who are anemic and BMI below normal)
- Men from 15 to 49 years age group (who have BMI below normal)

Based on the rankings the best (highest) and worst (lowest) performing (ranked) districts were selected. In total, 10 districts were covered (2 each from all the 5 states). Within each district, block were selected based on their distance from the District Administrative Centers. The coverage within a district is provided in Table 2 below:

Table 2: Selection of Districts and Blocks for Primary Survey

Types of Respondents	State	District					
		District 1			District 2		
		<i>Best Performing District</i>			<i>Worst Performing District</i>		
		Block 1	Block 2	Block 3	Block 1	Block 2	Block 3
Distance from DAC*		<i>Nearest</i>	<i>Median</i>	<i>Farthest</i>	<i>Nearest</i>	<i>Median</i>	<i>Farthest</i>
Total	200	26	36	38	26	36	38
Interview		10	20	20	10	20	20
FGD		8	8	9	8	8	9
Other Stakeholder		8	8	9	8	8	9

The sample for data collection, within each block, included respondents across urban, semi—urban and rural areas. The respondents selected for interviews were from following categories:

- Rural: Daily wage workers, marginal farmers, landless laborers etc.
 - Urban: Unorganized labor, sales people, hotel/restaurant workers, hawkers
- Please note that the spread of respondents across the state also depends on number of respondents available at the time of interview.

Level - 3: Selection of Respondents

Stakeholders for study, were categorized into three types based on the level of engagement:

- **Macro-level stakeholders:** Macro-level stakeholders were identified from cluster of key drivers that enable the market to perform. The key drivers identified for food and nutrition chain in India are:
 - *District Administrative Centers*, which take care of government based NRC units and regulating private sector hospitals and healthcare systems at district level
 - *Government hospitals* administering access to healthcare facilities at block level through PHCs and CHCs. Through PHCs and CHCs, healthcare facilities provided to urban, semi-urban and rural clusters respectively.
 - *Private Sector Players*, which are already involved in manufacturing or distribution-based supply chain for currently available Fortified Energy Foods. The private sector players consist of either manufacturers producing Fortified Energy Foods products made from natural ingredients such as chattua, ganji, chuda, etc. or distributors selling Fortified Energy Foods products established under known or advertised brands.

Respondents covered under this stakeholder category were manufacturers, distributors, nutritionists, medical officers, physicians etc.

- **Meso-level stakeholders:** Meso-level stakeholders comprise of cluster of gatekeepers that were in direct contact with the households/potential beneficiaries. The key gatekeepers identified were schools, Anganwadis and ASHA workers. The gatekeepers were also involved in identifying, assessing and diagnosing cases of malnourishment among various age groups and deploying mitigation measures such as access to proper health solution, distribution of healthy and nutrient diet especially among infants, children, adolescents and expecting mothers.

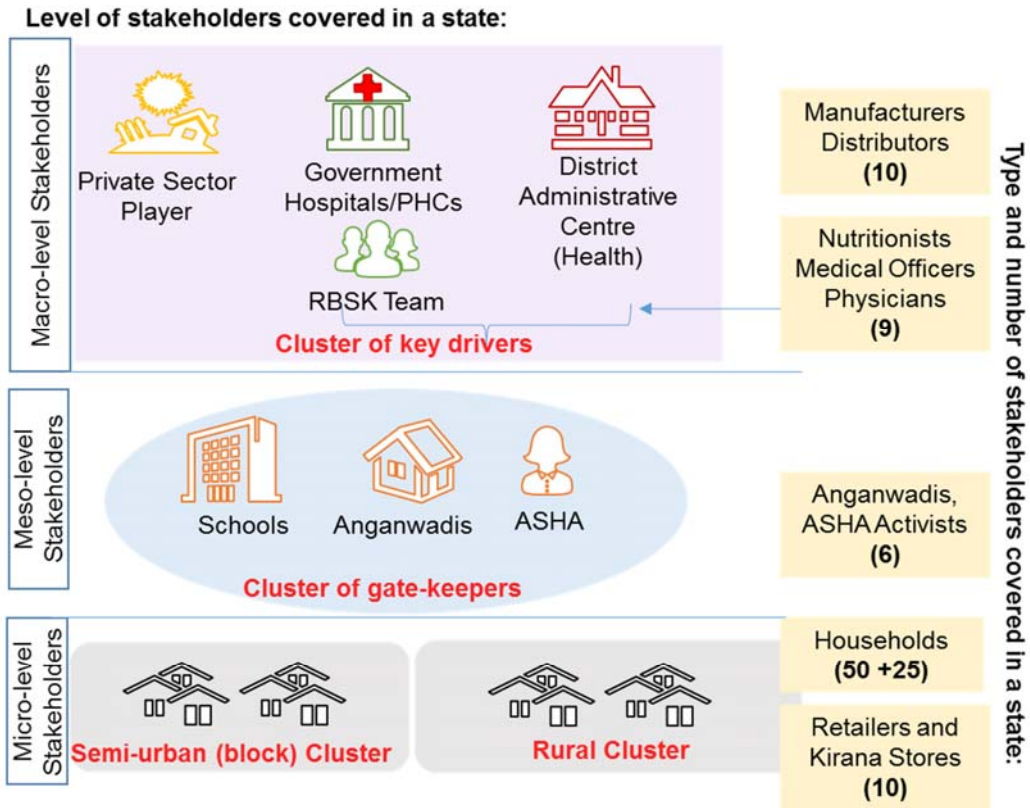
Respondents covered under this stakeholder category were Aanganwadis, Balwadis and ASHA workers.

- **Micro-level stakeholders:** Micro-level stakeholders included households in urban, semi-urban and rural locations.

Respondents covered under this category were households and retailers or kirana storeowners. Household respondents included adolescent girls and boys, expecting and lactating mothers, adults and elderly people belonging to BPL, APL and neo-middle class category.

A schematic representation of stakeholders and respondents is provided in Figure 2.

Figure 2: Stakeholders covered per state through primary survey



Household sample covers following types of respondents across BPL, APL and neo middle class groups:

- Adolescent girls (5) and boys (5) - 10
- New (5) and Expectant Mothers (5) - 10
- Elderly Men (5) and Women (5) - 10
- Men (10) and Women (10) from other age groups - 20

Appendix 2: Summary of Responses

This appendix summarises the number of respondents covered in the study and their responses.

2.1 Households Research Data

2.1.1 In-depth interview

State-wise and gender wise coverage of respondents

Table 3: Distribution of respondents across state and gender

State	Total respondents	Male Respondents	Female Respondents
Uttar Pradesh	100	36	64
Maharashtra	103	11	92
Gujarat	113	10	103
Orissa	101	38	63
Karnataka	103	12	91
Total number of respondents	520	107	413

Occupation wise distribution

Table 4: Distribution across occupations

Occupation	Total no. of respondents
Urban	
Organized and unorganized labor	76
Sales people	25
Hotel/restaurant/office workers	22
Hawkers and small business owners	17
Others services (police constables, teacher, gardener, etc.)	25
Total respondents	165 <i>(Please note that 10 respondents surveyed were not employed and live either on their pension or are financially supported by their children.)</i>
Rural	
Daily wage workers	102
Marginal farmers	110
Landless laborers	66

Others (Drivers, Shop owners, Business, Government jobs etc.)	62
Total respondents	340 <i>(Please note that 5 respondents surveyed were not employed and live either on their pension or are financially supported by their children.)</i>

Income wise distribution in urban and semi-urban areas

Table 5: Income Distribution in urban areas

S. No.	Income category	No. respondents	of	Expenditure on Food Items	Expenditure on Food Supplements
1.	INR 1,000 - 10,000	102 (58.29%)		INR 4,035.73	INR 353.45
2.	INR 10,00 –30,000	63 (36%)		INR 4,042.77	INR 352.14
3.	INR 30,000 – 60,000	10 (5.71%)		INR 4,025.81	INR 344.86

Income wise distribution in rural areas

Table 6: Income distribution in rural areas

S. No.	Income category	No. respondents	of	Expenditure on Food Items	Expenditure on Food Supplements
1.	INR 1,000- 10,000	282 (81.74%)		INR 3,065.46	INR 353.45
2.	INR 10,001 –30,000	63 (36%)		INR 4,042.77	INR 352.14
3.	INR 30,000 – 60,000	10 (5.71%)		INR 4,025.81	INR 344.86

Area of Residence

Table 7: Distribution across geographical area

Rural	Urban	Semi-Urban
345	51	124

Age wise distribution

Table 8: Distribution across age

Respondent type	12-18 years	19-30 years	31-50 years	51 years and above	Total no. of respondents
Male	8	21	45	33	107
Female	10	222	149	32	458
Total number of respondent	18	243	194	65	520

Expenditure on food items (overall)

Table 9: Expenditure on food items

Income category (per month)	Urban	Rural	Total no. of respondents
INR 100 – INR 1,000	8	29	37
INR 1,001 – INR 5,000	105	256	361
INR 5,001 – INR 10,000	62	60	122
Total no. of respondents	175	345	520

Dietary Intake

Table 10: Dietary intake

Food Intake	Rural		Urban	
	Number of Respondents	Average Income per month (INR)	Number of Respondents	Average Income per month (INR)
Twice a day	2	4,000	4	8,875
Thrice a day	152	7,530.59	119	12,495.76
Four times a day	115	8,788.69	44	13,352.27
Five times a day	53	11,278.3	7	16,000

Intake of Fortified Energy Foods

Table 11: Intake of Fortified Energy Foods

Intake of food supplements	Urban	Rural
Yes	78	117
No	97	228
Total no. of respondents	175	345

Family Member who take Fortified Energy Foods

Table 12: Age of consumers of Fortified Energy Foods

Family Member	Provide some form of food supplements
Infants and Children who are sick	53
Children	46
Mothers	43
Elderly	18
Others (Male)	35
Total no. of respondents	195

Prevalent Fortified Energy Foods

Table 13: Variants of Fortified Energy Foods consumed

Supplement Used	Yes
Lactogen	11
Cerelac	38
Bournvita	37
Horlicks	41
Boost	7
PediaSure	2
Chyawanprash	4
Others (some form of Protein powder)	55
Total no. of respondents	195

Consumption pattern of Fortified Energy Foods in urban areas

Table 14: Consumption pattern of Fortified Energy Foods in urban areas

S. No.	Income category	No. of respondents	Analysis
1.	INR 1,000 - INR 10,000	102 (58.29%)	<ul style="list-style-type: none"> 69 knows about EDFs 35 takes EDFs Out of 35 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (15), Adolescents (4), Pregnant Women (14), Lactating Mothers (0), Elders (2) Out of 35, 21 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex, Protodex, PediaSure
2.	INR 10,001 – INR 30,000	63 (36%)	<ul style="list-style-type: none"> 52 knows about EDFs 35 takes EDFs Out of 35 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (18), Adolescents (4), Pregnant Women (12), Lactating Mothers (0), Elders (1) Out of 35, 17 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex
3.	Greater than INR 30,000	10 (5.71%)	<ul style="list-style-type: none"> 8 knows about EDFs 7 takes EDFs Out of 7 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (3), Adolescents (0), Pregnant Women (2), Lactating Mothers (0), Elders (2) Out of 7, 2 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex

Consumption pattern of Fortified Energy Foods in rural areas

Table 15: Consumption pattern of Fortified Energy Foods in urban areas

S. No.	Income category	No. of respondents	Analysis
1.	INR 1,000 - INR 10,000	281 (81%)	<ul style="list-style-type: none"> 212 knows about EDFs 81 takes EDFs Out of 81 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (30), Adolescents (20), Pregnant Women (20), Lactating Mothers (10), Elders (1) Out of 81, 24 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex
2.	INR 10,001 – INR 30,000	56 (16%)	<ul style="list-style-type: none"> 44 knows about EDFs 31 takes EDFs Out of 31 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (10), Adolescents (4), Pregnant Women (9), Lactating Mothers (6), Elders (2) Out of 31, 9 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex, Nestle NAN, Pro PL, PediaSure
3.	Greater than INR 30,000	8 (2%)	<ul style="list-style-type: none"> 8 knows about EDFs 5 takes EDFs Out of 5 respondents using EDFs, the EDFs is currently provided to following target groups: Infants (2), Pregnant Women (3) Out of 5, 4 respondents spend on buying expensive EDF products such as Cerelac, Protein Powder, Mother's Horlicks, Protinex, Lactogen, Farex

Reason for intake of Fortified Energy Foods

Table 16: Reasons for intake of Fortified Energy Foods

Reason	Yes
Nutrition Intake	121
Lactation	17
Complementary Children's Food	38
Old Age Supplements/ Illness	19
Total no. of respondents	195

Expenditure on Fortified Energy Foods

Table 17: Expenditure on Fortified Energy Foods

Income category (per month)	Urban	Rural
INR 100 – INR 200	5	24
INR 201 – INR 500	23	62
INR 501 – INR 1,000	10	8
INR 1,001 and above	0	1
Total no. of respondents	38	95

Daily chores of consumers of Fortified Energy Foods

Table 18: Daily chores of consumers of Fortified Energy Foods

Daily chores of food supplement taking people (apart from infants and toddlers)	No. of respondents
Student	129
Females	71
Males	43
Infants	106
Total no. of respondents	195

Consumption pattern of Fortified Energy Foods

Table 19: Consumption of Fortified Energy Foods

Frequency of food intake	No. of respondents
Three times a day	40
Two times a day	136
Once a day	173
Total no. of respondents	349

Awareness level regarding Fortified Energy Foods

Table 20: Awareness level of Fortified Energy Foods

Know about food supplements	Urban	Rural
Yes	130	264 (394)
No	45	81
Total no. of respondents	175	345

Mode of awareness about Fortified Energy Foods

Table 21: Mode of awareness

How they know about food supplements	No. of respondents
Mass campaign	61
Doctor	131
Nutritionist	70
Government health worker	30
Others (advertisement, neighbor, etc.)	102
Total no. of respondents	394

Expectations from low cost Fortified Energy Foods

Taste:

Table 22: Preferred taste

Preferred taste	No. of respondents
Fruity	94
Salty	33
Tangy	20
Mixed taste	113
Chocolate	212

Others (coffee, lemon, sweet, vanilla etc.)	48
Total	520

Form:

Table 23: Preferred Form

Preferred form	No. of respondents
Fine amorphous (taken with water/milk)	324
Course amorphous mixed with vegetables/fruits or water/juice	10
Tablets	30
Bars	10
Biscuits	133
Others	13
Total	520

Size of packaging

Table 24: Preferred size of packaging

Preferred size for packaging	No. of respondents
100-300 gm or ml	179
300-750 gm or ml	167
1 kg or l	107
> 1 kg or l	29
Any other (small pouch size packet)	38
Total	520

Price per serving:

Table 25: Preferred Pricing

Preferred price per serving	No. of respondents
< INR 10	420
INR 10 – INR 25	48
INR 25 – INR 50	32
INR 50 – INR 100	20
> INR 100	Not applicable
Others	Not applicable
Total	520

2.1.2 Focus Group Discussion

FGD 1:-

Location	Kutiya (Porbandar, Gujarat)
No. of Respondents	12
Age group of Respondents	16 years to 50 years
Gender of Respondents	Females
Professional details of Respondents	Half of the group members were daily wage laborers and the remaining were home makers.

The discussion began with the moderator asking participants if they were aware about Fortified Energy Foods. The participants said that these are supplemental food products that are usually taken by people who work out for muscle building. The moderator then clarified that Fortified Energy Foods are consumed to complete the nutritional requirement of the body where the other food items consumed do not suffice (unless a well-balanced nutritious diet is followed).



The group members then discussed that some of them have given these products to their children, but were opposed to the product's claims of making children stronger, sharper and taller, as they did not see any such result in their children. They said that products like Bournvita and Horlicks are only flavoring agents that enhance the taste of milk and do not provide any nutrition. They find the advertisements of these products to be very misleading and non - trustworthy. However, they also said that few products like Chyawanprash and supplements given to them through Aanganwadis such as, Calcium, Iron, Folic, and Multivitamins are beneficial and should be taken.

The participants said that they would be willing to buy the low cost Fortified Energy Foods. All of them recommended that it should be in tablet, bar or biscuit form. It should be made available at all the nearby medical stores. In order for them to be able to afford the product, it should cost somewhere between INR 60- 70 per kilogram. The group members strongly suggested that the product should be certified by a government agency ensuring that it is genuine and will improve the health of the consumers.

The group also suggested that the product should be available through government channels such as Aanganwadis and promoted through government advertisements. As the group was more aware about advertisement gimmicks, government's assurance that the product is beneficial and recommended for all, is significantly important.

Finally, the group discussed the importance of breakfast as well. They said that it is the most important meal of the day and should not be skipped. But it was observed that most of them were not able to have a proper breakfast as they are in a hurry to reach

their place of work - Labor Chowk before sunrise, due to which they are low on energy throughout the day. Some of them carry packets of biscuits while others buy buttermilk or plain milk when they feel hungry.

FGD 2:-

Location	Piplyadevi - Subir (The Dang, Gujarat)
No. of Respondents	10
Age group of Respondents	23 years to 55 years
Gender of Respondents	Female
Professional details of Respondents	Most of the respondents were farmers. Some of them had their own farm lands, while the remaining worked on other's farms.

The group comprised of people from the lower socio-economic background. Majority of them were farmers who reported that their monthly income was in the range of INR 1,000 – 5,000 per month. The remaining were landless laborers who have even lesser incomes. The participants had some awareness about Fortified Energy Foods. They were aware about the Fortified Energy Foods that are available in the market, but majority of them reported that they haven't used any of the product due to their high pricing. However, they consume homemade Fortified Energy Foods such as Ghee and Jaggery Laddoos.



The group reported that for them seasonal migration is a major issue that has some negative impact on their health. As The Dang is situated on a hilly terrain, it receives rainfall between April and July, but remains dry from October to March due to which people have to migrate during this season. They migrate to either Surat or Nashik to find work as laborers on farms. This constant mobility and the poor conditions in which they stay during this period of migration (the entire families stay on farms working all day), exposes them to greater stress along with lack or interruptions in access to medical services. It may also be associated with ignorance towards health and nutrition as sustenance is the primary focus. During this time people, especially children, suffer from dehydration, drastic weight loss, anemia, diarrhea and respiratory disorders.

The group members also discussed how government has taken initiatives to promote health and nutrition in the state. There is Doodh Sanjeevini Yojna under which every children in the tribal area is provided 200 ml of flavored milk. The scheme is being implemented to prevent dropouts, ensure regular attendance in government primary schools as well as arrest malnutrition among children. The National Iron Plus Initiative (NIPI) which entails providing every child, adolescent, women in reproductive age and pregnant / lactating mothers, a dose of Iron and Folic Acid Syrup every week, is also active. Under this programme, supplements such as multivitamins, rava, etc. are

provided to infants through ASHA / ANM. Children between 5-10 years are provided supplements in schools through teachers, out-of-school children are provided supplements through Aanganwadi centers (AWC), pregnant and lactating women are provided supplements by ANM / ASHA (and intake is tracked through MCP card) and to women in reproductive age get iron and folic acid through FHW during house visit for contraceptive distribution.

FGD 3:-

Location	Dabdar - Waghai (The Dang, Gujarat)
No. of Respondents	12
Age group of Respondents	23 years to 50 years
Gender of Respondents	Males and Females
Professional details of Respondents	Some of the respondents were laborers while the others were unemployed.

The discussion began with the moderator asking the participants if they are aware about Fortified Energy Foods. The group members were aware about the Fortified Energy Foods that are available in the market such as Bournvita and Complan.



Some of them responded that they have even given these products to their children as they believe that these improve brain development and promote height growth. Nevertheless, due to the high cost of these products, they are not able to get these on a regular basis. The adults do not take any Fortified Energy Foods, as affordability is a major issue.

The group members reported that the main occupations of people in The Dang area are farming and labor. Their monthly income lies in the range of INR 1,000-5,000 and monthly expenditure on food items is around INR 1,500. However, majority of the community members consume tobacco that not only has adverse effects on their health, but they also end up spending their earning on buying tobacco which could otherwise be utilized to buy nutritious food.

Most of the pregnant women and lactating mothers are anemic despite continuous products provided under ICDS programs, as they do not follow healthy diets, do not avail on-time medical facilities and do not take post-partum care especially in terms of diet and their own reproductive health. Women are also observed to be consuming tobacco that has negative impact on their newborn's health, such as low birth weight. This situation still exists in spite of repeated attempts of awareness generation on how tobacco consumption in women is associated with adverse reproductive outcomes such as premature deliveries, infants with lower average birth weights etc.

FGD 4:-

Location	Belagachia, Barang Block, Orissa
No. of Respondents	7
Age group of Respondents	17- 54
Gender of Respondents	Male and Female
Professional details of Respondents	Laborers and business owners / hawkers

Everyone in the group except for one of the participants, believed that Energy Dense Foods are important and are required especially for children, pregnant and lactating mothers. There was just one lady who mentioned that only home cooked food and milk are enough for children to be healthy. Out of the 7 people that were a part of the discussion, 3 people were reported to be saying that they have given some kind of Fortified Energy Foods to their children when they were infants and to the mothers when they were pregnant. It was observed that people in the area give Fortified Energy Foods to children only when they are infants. Once they grow up to the age of 3 or 4, they stop giving them any kind of Fortified Energy Foods.

The sub issue that was further identified was the issue of drinking water in the area. The water used in the area for drinking purpose has high in iron, and people in the area usually get stones drinking this water. The respondents said that people in the area usually do not have the money to get operated for stones. Even if they get operated for the kidney stones, they come back because of drinking the same water again. Everyone in the group said that the government should do something about the problem of drinking water in the area.

People during the focus group discussion also complained about the quantity and quality of the ration that they get from the PDS shops. 3 out of the 7 people complained that their ration card hasn't been updated and the ration that they get is not enough for their families. Thus, they have to buy half of the ration from the market. People also mentioned that the quality of the ration is also not good.

In terms of nutrition and energy dense foods, 2 people mentioned that earlier when their children were small and their wives were pregnant, they didn't know about Fortified Energy Foods. Now after the mass campaigns, they have some knowledge about these products, but they are so costly that they can't afford to give them to their children.

FGD 5:-

Location	Kolkur, Jewardi
No. of Respondents	8
Age group of Respondents	19-37
Gender of Respondents	Male
Professional details of Respondents	Farmers and laborers

The FGD revolved around understanding the situation of health and nutrition in the village block, and understanding the usage, need and demand of Fortified Energy Foods in the area. The members of the group discussion were all males and their major occupation was farming and labor work.



The discussion started around the dietary intake of the people and the kind of products that malnourished children get from the Aanganwadis. There was a mixed response to this question. Some people shared that the Aanganwadis do not give milk powder to every child who needs it. As per the respondents, the Aanganwadi workers sell most of the milk powder to village shopkeepers and buy households things in place of that.

It came out from the discussion that people in the village consume Fortified Energy Foods but their usage is only restricted to the age group of 0-5 years. People who can afford to buy them for their children, responded that they thought Fortified Energy Foods were only for children and no such products were available for adolescents and adults.

Community members also shared that they would be interested to buy such products for good health of their children provided they receive payment for their harvest on time from the government. Since farming is a key occupation and income generating activity, people depend on payment of their harvest as the sole source for making purchase for their daily requirements. Some of them also shared that after doing full day of labor work they get just INR 100, which is not enough for a family to meet even the basic amenities.

In such cases, people look for government aided products for their nutritional requirements, especially for pregnant women and children.

FGD 6:-

Location	Afzalpur Block
No. of Respondents	10
Age group of Respondents	22-39
Gender of Respondents	Female
Professional details of Respondents	Laborers and farmers

The objective of the discussion was to understand the situation of health and nutrition in the village block, and understand the usage, need and demand of Fortified Energy Foods in the area. The group consisted of only women, and the discussion started with asking them about their dietary intakes. It came out that most of the people in this village have poha, upma, ragi roti and wheat chapatis as their breakfast. Their dinner and lunch mostly includes rice, sām̐bhar (dal) and ragi roti. Infants and children usually take milk, while adults and elders in the families do not consume milk.

Consumption of stale vegetables was realized as one of the key reason affecting nutrition level in people's diet. The village did not have its own fruits and vegetable market and thus, accessibility to fresh produce was not there, and hence people had to go to another village to buy vegetables and other grocery items. Since they bought vegetables for the whole week at once, they became rotten and dry till the time they were consumed.

The discussion members also shared that male members in the village usually go to buy ration and other needy items for the house. They also shared that decisions about buying any product in the house were usually taken by the elders and the male members of the family. Even if female members want to buy certain products like Bournvita, etc. they have to convince the elder females (mother in laws) of the households and get their permission before buying these products.

Community members usually perceive Fortified Energy Foods as medicine, and take them only if prescribed by doctors. During the discussion it also came out that most of the newborns are underweight and the major reason for this is that mothers usually avoid taking healthy diets as their major responsibility even during pregnancy is taking care of the family, eating the left over after the family, etc. This leads to less milk for breast feeding, deteriorating health conditions, especially calcium and major vitamins, post pregnancy.

The awareness level among community members about Fortified Energy Foods products is very low. However when the benefits of Fortified Energy Foods were shared, the community showed interest to buy these products provided:

- The quality of product is maintained as in any other branded similar product

- Product will be in the estimated range of INR 60-120 per 500 gm
- Product is prescribed by RBSK team doctors who regularly visit Aanganwadis

FGD 7:-

Location	Salepur Block, Subarnapur, Orissa
No. of Respondents	8
Age group of Respondents	17-57
Gender of Respondents	Females
Professional details of Respondents	Housewives and laborers

The objective of the discussion was to understand the situation of health and nutrition in the village block and understand the usage, need and demand of Fortified Energy Foods in the area. The community started discussing about various different issues, and the most prominent among them was the issue of corruption in the village as compared to the Fortified Energy Foods, nutrition and health standards.

When we started discussing about Fortified Energy Foods, it came out that people who can afford to buy such products are using them for their families especially children and pregnant mothers. Some of the people who are financially well-off, are also giving it to their adolescents. However, adults and elderly people do not take any such products. The main reason for this was financial constraints of the family. One of the participant shared that not everyone in the village could afford to buy Fortified Energy Foods for their children. On behalf of everyone present, she shared that it would really help if Fortified Energy Foods were cheaper as people would be interested to give these to their kids for their better health.

All of them shared that they would be willing to buy Fortified Energy Foods if their cost was low, such that they would come under their budget. However, the quality of the products has to be good. They said that the products should taste the same way as other costly Fortified Energy Foods, so that children also like them. One of the participant shared that her son was bored of eating Cerelac so she shifted to Horlicks that is chocolaty in taste. Her son likes the taste now and is healthy too. Women said that the government should not send these products via a broker, but rather they should be delivered or sold door-to-door so that they reach women directly and they will not have to depend on their husbands to buy these products.

FGD 8:-

Location	Nidugunda, Chincholi
No. of Respondents	9
Age group of Respondents	22-56
Gender of Respondents	Females
Professional details of Respondents	Farmers and laborers

It came out from the discussion that Karnataka Health Promotion Trust with the help of Karnataka Government under Karnataka Nutrition Mission distributed Fortified Energy Foods to the villages in the Chincholi block. The Fortified Energy Foods product called Shakti Vita was distributed for three different age groups - young children, adolescent girls and pregnant and lactating mothers. The product is made of a mixture of different grains like ragi, pulses etc. They were distributed free of cost to 100 families. These 100 families were selected based on a baseline survey and were given cards for receiving Shakti Vita product from volunteers.

People during the group discussion told that Chincholi is the most backward block of Gulbarga as it is the farthest from the district headquarters. They said that the block has 50% of Thanda migratory tribal people who leave their children with grandparents and migrate to other areas in the district for work. Most of the Thanda tribe children suffer from malnourishment and other nutritional deficiencies. Their parents work in forest areas and thus they eat whatever is available in these areas. The labor rate in the area is just INR 100. Community members shared that with this amount it is very difficult to fulfill the basic needs of the family.

Most of the women in the village were aware about Fortified Energy Foods and their benefits, and were willing to give it to their children. However, due to financial constraints most of the families cannot afford to buy these products from the outside market, which makes their children malnourished. Since the block is the farthest from the only district NRC, people do not take their children to NRC when referred by the Aanganwadis, ASHAs or the RBSK's team of doctors. The major reason for not taking the children to NRCs was that the child was admitted for 3-5 days and a family member had to be there with the child. Both the parents were either engaged in labor activity or one of them undertakes labor work while the other takes care of home. As a result, going to the NRCs for 3-5 days becomes difficult as it leaves them with no option as to who will take care of their earnings for 3-5 days, or what will their other children eat during this time and who would take care of the other children at home?

Out of these 100 families, KPMG interviewed 20 families. Our key observations are as follows:

1. Shakti Vita comes in a powder form, which people consume by adding to warm water or warm milk, whichever they can afford.
2. It is available for three age-groups- a) for pregnant and lactating mother, b) for adolescent girls and c) for children in 0-3 years of age. Currently the product was being provided to pregnant and lactating mothers and children in the 0-3 year age group.
3. People taking Shakti Vita observed changes and benefits especially in their child's health. Children taking Shakti vita were found to be healthy, with better weight. They do not fall sick very frequently and are more active. However, women taking Shakti vita could not share any feedback on the benefits of the product. They said they had taken the product because it was free.
4. People who were not taking Shakti Vita shared their interest to have these as they could easily observe the health benefits between children taking Shakti Vita and children who were not taking Shakti Vita.
5. Aanganwadis have played a major role in creating awareness about Shakti Vita product in the village area. People could understand the benefit of taking these products for pregnant women, lactating mothers and children only after Aanganwadis went door to door to explain what the product was about.
6. People shared that that they would be interested to buy the product at cost of INR 50 per 500gm.

The key feedback about Shakti Vita is discussed below:

- Number of children, adolescent girls, pregnant women and lactating mothers have increased in the village, but the quantity of Shakti Vita given free of cost has been restricted to only 100 families.
- People taking these product for free assume that it would continue the same way, and whether they would genuinely buy Shakti Vita when it is offered at some price is a little doubtful.
- Adolescents were not receiving any Shakti Vita product, and our team could not see the product for adolescents. So, in terms of product impact and benefits to adolescents, there were no observations.



FGD 9:-

Location	Basandhpur, Narsinghpur Block, Cuttack , Orissa
No. of Respondents	8
Age group of Respondents	14-65
Gender of Respondents	Both males and females
Professional details of Respondents	Farmers, laborers, landless farmers

It was a mixed group of both males as well as females. In the discussion, it was observed that only one women out of the entire group was aware about Fortified Energy Foods, nutrition related issues and challenges faced by women and children in the village, as she was part of a SHG group.

Out of the usual food intake, one habit which was different was that in this area male members in the family usually get a favored treatment as compared to the female members even in food and nutritional related things. The group shared that because men go to work involving farm / labor type of work, which involves a lot of strength, they drink milk, while the female members do not. Even in infants, children and adolescents, the difference in food approach is maintained. Infant boys are preferred giving milk and Fortified Energy Foods and not the girls. The girls in the village are married just after they hit puberty. Thus, one of the key reason for having undernourished children is early marriages and having children at a very young age. This makes both the mother and the child undernourished.

The financial condition of most of the people was not good. Only those who are aware about Fortified Energy Foods and can afford them commonly, use them. Horlicks and Cerelac for children and Mother's Horlicks for pregnant ladies were the most common Fortified Energy Foods used. Most of these people take these by mixing with it with warm water and usually prefer to take these with their breakfast. Every family in the village eats chicken and fish at least two times a week. Two families shared that they have started using Patanjali products because the advertisement says they have no chemicals in it.

It also came out in the discussion that in the village level meetings, the main issues discussed are temples, education, schools, and roads, while health and nutrition, especially of women and children, are completely ignored. It also came out from the focus group discussion that the quality of the chatua powder that people get from Aanganwadis is not good and people have to add their own grains and nuts into it to make it better.

FGD 10:-

Location	Chingerkata, Dungripali Block, Subarnapur, Orissa
No. of Respondents	8
Age group of Respondents	19-67
Gender of Respondents	Male
Professional details of Respondents	Farmers, laborers

The condition of PHC's and CHC's in Dungripali was much better than the other five blocks visited during the study. People in the discussion also agreed that the condition of the block CHC has improved in the last few years. The CHC has a separate department for women and child health that is headed by a pediatrician. The first issue that came out from the discussion was about the awareness of Fortified Energy Foods among people. 5 out of 8 respondents said that they used to give Fortified Energy Foods to their children when they were small. Cerelac and Junior Horlicks were the most common Fortified Energy Foods given to infants. 5 out of the 8 respondents said that their wives or daughter in laws had taken or were taking Mother's Horlicks. The group agreed that largely the village is aware about Cerelac and Horlicks and those who can afford them are giving it to their children.

The major issue as identified with the people of Dungripali was not affordability but lack of awareness on what to feed their children under different age groups. It was observed that most of the people in the area are malnourished because their mothers do not breast-feed them enough. This is because the mother did not take good care of their diet when they were pregnant.

The average labor rate in the area is INR 100-180 and sometimes even at this rate, the people are not able to find work for thirty days in a month. On an average, they would get work for 14-16 days a month. With this income, people said that it became very difficult to afford Fortified Energy Foods on a regular basis. Chatua is a traditional Fortified Energy Foods used in the area, while the other most commonly used Fortified Energy Foods were Cerelac and Horlicks. The respondents said that they knew about these products through doctors, and the reason that most of them were using them was for nutrient intake.

FGD 11:-

Location	Udaipuda, Ulunda Block, Subarnapur District, Orissa
No. of Respondents	9
Age group of Respondents	20-51
Gender of Respondents	Both (Males and Females)
Professional details of Respondents	Laborers, business / hawkers and police officer

There are two NRCs in Subarnapur district. One is in the district headquarter and the other is in the Ulunda block which is the oldest NRC in the district. FGDs were conducted in the village that was just a few kilometers from the NRC. It came out from the discussion that people in the village did not take their malnourished children to NRCs because mothers have to stay with the child every time, and they could not leave the child alone for an hour. It is difficult for the female members to leave all their household work and go to the NRC with her child. Also there are some women who work as laborers and thus cannot leave their 15 days' work and go to the NRC with the child. It was also observed that people in the village prefer going to private clinics than NRCs or CHCs as they feel that private doctors are better than the government ones.

In terms of Fortified Energy Foods, there were families who were using Fortified Energy Foods like Cerelac and Junior Horlicks but just for their infants and Mother's Horlicks for pregnant women. Once the infant grew up and the pregnant woman delivered the child, they would stop giving Fortified Energy Foods to them. All respondents shared that each one of them wants to give Fortified Energy Foods to their children but they cannot afford it. When a child is born in their family, they cut down other expenses and buy products like Cerelac but they cannot afford these on a regular basis, and thus stop buying them once the child is a little grown up and starts eating other daily used food items.

One of the respondent shared that one of the reason for this problem was also in the awareness level among the community members and supply chain of these products in the villages. The male members usually go and buy ration and other daily need requirements for the family in the market. Hence, if the male members were made aware of the benefits of these Fortified Energy Foods products, the family would buy them on a regular basis and consume them. So the benefits of using Fortified Energy Foods should either be told to the male members so that they can buy them, or there should be someone at the household level supply chain selling these products so that women can get an easy access to these products.

FGD 12:-

Location	Champamal, Birmaharajpur, Subarnapur, Orissa
No. of Respondents	7
Age group of Respondents	16-68
Gender of Respondents	Both male and female
Professional details of Respondents	Farmers, laborers, shopkeepers

Villagers at large were aware about Fortified Energy Foods and knew that these are vital for their children. They usually associate Fortified Energy Foods with just children and elderly, while adolescents were never given Fortified Energy Foods for their additional nutritional requirements.

The participants were well aware about the Fortified Energy Foods and 4 out of 7 of them said that they have been using the food supplements available in the market. The most common supplements used were Cerelac, Horlicks and Lactogen for infants, and Mother's Horlicks for pregnant women. Participants said that they want to consume more of these products and want to give it to every member of the family but they cannot afford these on a regular basis. The respondents shared that they are aware that Fortified Energy Foods will develop their children's health and will sharpen their brain. Some of the families also take homemade Fortified Energy Foods such as chatua. The Aanganwadis also provided Chatua and it is everyone's first choice. The food supplements available in the market are taken for additional benefits.

The respondents suggested that the Fortified Energy Foods should be made available at low cost. However, the taste should be the one preferred by children such as chocolate flavor while the elders would like mixed or fruity. The respondents agreed that 100 gm of the product should be made available at INR 10, which is affordable for them.

FGD 13:-

Location	Mankhurd – Chembur (Mumbai, Maharashtra)
No. of Respondents	12
Age group of Respondents	23 to 50 years
Gender of Respondents	Female
Professional details of Respondents	The group largely comprised of Neo-middle class people. Half of the group members were involved in small businesses, while some were domestic helpers in the nearby residential societies and the remaining were home makers.

All the participants were well aware about Fortified Energy Foods and most of them had been giving or at some point had given the Fortified Energy Foods

available in the market to their children. Most of the participants' monthly income was between INR 8,000 to 10,000 out of which INR 6,000 was their monthly expenditure on food items. Thus they can afford Fortified Energy Foods available in the market, and have been using these. However, they said that they do not trust what these products claim and think that there are no major health benefits of taking these.



However, all the participants agreed that the need for Fortified Energy Foods or any other kind of supplements had been “created”, as all food items are adulterated and of poor quality. They discussed how even spices, flour and fruits are all adulterated and has severe side-effects and causing diseases that were unheard of in earlier times.

The group members discussed how a vicious cycle has been created where adulterated food items cause infections and other illnesses and in order to treat these, medicines have to be taken which further have side effects and causes harm to the body.

They reported that majority of them were shifting to Patanjali products that make organic products with genuine ingredients. Although the pricing of the products from the brand were higher and they had noticed an increase of almost 20% in their expenditure on food items, but did not mind that as getting healthier and herbal products was still better. A few also shared that they have stopped using packaged and refined products and prefer to get the raw ingredients and grind and prepare them at home.

They recommended that the low cost Fortified Energy Foods should be fair priced (Rs 200- 250 per kg), and should show quick results in terms of health benefits. The product should be of premium quality, and should be readily available and easy to use.

FGD 14:-

Location	Dadri Town, Gautam Buddha Nagar, UP
No. of Respondents	8
Age group of Respondents	25-689
Gender of Respondents	Male

The first issue that came up during discussions was about the situation of health facilities in the village. The four senior citizen members from the group shared that the health center is very far from the village and even for the basic healthcare facilities, people have to travel 20-22 km.

The other issue as discussed was about the quality of products that are available in the market. It was shared that earlier ghee, fruits, and vegetables available in the market was pure, and hence used to keep everyone fit. They said that they used to drink tap water without any purifier, but nowadays every product has chemicals in it.

They do not feel the need to give Fortified Energy Foods to their children as they feel that these also have chemicals in it. They believe in homemade Fortified Energy Foods like sattu / panjeeri. People do not trust the products that government provide through Aanganwadis as they are usually of very bad quality and taste.

It was observed that very few people are buying Fortified Energy Foods in the area. Those who can afford Fortified Energy Foods are buying the products for two main reasons:

- First is the nutrient intake. They believe that Fortified Energy Foods like Horlicks and Bournvita will provide nutrition to their children.
- Second reason is flavor. Children, who never used to drink milk, started drinking milk when Bournvita was added.

The key suggestion made was that the cost of the product should be low and the quality of the product should not be compromised.

FGD 15:-

Location	Kakda - Dhadhgaon (Nandurbar, Maharashtra)
No. of Respondents	11
Age group of Respondents	23 to 40 years
Gender of Respondents	Males and females
Professional details of Respondents	The respondents belonged to a very low socio-economic background. All of them were landless farm laborers. Their average monthly household income was around INR 1,000.

The discussion began with the moderator asking the participants if they were aware about Fortified Energy Foods. When the people did not understand the term they were told what a Fortified Energy Foods is and some examples were given of



such products, such as, Bournvita, Chyawanprash and Panjeeri that was given by Aanganwadis. The participants reported that under a pilot project by WCD, Jamshedji Tata Trust and UNICEF, Community Management of Acute Malnutrition, children who attended Aanganwadi, were given Fortified Energy Foods item prepared from ingredients such as groundnut, til oil, coconut oil, shingdana, corn flour etc. The project lasted for two years. The pilot project was aimed at improving survival and development outcome of estimated 11,500 SAM children in all six blocks of Nandurbar district and compare the outcome of three nutrition protocols – MNT / RUTF, SF and ARF recipes.

It was observed that this particular community belonged to an extremely low socio economic background; with an average annual income of INR 1,000- 2,000. People here usually struggle to meet their daily ends, and hence sustenance was their primary focus. In addition, they are constantly moving in search of work, which further disrupts access to health services.

The group members also highlighted that Dhadgaon's geographical location hinders their access to health services and other government initiative. The people in the area stay in small clusters on different hills and travelling to hospitals is difficult.

It was felt that even though the community had received Fortified Energy Foods products under the Community Management of Acute Malnutrition pilot project, they do not have a clear understanding about them as basic information about nutritional requirements of the human body, calorie intake, vitamins and minerals is lacking. As per the respondents, awareness about basic things should be first created followed by attention measures that shall be adopted by families for their health and nutrition requirements.

The group members reported that pregnant / lactating mothers and children below the age of 6 years were provided RUTFs through Aanganwadi. However, their diet comprises of only what they grow on the lands of the sarpanch and other land owners, such as, jowar bhakri, wheat, and few pulses. It was further noted that intake of vegetable and fruits was almost absent.

FGD 16:-

Location	Kuarapur Village, Misrikh, Sitapur
No. of Respondents	7-8
Age group of Respondents	18-74
Gender of Respondents	Both males and females
Professional details of Respondents	Four participants were farmers, two were laborers and one ran a small business of Animal Husbandry.

The respondents shared that people in villages have started following the urban culture in their diet. Even after having access to fresh sugarcane juice, they prefer having / offering tea. Earlier people used to eat katariya, a kind of homemade laddu which used to be very healthy. Now people have replaced katariya with biscuits and namkeen. Everyone prefers to eat potatoes rather than eating green vegetables like spinach and bathua. Earlier jaggery used to be an important ingredient in children's diet whether with milk or rice, or roti. Now children in rural areas also eat noodles which makes them unhealthy.

All the participants agreed that food nowadays is not nutritious and the major reason for this is use of HYV (Hybrid) seeds. Beside this, the group also shared that using HYV seeds had become a vicious cycle for them. They do not get reusable seeds and somebody who did not have money was not able to sow the land in the next cycle.

When asked would they be willing to buy any kind of low cost Fortified Energy Foods from the markets, they responded that if villagers properly eat what is available in the villages in appropriate quantities they would never need any kind of Fortified Energy Foods. People have stopped doing physical activities in villages and have thus become weak. Most of the villagers here are small farmers with 1 or 2 bigas land. This makes them financially very vulnerable and the only healthy and nutritional diet they can afford is three-course meal for their families' basis what they grow.

The participants suggested that the Fortified Energy Foods if are made available at very low cost, should be as good as the ones that are currently available in the market. Majority of the respondents shared that they would prefer chocolate flavor in powdered form that can be added to milk for their children. The community will be able to afford a price of INR 60 - 65 for a 150 gm of product.

FGD 17:-

Location	Mehmoodabad, Sitapur
No. of Respondents	6-7
Age group of Respondents	26- 50 Years
Gender of Respondents	Female
Professional details of Respondents	The group consisted of homemakers and laborers. However, even the homemakers participated and helped their husbands in farming and animal rearing activities.

All the participants were aware about the Fortified Energy Foods available in the market. Most of the respondents said that they cannot buy Fortified Energy Foods due to low levels of income and accessibility to buy these products in the nearby shops. It was also shared that even the ones who can afford to buy the Fortified Energy Foods available in the markets, usually give it to their sons and daughters.

Traditional homemade Fortified Energy Foods such as desi ghee laddoos, harira, and panjeeri are given to pregnant and lactating mothers. Majority of the respondents shared that elderly people in the family were not given any food supplements, as the household income was very low.

Everyone in the group said that if low cost Fortified Energy Foods were made available they would obviously buy them for their families. Majority of the respondents shared that they would like the product to taste sweet. In terms of form all the respondents shared that they would like it in any form, paste like, fine-powder form, etc. All the women agreed with each other that for a 250 gm packet the cost should be between INR 25 to 50. However, one of the participant reported that she would not be able to afford it at all as she is a widow and the only earning member in the family.



FGD 18:-

Location	Laharpur, Sitapur
No. of Respondents	9
Age group of Respondents	25-79 Years
Gender of Respondents	Female
Professional details of Respondents	The group comprised of women who were laborers or belonged to households where the earning member, husband or children, were laborers.

Laharpur is the most backward village of the Sitapur block. People belonging to backward classes inhabit the village. Any government-aided schemes floated through panchayats or health machineries such as ICDS via Aanganwadis are not provided to the community due to their social status. The Aanganwadis in the area are functional but the workers never visit the area. In addition, the workers usually sell the products that are provided under government aid to buy their own household items such as ration.

The community members find it challenging to meet their daily needs. The group shared that they usually take vegetables and roti. However the two course meal depends on the daily wage work. In case the earning member of the family falls sick or does not go to work, the family usually take chatni roti as their meal.

The respondents in the village had never heard about Fortified Energy Foods and usually depend on traditional home foods like panjeeri, which is given at the time of lactation to new mothers. Some of the respondents shared that the condition of hospitals, availability of doctors during delivery and other medical facilities were very poor. Not only accessibility of basic medical facilities during pregnancy was an issue, but affordability was also an issue. Doctors in the PHC usually charge the patients INR 500 for treating them. Family members have to usually carry their own clean bed sheet and maintain cleanliness around the pregnant women during her delivery time. One of the respondent also shared that during the entire pregnancy cycle, women in the village are only given 60 iron tablets and no protein powder tonic for their better health.

After getting to know about Fortified Energy Foods, their benefits and impact on various age groups, the respondents showed interest in buying them for their families provided they were of good quality, cheap, such that they can afford them, and are duly prescribed by a doctor for the required member.

FGD 19:-

Location	Kotwal Colony, Masawad – Shahada (Nandurbar, Maharashtra)
No. of Respondents	15
Age group of Respondents	16 to 60 years
Gender of Respondents	Male and female
Professional details of Respondents	A mixed group with people belonging to different socio-economic backgrounds. Most of the respondents were in police services and the remaining were shop keepers, auto drivers, and daily wage laborers.

The group participated in the discussion proactively. They were quite excited to be part of the discussion and showed interest in the topic as they were all quite aware about Fortified Energy Foods and understood the need for introducing such products at a low cost. They all agreed that it is the government's duty to ensure the well-being of the citizens. They suggested that government should undertake awareness drives to ensure that people understand the importance and ways of achieving good health. The marginalized sections of the society - women and children, should be covered under a comprehensive nutrition program.



Majority of the participants shared that there is a need for Fortified Energy Foods and they discussed the causal relationship between poor dietary habits such as skipping meals, especially breakfast, consuming too much caffeine, not eating at the right time etc., and the need for taking Fortified Energy Foods. Majority of the laborers skip breakfast as they are in a hurry to get to work.

All of them shared their concern about their children consuming junk food all the time. The children have easy access to such food and prefer it over healthy food such as vegetables and fruits. Such food items only cause diseases and do not have any nutritional value.

Some of the group members said that they give Fortified Energy Foods such as Bournvita, Horlicks etc., to their children. The adults usually consume homemade Fortified Energy Foods during winters. In most of the households, giving homemade Fortified Energy Foods such as ghee laddoos to pregnant and lactating mother is a practice.

The group members suggested that Fortified Energy Foods should be made available at subsidized rates, such as INR 100-200 per kg, at all the medical shops, PHCs and CHCs.

This, as per the respondents, would make a lot of difference to the health of the children and adolescents. In addition, awareness needs to be created among people about nutritional requirements of the body, healthy dietary habits, etc.

FGD 20:-

Location	Bilaspur, Gautam Budh Nagar
No. of Respondents	7-8
Age group of Respondents	17- 65 Years
Gender of Respondents	Male and female
Professional details of Respondents	Majority of the participants belong to the Saifi community, which is associated with carpentry, and iron smiting. So most of them have or are working, as laborers at carpentry or wood cutting workshops as laborers. One of the participant was a farmer and one worked at a farm.

The participants were well aware about Fortified Energy Foods and most of them had been using the supplements available in market such as Complan, Horlicks, and Bournvita for their children, and Chyawanprash for elderly people. However, the use was not continuous as their earnings were not stable. They criticized the government for not being able to create jobs and ensure job security. The community believes that Fortified Energy Foods currently consumed contribute to children's brain development and height growth and improves memory of the older people.

The traditional homemade Fortified Energy Foods such as desi ghee laddoos, gondh laddoos, nuts and fruits are their first choice and food supplements available in the market are taken only for additional benefits. Many people reported that doctors had suggested giving food supplements to their children. Another view was that because of the good taste, children at least like to have a glass of milk, which they usually do not take if plain milk was given.

Few participants also suggested that a new supplement should be a sugar free product so that even diabetic people can take them. People would prefer a powdered form, which is given with milk. Similarly, for elders paste like form would be ideal.

The participants suggested that a 200 - 500 gm pack may be introduced initially and if the consumers like the product then 1 kg pack would be better. All the participants agreed that a pack of 200gms product should cost INR 50. They all agreed that 100 gm of product be made available at INR 25. The community at large felt that the Fortified Energy Foods such as Bournvita, Complan, etc. were vital for children as they aid brain development, growth and sharpen memory. In-terms of taste, everybody shared that children would prefer chocolate flavor while the elders would like mixed or salty taste.

FGD 21:-

Location	Dankaur, Guatam Budh Nagar
No. of Respondents	6-7
Age group of Respondents	25- 75 Years
Gender of Respondents	Males
Professional details of Respondents	Three participants run a small businesses, two were shopkeepers, one was a laborer and one was a Mullah.

The discussion was held around the need for a low cost Fortified Energy Foods in the market. The respondents shared that the need for Fortified Energy Foods had created as most of the food items that people would consume such as ghee, jaggery, besan and fruits, were adulterated which usually made people sick, especially children. Some of the participants shared that despite financial constraints, they buy food supplements like Complan, Bournvita or Horlicks, for their children as these products had health benefits.

A few group members who owned a shop highlighted that the actual price of food supplements with the kind of ingredients they contain should fall under the price range of INR 50 - 60 but the brands sell them at inflated prices. In addition, the quality that the consumer gets is poor. Members while sharing their food experiences suggested that the quality of food supplements in the nineties used to be very good but now had been compromised. The participants reported that majority of the people in Dankaur cannot afford these supplements and only 20-30% of the people were using food supplements.

The pregnant and lactating mothers in the area are usually given traditional food items like munakka, meva, panjeeri and gondh laddoos. The elderly also take these food items. One interesting observation was that the members of the group purchase products like Bournvita, Horlicks, Pantanjali products, and fairness creams etc., after viewing their advertisements on television. However, they repurchased the product only if they found them good enough.

The participants suggested that Fortified Energy Foods made available at very low cost would be purchased only if the quality of the product was as good as the ones currently available in the market. Majority of the respondents said that they would prefer chocolate flavor in powder form that can be added to milk for their children. A price of INR 60 - 65 was reasonable for 100-150 grams of product.

FGD 22:-

Location	Kadumanesa, Krishnarajapete, Mandya, Karnataka
No. of Respondents	5
Age group of Respondents	24- 40 years
Gender of Respondents	Females
Professional details of Respondents	Housemakers whose husbands were farmers

All the respondents were aware about Fortified Energy Foods, their benefits and the current practice. Almost all of them used some market based Fortified Energy Foods for their children such as Horlicks and Boost. Majority of the people give it only to their children as the product is priced high. Some of the respondents started giving Fortified Energy Foods to their children as the doctor who visits the village in every three months, prescribed it, while others bought food supplements attracted after being influenced by their advertisements.

The participant's daily diet included rice, chapati, ragi balls, vegetables, milk and eggs and during their pregnancy and post childbirth, all of them had methi and ghee laddoos along with protein powder, iron and calcium tablets prescribed by the doctor.

When asked if they would be willing to use low cost Fortified Energy Foods, the respondents suggested that they would take Fortified Energy Foods only if prescribed by doctors. No preference was shared in terms of taste. The form should be fine amorphous that can be easily mixed with milk and given to children. A 500gms pack should cost between INR 100 - 200.

FGD 23:-

Location	Raggibommanalli, Malavalli, Mandya, Karnataka
No. of Respondents	8
Age group of Respondents	16- 40 years
Gender of Respondents	Females
Professional details of Respondents	This was a mixed group. Some of people's primary occupation was farming, some were laborers, one was a factory worker, a canteen worker, and a lawyer

All the participants were aware about Fortified Energy Foods and almost all of them use some market based Fortified Energy Foods for their children, such as Horlicks, Junior Horlicks, Boost, etc. Some of the respondents also used Women's Horlicks. They said that they trust the Horlicks brand and believe that its claim of making children taller, stronger and sharper was true.

The group discussed that the currently available food supplements were overpriced but were good for health. Some of the participants also shared about the differences in wages of men and women laborers. Some of the members had given Horlicks to their children until they were five-six years old, but that they stop as the families, especially daily wage workers and laborers, cannot afford these products on a regular basis.

The respondent's daily diet includes ragi balls, rice, vegetables, milk and eggs, and during pregnancy all of them have ragi malt. They also have dry fruit laddoos during festivals.

When asked if they would be willing to use a low cost Fortified Energy Foods, the respondents shared that they would only take Fortified Energy Foods if suggested by doctors otherwise they would not use it. In terms of taste, some of participants said they would prefer chocolate flavor while the other prefer sweet taste. All of them agreed with each other that it should taste like Horlicks. The form should be fine amorphous that can be easily mixed with milk and given to children. The participants said that a 500 gm pack should cost INR 100. They also suggested that Nandini milk / milk powder should be one of the ingredient in the Fortified Energy Foods as it has very good quality.

FGD 24:-

Location	Srirangapatna, Mandya, Karnataka
No. of Respondents	6-7
Age group of Respondents	22-34 Years
Gender of Respondents	Females
Professional details of Respondents	All the participants were homemakers. Their husbands were farmers whose monthly income was around five to seven thousand rupees.

The discussion began with respondents asking the participants if they were aware about Fortified Energy Foods. It was noted that all the members of the group were aware about Fortified Energy Foods and their benefits and all of them have been or have at some point taken or given Fortified Energy Foods that are available in the market such as Horlicks, Boost, Bournvita etc. Most of them have reportedly taken food supplements only during their pregnancies, as prescribed by the doctors, or have given it to their children.

Some of the respondents highlighted that their everyday diet includes ragi malt, eggs and milk which is very nutritious and that is why they do not use any kind of supplement unless suggested by the doctor. Many of them also grow vegetables on their land for self-consumption, but in the recent times due to failed monsoon and non-availability of water for irrigation, their crops had suffered and their earnings had reduced.

When asked about the supplements that pregnant and lactating mothers were given, it was reported that pregnant and lactating mothers usually have ragi malt and supplements prescribed by the doctor such as protein powder and iron syrup. One of the respondent shared that the doctor prescribed multivitamin syrup and Himalaya Bonnisan for gastrointestinal (GI) disorders for her baby, which was caused due to cow's milk.

The respondents reported that Fortified Energy Foods of good quality and prescribed by the doctors should be affordable and accessible. In terms of taste, they should be sweet or chocolaty, in fine amorphous form and should cost INR 50- 70 per 500 gram.

FGD 25:-

Location	Mocha, Chhaya (Porbandar, Gujarat)
No. of Respondents	14
Age group of Respondents	19 to 65 years
Gender of Respondents	Males and Females
Professional details of Respondents	The majority of the group members were farmers and the rest were homemakers.

The respondents actively participated in the discussion and seemed very interested. Following the ice breaking and rapport building exercise, the respondents spoke on various issues related to nutrition that affects them in their daily life. They expressed their concern about their children falling ill frequently. Some of the group members also complained that despite having proper meals they do not feel energetic and feel lethargic during the day.



However, people were interested in buying currently available Fortified Energy Foods in the market, but their major concern was their high pricing. They feel that the branded food supplements are sold at very high rates. It was reported that they are not able to afford these products every month and get them only once in two - three months for their children. Although, it may be highlighted that people believe that the products available in the market do have health benefits that the brands promote such as, brain development, promote height growth etc.

The participants said that few of them take Fortified Energy Foods available in the market while those who cannot afford these products, consume alternative traditional food items. The community also consumes a lot of buttermilk, with every meal. Their everyday diet included, tuber or gourd shaak, kathol (chickpea or dry peas), lentil, bhakhri, kadhi, Saurashtra or Kathiyawadi – Gujarati Thaal, which includes Cauliflower, Kadhi, Moong / Tur / Urad Pulses with rice, Thepla, and Rotla. All the respondents were Pure Vegetarian. The community provides Ghee and Jaggery to their children everyday as an indigenous nutritional supplement.

The rate of malnourishment among children and women was quite low in the district, as the community followed a healthy diet, which they can afford. The people who belong to economically weaker sections were helped by ashrams, run by philanthropists. The ashrams also take care of the other health needs of the community. They also prescribe medicines and remedies for illnesses, and guide the people to help them lead a healthy lifestyle. The philanthropist societies often organize langar, where marginalized sections of the society have open unlimited access to food.

The participants suggested that the low cost Fortified Energy Foods be introduced at subsidized rates by the government. Even though they are relatively better off than the people in the other two blocks, but they still felt that the prices at which the Fortified Energy Foods were available in the market was still high for them. They were willing to buy Fortified Energy Foods at INR 200 per kg, in terms of fine powder form which would be preferred in a chocolate flavor.

FGD 26:-

Location	Devragi Chawl, Mulund, Mumbai Sub-urban, Maharashtra
No. of Respondents	12
Age group of Respondents	16 to 65 years
Gender of Respondents	Males and Females
Professional details of Respondents	The majority of the group members were hawkers / drivers, sales agents, teachers and housewives

The discussion started with the food intake habits of the community members. The members of the group shared that three-course meals were usually taken but people are often seen skipping their breakfast and having a heavy lunch instead. Junk food like Maggi, burgers have become the favorites, especially for children and thus, children avoid having proper three-course meals. Some also complained that despite having proper meals they do not feel energetic and feel lethargic during the day.

Following the food intake habits, participants actively participated in the discussion and started sharing their views on Fortified Energy Foods and their understanding of Fortified Energy Foods. Most of them knew about Fortified Energy Foods and their importance especially for infants and pregnant women. Some of the group members, especially adolescent male members also shared that food supplements were also used for muscle building and they helped them gain strength and energy. In cases where the mother's milk was not available, infants especially in the age group of 0 to 6 months, preferred to have cow's milk or packaged milk unless a doctor prescribed them a Fortified Energy Foods substitute.

The major concern for the group was high pricing of the current Fortified Energy Foods that were available in the market. They feel that because of their brand name, these products are sold at higher rates. It was reported that most of the people were not able to afford these products, but because they impacts their child's health they have to make arrangements to buy these products.

The rate of malnourishment among children and women was quite low in the area, as the community followed a healthy diet which they could afford. The participants suggested that the low cost Fortified Energy Foods should be introduced, and the group would be willing to buy it at INR 200 per kg, in powdered form and the preferred flavor was chocolate.

2.2 Retailer Research Data

Q1. Do you sell Food Supplement / Fortified Energy Foods like Cerelac, Protinex, etc.?

Option	Number of responses
Yes	57
No	3

Q2. If no, did you earlier stock these goods?

Option	Number of responses
Yes	3
No	0
NA	57

Q3. If no. what was the reason for discontinuation?

Option	Number of responses
Unaware	0
Low Demand	3
Low Margin	0
Absence of distribution in retailers locality	0
Others	0
NA	57

Q4. What alternative products are used by local consumers esp. for infants, lactating mothers, pregnant women, adolescents and elderly?

Option	Number of responses
Milk and derivatives	42
Fruits and Vegetables	7
Pulses	14
Roti / Chapati	26
Chocolates / Biscuits	4
Others	32

Q5. What are different form of products available?

Option	Number of responses
Powders	57
Bars	0
Biscuits	15

Drinks	0
Others	0
NA	3

Q6. Which are the top three selling products?

Option	Number of responses
Bournvita	45
Boost	9
Horlicks	51
Complan	8
Protinex	2
Cerelac	14
PediaSure	1
AmulPRO	0
Other	4
NA	3

Q7. Why do you think consumers buy these products?

Option	Number of responses
Advertising & Promotion (Awareness about the health benefits of the product)	42
Availability	10
Affordability	0
Taste	14
Other	7
NA	4

Q8. Where do you procure these products from?

Option	Number of responses
Wholesale market	6
Dealer	6
Distributor	42
Other	3
NA	3

Q9. Generally what is the profit margin on these products?

Option	Number of responses
8 – 10%	47
5 – 7%	6
2 – 4%	2
Other	2
NA	3

Q10. Do you sell any local products?

Option	Number of responses
Yes	5
No	55

Q11. If no, what is the reason for that?

Option	Number of responses
Consumer Preference	56
Affordability	3
Availability	4
Other	0

Q12. What according to you is the perception of the consumers about local products?

Option	Number of responses
Good	0
Acceptable	8
Not acceptable	52

Q13. What according to you is the differentiator for local products?

Option	Number of responses
Taste	0
Pricing	7
Packaging	0
Availability	0
Other	0
NA	53

2.3 Distributors Research Data

Q1. What economic strata do the people in your catchment area belong to?	
Option	Number of responses
Low Income	19
Medium Income	14
High Income	3

Q2. Do you sell Fortified Energy Foods?	
Option	Number of responses
Yes	20
No	0

Q3. If no, did you earlier stock these goods?	
Option	Number of responses
Yes	0
No	0
NA	20

Q4. What alternative products are used by local consumers esp. for infants, lactating mothers, pregnant women, adolescents and elderly?	
Option	Number of responses
Milk and derivatives	13
Fruits and Vegetables	0
Pulses	7
Roti / Chapati	8
Chocolates / Biscuits	3
Others	8

Q5. What products are there in your portfolio?	
Option	Number of responses
Bournvita	12
Boost	8
Horlicks	9
Complan	1
Protinex	0
Cerelac	5
PediaSure	1

AmulPRO	0
Other	3
NA	0

Q6. Which are the most demanded products?

Option	Number of responses
Bournvita	9
Boost	1
Horlicks	9
Complan	1
Protinex	0
Cerelac	4
PediaSure	1
AmulPRO	0
Other	2
NA	0

Q7. What is the typical fulfilment model?

Option	Number of responses
Company to Super Stockist to Distributor	13
Company to Distributor	7

Q8. How many days does it take for the products to be delivered to you?

Option	Number of responses
0 – 1	8
1 – 2	9
More than 2 days	3

Q9. What SKU sizes sell the most in your catchment area?

Option	Number of responses
75gm	6
100gm	3
200gm	10
500gm	13
Others	5

Q10. How many units are generally bought by the retailers?

Option	Number of responses
0 to 10 pieces	15
11 to 30 pieces	6
31 to 50 pieces	1
More than 50 pieces	3
NA	2

Q11. How many retail outlets do you serve to?

Option	Number of responses
Less than 50	7
50 – 100	5
101 – 500	6
More than 500	2

Q12. Which brands are supplied in your state?

Option	Number of responses
Bournvita	0
Boost	0
Horlicks	0
Complan	0
Protinex	0
Cerelac	0
PediaSure	0
AmulPRO	0
Other	0
All	20

Q13. What is the form of Fortified Energy Foods supplied?

Option	Number of responses
Powdered	20
Bars	0
Biscuits	0
Drinks	0
Other	0

Q14. What according to you is the differentiating factor for these products?

Option	Number of responses
Convenience	0
Taste	6
Affordability	0
Availability	4
Other (Awareness about the product, A&P)	18

Q15. What is the concentration of sale in your catchment area?

Option	Number of responses
Rural	18
Semi – Urban	15
Urban	4

Q16. What in your opinion is the most successful mode of distribution?

Option	Number of responses
Company to Super Stockist to Distributor	4
Company to Distributor	1
NA (Did not have an opinion, said the decision depends on the company's desired reach, and both work similar for them)	15

Q17. What discount do you generally offer to retailers?

Option	Number of responses
No discount	1
0 – 1%	5
1.1 – 2%	7
More than 2%	8

Q18. Generally what is the profit margin on these products?

Option	Number of responses
0 – 2%	0
2.1 – 4%	10
4.1 – 5%	9
More than 5%	1

Q19. Do you prefer exclusive deals to multiple agencies?

Option	Number of responses
Yes	2
No	18

Q20. What are your typical volumes sold?

Option	Number of responses
Less than INR 10,000	0
INR 10,000 – 50,000	7
INR 51,000 – 1,00,000	1
INR 1,01,000 – 5,00,000	4
Above INR 5,00,000	7
NA	1

Q21. Do you sell any local products?

Option	Number of responses
Yes	1
No	19

Q22. Are there any local products available in the market?

Option	Number of responses
Yes	4
No	16

Q23. What according to you are the roadblocks for private players?

Option	Number of responses
Capital Investment	0
Lack of demand	20
Regulatory	0
Lack of distribution	0
Other	0

Q24. How does packaging affect the demand for the product?

Option	Number of responses
Brand recall	11
Brand preference	7
Ease in consumption	0
Hygiene	3
No impact	1
NA	7

Q25. In case of branding how do companies assess the effectiveness?

Option	Number of responses
Brand recall	20
Brand preference	18
Price inelasticity	0

2.4 Manufacturer Profiles

Manufacturer Profile 1 : Nutrivita Foods Pvt. Ltd.

Business Profile:

- Nutrivita was founded in 2010 through a partnership between Indian entrepreneurs and the French company Onyx Développement (Groupe Nutriset)
- The company manufactures RUTF (Ready to eat therapeutic foods) and RUSF (Ready to eat supplementary foods)
- Products are manufactured in collaboration with nutritional experts, using technology and ingredients which have been developed indigenously. The products manufactured by the company are made from peanuts, and have a shelf life of 2 years
- The company has its manufacturing operations in Pune and Corporate office in Mumbai. They supply 2,000 MT of product every year, and they are running near total capacity.
- Nutrivita focusses 100% on exports primarily supplying to agencies like UNICEF and Red Cross as these agencies deal with issues such as malnutrition
- The company source raw materials locally in India through vendors, manufactures finished products and exports directly to customers as per requirements. In very few cases Nutrivita supplies to customers through dealers in the other country, who then supply to customers locally
- Nutrivita doesn't supply to the retail market directly due to challenges of pricing the product that would be acceptable to the target customer and deliver profitability to the company. The manufacturing costs are high as there are minimum quantities of raw material that have to be added in the fortified product. The product is a wholesome product, hence difficult to manufacture at a cost as low as INR 5
- The RUTF from Nutrivita Foods Pvt. Ltd. weighs 92gm per packet and RUSF weighs 100gm per packet

Key Insights:

- UNICEF issues open tenders for supply of products. The Selling Price of the product keeps on varying as per the bid price of each tender
- WHO provides its guidelines on the ingredients and their composition. Raw material cost is a significant share of the total cost and is depending on the ingredients used, and their overall composition
- The costing of the product involves factors such as sourcing the right material, ensuring the correct grammage being included in the product, as well as the shipping cost. In terms of cost break-up, Direct Costs is around 60 – 70% of the total cost, while indirect costs would be 30 – 40%. Break-up of indirect costs include Manpower (10%), Logistics (6-8%), Branding & Marketing (8%) and Overheads (2-3%)

Suggestions for introducing a low cost Fortified Energy Food:

- Nutrivita suggests that the private players would need monetary support during the initial years to set-up infrastructural capabilities and sustain the business
- In terms of strategy currently adopted, Nutrivita supplies the product to public bodies such as governments and development financial institutions. Own distribution through retail markets is a challenge due to huge investments needed

Manufacturer Profile 2 : SD Real Foods**Business Profile:**

- SD Real Foods manufactures Chuda powder (made from rice cereal, kesar and badam). The product is a baby food cereal, similar to Cerelac, but is also consumed by elderly people and is sold for INR 70 per 500gm
- The product from SD Real Foods is the cheapest alternative to baby food cereal such as Cerelac. The product is a B2C product available in retail markets in Orissa and have received good feedback from the market for their product
- The company has annual production is 6 tonnes and turnover of INR 1 Cr
- The company is based in Cuttack, primarily selling in Orissa, but plan to sell all over the country

Key Insights:

- The company follows the same regulations on food quality and security as directed by FSSAI which are applicable to all fortified foods
- Key insights on operations;
 - Infrastructure requirements include Plant, Office space, Storage facility (for raw material as well as final product)
 - Cost of manufacturing – INR 40 per Kg (Direct costs – INR 25, Indirect costs – INR 15)
 - The plant should be set-up in a dry area, as water can lead to product damages
 - Cold storage facility is not required
- Cost of plant & machinery varies from INR 30,000 to INR 2,00,000 depending on the capacity needed, and the type of machinery being set-up
- The company finds it difficult to get credit from the market, as it is a new business.
- Terms of trade include Receivable days and Inventory days of 1 month
- Organogram of the business include Marketing (1 manager & 2 assistants), Procurement (1 person), Processing (1 technical person), Grinding (2 people), Packaging (2 people), Security (1 person)
- Other expenses include Annual Rent of INR 60,000 and Power & Fuel of INR 48,000. The company does not spend on A&P
- Annual production is 6 tonnes and turnover of INR 1 Cr

Suggestions for introducing a low cost Fortified Energy Food:

- SD Real Foods is of the view that having a regional set-up, with local sourcing of raw materials and decentralized manufacturing, would be ideal for addressing the distributed demand. Moreover, some form of monetary funding would be required to set-up infrastructure to supply the low cost Fortified Energy Food is the best way possible for addressing the market
- It is difficult for any manufacturer to bring costs below INR 30 – 40 per Kg as it would affect the quality of the product. Hence, to address the market, some monetary support is needed

Manufacturer Profile 3 : Imperial Malts Ltd.
Business Profile:

- Imperial Malts is a manufacturer of malt based products based out of Gurgaon. The company supplies raw material like liquid malt extract to FMCG manufacturers of brands like Bournvita and Horlicks and globally to over customers in 30 countries
- The company also has a malt based powder that is supplied to organizations such as The Indian Army and to Malt Plus (South India based company). The company does not operate in the B2C segment
- 70% of the company revenue comes from domestic market

Key Insights:

- Pricing is the biggest issue for the lowest strata of society and hence no commercial player wants to get into the market. In addition, Packaging and Marketing are significant costs for open market distribution
- As an indicative benchmark, if the selling price of a product is INR 150 per kg, the cost for such a product would be INR 135, out of which INR 95 would be the direct cost the rest would be the indirect cost including operating costs such as Fuel, Labor, Overheads, Power
- The capex requirement for setting up a 10,000 tonnes capacity plant would be INR 20 crores and the land requirement would be 2 acres for such a plant

Suggestions for introducing a low cost Fortified Energy Food:

- Shortage of protein in the diets of people in poor and lower middle class is the biggest factor contributing towards lack of proper nutrition in these target groups. Availability of milk for the target group is also an issue, which further contributes to the problem
- Small manufacturers have limited ability to address the market with a low cost Fortified Energy Food and therefore monetary funding or grants are need The ideal pricing for a low cost Fortified Energy Food would be INR 15 per serving
- Since awareness about the low cost Fortified Energy Food is extremely important, there is a need to invest in advertising & promotion and use of regional ATL and BTL tools

Manufacturer Profile 4 : Nuflower Foods and Nutrition Pvt. Ltd.
Business Profile:

- Nuflower Foods and Nutrition Pvt. Ltd. is Gurgaon based and is into manufacturing of RUTFs. The company has UNICEF accredited supply division (equivalent to a USFDA accreditation) and is primarily into institutional sales such as community health programs with Public health bodies

Key Insights:

- The objectives of community health programs is two-fold:
 - Treatment of people with SAM (Severe Acute Malnutrition)
 - Prevent people from falling into SAM
- Current government set-up includes nutrition rehabilitation centers and treatment at PHCs and CHCs
- The Selling Price of the product is INR 21 – 22 per pack (ex-factory, no middlemen) and Costing of the product: INR 14 – 17 per pack

Suggestions for introducing a low cost Fortified Energy Food:

- Launching a low cost Fortified Energy Food is difficult, as the end consumer does not have the money to purchase the product. As such the current formulation of RUTF products would need to be altered in order to be distributed in the B2C segment
- Due to product limitations and huge investments required to distribute the product in the B2C channel, public models – governments and development financial institutions are used by Nuflower to distribute their product
- Regional FMCG players would be ideal for addressing this opportunity. Such players would have an existing network in their regions which can be utilized. Moreover, there is a need for a wide distribution network to address the distributed demand

Manufacturer Profile 5 : GC Rieber Compact India
Business Profile: <ul style="list-style-type: none"> GC Rieber Compact India manufacturers RUTFs at Gurgaon and supplies primarily into institutional channels such as community health programs with Public health bodies. The company has a UNICEF accredited supply division (equivalent to a USFDA accreditation) The company is completely export oriented supplying to agencies like WHO, UNICEF for their programs and has no domestic revenue
Key Insights: <ul style="list-style-type: none"> RUTFs are used as a treatment program and provide 1200 – 1500 kcal per day over 6 – 8 week over which the RUTF has to be consumed There are WHO guidelines on packaging and contents for international sale Capex required for manufacturing capacity of 10,000 tonnes is INR 30 – 40 Cr if international machines are used and INR 20 – 25 crores for locally sourced machines. Area required for manufacturing setup is ~15,000 sq ft Strong safety regulations are to be followed as product contamination is a concern while manufacturing. Human interventions are minimal for production The Selling Price for product is INR 20 – 21 per pack and Costs would be 70 – 75% of this price. Other key costs include Power and Rent
Suggestions for introducing a low cost Fortified Energy Food: <ul style="list-style-type: none"> The issue of buying power with the target consumers is the biggest issue preventing the launch of such low cost products Products currently manufactured by the company – RUTFs, would not work through the regular marketing / distribution channel, as these are proposed as medicines to address malnourishment The value proposition for a modified RUTF could be centered on the calorific value and taste. The product can be made in a paste or jam form as these are easy to consume and do not require additional products like milk or water Having a localized set-up is suggested in order to serve the demand in regional areas The advertising & promotion of the product should involve use of both ATL as well as BTL tools. Use of regional media like local newspapers and radio channels are useful in order to reach a wide number of consumers. In addition, medical delegates / opinion leaders could be used in order to encourage the use of low cost Fortified Energy Food. Use of rural vans is an innovative way of creating awareness about the product, by distributing free samples and holding some consumer interaction

Manufacturer Profile 6 : Techno Foods

Business Profile:

- Techno Foods operates in the B2B set-up where it supplies fortified foods for various ICDS schemes of different state governments, such and also supply to NGOs for their projects in North – Eastern states of India
- The company operates 3 plants – 900MT a month, 600 MT a month, and 2000MT a month
- The company supplies 3 products – Fortified Poha, Upma and Laddus, under ongoing projects with the Government of UP. The government provides the quantity requirements, and the specifications of the fortification of the product including ingredients to be used
- The shelf life of the product manufactured by Techno Foods is 3-6 months. The Govt. asks for a FOR rate, and the product is delivered to the Aanganwadi centre or the government centre, from where the product is distributed

Key Insights:

- For the products currently manufactured, the Selling Price of the product is fixed as per the specifications of the government for the ICDS program. For the UP government project the price is fixed at INR 6.25 / 100gm. However, the pricing of the product can vary depending on the ingredients and the age group the product is being supplied for. The price band of the product is a risk for the commercial players as the cost of the raw materials keeps fluctuating, and the price cannot be changed once tender is finalized
- The manufacturer and the government try to keep the packaging of the product as standard in order to keep the cost of the product as minimal as possible
- Cost breakdown:
 - Direct cost – 70%
 - Indirect cost – 30% (Transportation ~10%, Power ~5–10%, Rest is Overheads (Liasoning, Market surveys), A&P spend is minimal as Government takes that responsibility
- Transportation costs varies depending on the area being covered
- Capital Expenditure
 - Land for 2,000 MT plant is ~3 acres
 - Total Capex (excluding land) is ~ INR 15 Cr and can go up to ~ INR 20 Cr if imported machinery is used (Civil cost ~INR 6-8 crores and Plant & Machinery ~INR 7-10 crores)
- Margin for final product in case of a government model would be 7-10%
- Credit cycle for government supply can go up to 120 days
- Cold storage is not required for products manufactured

Suggestions for introducing a low cost Fortified Energy Food:

- Currently the central government allocates funds to state governments to spend on nutrition programs in their respective states. The state government rolls out tenders and the manufacturers give their respective quotes at which they can supply the product
- The Target Group for a low cost Fortified Energy Food is poor and lower middle class consumers who have limited purchasing power. Hence sustaining the demand for the product over a long period of time may be an issue for a private player
- Given limited margins and high investments, in case a private player launches products in the open market, some form of financial funding would be needed, especially during the initial years, to ensure the cost of the product becomes feasible for the target consumers

Manufacturer Profile 7 : British Biologicals

Business Profile:

- British Biologicals manufactures different fortified foods to be consumed with milk. The turnover of the business is INR 300 crore and has grown at 10%. The company has 3 manufacturing plants and are based out of Bangalore
- British Biologicals has an all – India selling model, where the product is sold through prescriptions and not the commercial OTC sales. The products are available at pharmacies and not retail shops
- They supply the products from their company depots to stockiest, who in turn supplies to the retail pharmacies
- The company has limited spend on advertising and promotion, due to the prescription based model
- Their product has a shelf life of 9 months on the chemist’s shelf, and has a 3-6 month prescription model

Key Insights:

- Having a wide distribution network would involve high distribution costs, as freight cost is high in this business
- Malt based foods are high on sugar content, and have little protein content. That is why most FMCG companies are now launching protein based drinks, especially for adults

Suggestions for introducing a low cost Fortified Energy Food:

- The consumers at the bottom most level of the pyramid do not have the capacity to purchase commercial Fortified Energy Foods from the market
- Localized sourcing of raw materials and decentralized manufacturing with regional distribution can be used for addressing the market with a low cost product
- Adequate monetary support is needed to ensure that the cost of the product becomes feasible for the target consumers

Manufacturer Profile 8 : GSK Consumer Healthcare
Business Profile:

- GSK Consumer Healthcare operates four Health Food Drink brands - Horlicks, Boost, Viva & Maltova, in the retail markets (Please note that the interview was conducted before the transaction with Unilever)
- Its Horlicks brand is the leader in the Indian health Food Drinks market with ~45% market (as of Oct 2017). Its other popular Brand Boost also had ~12% market share (Oct 2017), giving GSK CH a dominant position in the Indian market

Key Insights:

- The company mainly targets children and young mothers as the target consumers for their Health Food Drinks. However, they have launched niche products which are targeted towards the older sections of the society – such as Women’s Horlicks, Mother’s Horlicks and Protein Horlicks
- GSK CH has appointed contract manufacturers that manufacture certain products or components for them. Such contract manufacturers charge a fee in the form of a conversion cost, per kg of product produced
- They have an integrated value chain from sourcing to point of sale, with each level of the value chain being managed by a separate team. The distribution network is a mix of direct and indirect channels in order to ensure maximum reach for the product
- The margin profile for the industry is very typical. Gross margins vary in the range of 60 – 70%, while EBITDA margins can vary anywhere between 18 – 22%
- In terms of direct costs, cost of raw materials consumed is a significant cost, while employee benefit expenses and spend on advertising & promotion are significant components of the indirect costs

Suggestions for introducing a low cost Fortified Energy Food:

- The target consumers for low cost Fortified Energy Foods – poor and lower middle class consumers, do not have the buying power to make regular purchases of Fortified Energy Foods
- The company has launched smaller sachets of its Health Food Drinks, to enable these poor and lower middle class consumers to make need consumption
- Regional FMCG companies and smaller companies could be approached to launch such a product in the retail markets. These companies already have the existing infrastructure in place in terms of distribution networks, and have a strong regional presence which can help them successfully launch the product
- Larger players see limited acceptability of the product in the target groups, and limited purchasing power could impact margins as well
- Having a regional presence with localized sourcing and decentralized manufacturing, along with deep distribution networks is suitable for launching a low cost Fortified Energy Food. Advertising & Promotion using a mix of ATL and BTL tools is also crucial to enhance product visibility and drive acceptance among consumers

Appendix 3: Data Collection Tools

3.1 Questionnaire for Household

Objective	<ul style="list-style-type: none"> Fortified Energy Foods / Food supplement current consumption details / opinion about such products Current daily dietary intake plan and their daily chores Understanding their expectation from the new proposed product
Target respondents	<ul style="list-style-type: none"> Rural: Daily wage workers, small marginal farmers, landless labor etc. Urban: Unorganized labor, sales people, hotel / restaurant workers
# Respondents	150 – 160 per state
Close ended questions	20
Open ended questions	17

Detailed Questionnaire / Interview Guide

A. Basic Information:
1. Name and age of respondent
2. Relationship with the head of the Household (Self/Husband/Wife/Father/Mother/Son/Daughter/Brother/Sister)
3. Occupation (Employed/Self-Employed)
4. Nature of Work (Worker/Farmer/Laborer/Shop/Business/Other)
5. Work Hours (Daily hours and number of days per week)
6. Earnings (Earnings per day as well as per week)
7. Dietary Intake of the entire family (For Breakfast/Mid meals/Lunch/Evening Snacks/Dinner)
8. Information on education status of children – (Age/Gender/Whether go to school/Hours spent/Reason for not going)
9. How much your family spends per month on overall food and specifically on food supplement? (In Rs.)
10. What influences you most in your dietary habits? (TV Stars or Sportspersons/Self-help

groups/Panchayat members/Wealthy people in the locality/Family tradition/Advertising in TV & Newspapers/Any Other)
B. Fortified Energy Foods / Food Supplement related information
1. Do you know about Fortified Energy Foods /similar products like food Supplement? (Yes/No) (If yes proceed to 2)
2. Does anyone in your family take Fortified Energy Foods /similar products like food Supplement? (e.g.: Cerelac, Farex etc.) (Yes/No) (If yes proceed to 6)
3. If no, what are the reasons for not consuming Fortified Energy Foods? (Pricing/Availability/Accessibility/Form/Taste/Other)
4. What are the supplementary food products consumed by different age groups? (By Infants/Adolescents/Lactating Mothers/Pregnant Women/Elderly and during illness)
5. Would you be willing to consume such a product for better health, if available in the market? (Yes/No) if not then why?
6. If yes, then who takes these supplements? (Self/Husband/Wife/Father/Mother/Brother/Sister/Son/Daughter/Other)
7. What kind of Fortified Energy Foods /similar products like supplement do you take?
8. What is most common form of supplement that is used? (Fine amorphous – mixed with water or milk/Course amorphous – mixed with fruits or vegetables and water/Juice/Tablets/Bars and Biscuits/Others)
9. Daily Intake of these supplements of the entire family (For Breakfast/Mid meals/Lunch/Evening Snacks/Dinner)
10. What is the supplement consumer's daily chores? (Student/working female/house working female/working male/house working male)
11. Why do you take Fortified Energy Foods /similar products like food supplements? (Nutrient intake/Lactation/Complementary Children's Food/Old Age Supplement/Illness)
12. Do you give supplements to lactating mothers? (Yes/No), Please specify
13. Do you give supplements to infants/children when they fall sick? (Yes/No), Please specify

14. Do you give supplements to adolescents when they are growing? (Yes/No), Please specify
15. Do you give supplements to adults/elderly when they fall sick? (Yes/No), Please specify
16. How did the person using the supplement know about Fortified Energy Foods /similar products? (Mass Campaign / Doctor / Nutritionist / School / Government Health Worker / Other)
17. On a scale of 1 to 5, please rate the affordability of these supplements (1 being least affordable & 5 being most)
18. On a scale of 1 to 5, please rate the availability of these supplements (1 being least available & 5 being most)
19. On a scale of 1 to 5, please rate the taste of these supplements (1 being least tasty and 5 being most tasty)
20. On a scale of 1 to 5, please rate willingness to buy these supplements (1 being least willing & 5 being most)
C. Expectations for food supplements
1. Most desirable Taste (Fruity/Salty/Tangy/Mixed taste/Chocolate/Others)
2. Most desirable Form (Fine amorphous – mixed with water or milk/Course amorphous – mixed with fruits or vegetables and water/Juice/Tablets/Bars and Biscuits/Others)
3. Most desirable Size of packing (100-300 gm or ml/300-750 gm or ml/750 gm or ml to 1 kg or l/>1kg or l/Others)
4. Most desirable Price (per serving) (Rs 5 - 10/Rs 10-25/ Rs 25-50/ Rs 50-100/ >Rs 100/Others)

D. Advertisement

1. Do you watch movies/serials? Who is your favorite actor/actress/TV personality?
2. Is there any product (tooth paste/soap etc.) that you purchased after looking at advertisement on TV?
3. If yes, which product? And what attracted you towards the product?

Key Takeaways: _____

3.2 Questionnaire for Retailer/ Local Kirana/ Pharmacy Stores/Haats

Objective	<ul style="list-style-type: none"> Is the focus product segment currently part of assortment and various brands if available and associated consumption pattern – If not available reasons for same Inputs on current value chain structure and commercials (margin)
# Respondents	10 - 12 per state
Close ended questions	8
Open ended questions	5

Detailed questionnaire / Interview Guide

A. General information
1. Name of respondent/ shopkeeper/ pharmacist / Name & Address of store
B. Food Supplement / Fortified Energy Foods Information
1. Do you sell Food Supplement / Fortified Energy Foods like cerelac, protinex, etc.? (Yes/No)
2. If yes, go to question 6, if no then please let us know if you earlier stocked these products? (Yes/No)
3. If no, please share the reason for discontinuation/not keeping the products in your shop? (Demand / Profit)
4. What alternative products are used by local consumers esp. for infants, lactating mothers, pregnant women, adolescents and elderly?
5. What are different form of products available? (Powdered/Bar/Biscuits/Drinks/Others)
6. What is the cost of these products that you sell?
7. Which are the top three selling products?
8. Why do you think consumers buy these products? (for each product) Size/Price/Taste/Form/Availability/Others
9. Where do you procure these products (Wholesale market/Dealer/Distributor/Others)

10. Generally what is the profit margin for these products? (in %)
11. Do you sell any locally manufactured Fortified Energy Foods? (Yes/No) along with reasons for same
12. Perception about locally manufactured Fortified Energy Foods (Good/Acceptable/Not Acceptable)
13. Differentiator for locally manufactured products

Key Takeaways: _____

3.3 Questionnaire for Distributors

Objective	<ul style="list-style-type: none"> ▪ Their view on demand of such products in various areas, value chain insights and associated commercials ▪ What are various distribution techniques / initiatives used by manufacturers to drive sales for such products
# Respondents	3 - 5 per state
Close ended questions	5
Open ended questions	22

Detailed Questionnaire & Interview Guide

A. General information	
1. Name/Address of distributor	
2. What is the segmentation of population in the catchment area / community? (Economic strata – low/medium high income, age group – infant/adolescent/adults/elderly)	
B. Food Supplement / Fortified Energy Foods Information	
1. Do you sell Food Supplement / Fortified Energy Foods like cerelac, protinex, etc.? (Yes/No)	
2. If yes, go to question 5, if no then please let us know if you earlier stocked these products? (Yes/No)	
3. Please share the reason for discontinuation/not keeping the products in your shop? (Unaware/No demand/Low Margin/Others)	
4. What alternative products are used by local consumer's esp. for infants and lactating mothers?	
5. Which Fortified Energy Foods brands / are available in your product portfolio and which consumer segment buys it?	
6. Are there any Fortified Energy Foods manufacturing units nearby? (Yes/No)	
7. Do you sell any locally manufactured Fortified Energy Foods? (Yes/No)	
8. What are the roadblocks for a local manufacturer or local sales?	

9. How does the product packaging and branding affect demand in the region?
10. What consumer segments purchase energy foods?
11. What are the most demanded Fortified Energy Foods from your portfolio?
12. What is the typical fulfillment model for these products? (In terms of stakeholders/Turnaround time)
13. What are the current channels of distribution of Fortified Energy Foods?
14. What is the sale of products like across catchment areas? (Urban/Semi-Urban/Rural) (xx Kgs/ No. of Packets of xx Kgs.)
15. How many retail outlets do they currently sell their Fortified Energy Foods to?
16. What are the different manufacturers / brands currently supplying Fortified Energy Foods to different end users within the state?
17. What is the form of Fortified Energy Foods supplied to the market? (Powdered/Bar/Biscuits/Drinks/Others)
18. Differentiators for sale of these products in the market
19. What is the sales concentration of these products? (Regional – Urban/Semi-Urban/Rural)
20. Which are the most successful modes of distribution across various catchment and why? (Urban/Semi-Urban/Rural)
21. What is the pricing for retailers for Fortified Energy Foods? (For Bulk/Median/Minimum Orders)
22. What is the typical margin made on Fortified Energy Foods / similar products along with other terms of trade?

23. Do distributors prefer / enter exclusive deals with manufacturers or have brands from different manufacturers in their product portfolio?
24. What are the typical volumes sold by different manufactures in a year?
25. What is the average price point of each? (Urban/Semi-Urban/Rural)
26. In case of branding how does the companies assess the effectiveness of the product?

Key Takeaways: _____

3.4 Questionnaire for Manufacturers

Objective	<ul style="list-style-type: none"> Thoughts on acceptability of such products in Indian market Typical unit economics for products of such nature and typical investment required View on market for our focus products, also view on why this segment has failed to penetrate the rural market with views on effective RTM (Route to Market)
# Respondents	2 - 3 per state
Close ended questions	3
Open ended questions	10

Detailed Questionnaire & Interview Guide

A. General information
1. Name/Address/Year of establishment
B. Food Supplement / Fortified Energy Foods Information
1. Please list the Fortified Energy Foods products you manufacture / sell
2. Who are the target consumers for such products? (In terms of age and spending capacity)
3. Who are the distributors of your product?
4. Do you have your own factory to manufacture? (Yes/No)
5. If yes, why was contractual not considered, what are key consideration to select between the two and what are challenges while manufacturing on their own. Do you know people who have their own set-up for manufacturing? What are the constraints? If no, what are benefits other than cost and challenges associated. What is your model for manufacturing?
6. What would be an estimate of initial investment on manufacturing facility if done in-house?
7. What is the typical investment per unit capacity for such products? a. Typical percentage breakup of such cost across – Land / Building /P&M / IDC etc. or Civil / P&M / IDC etc. b. Discussion on key cost heads to include – Typical gross margins, Typical opex heads and their estimate as % of revenue – Manpower, Rent, Power and Fuel, R&M, others

c. Also a question on any other key cost head which could be very specific for such product manufacturing
8. Do you foresee a demand for Low cost energy dense products (Ask about the product demand in lowest and second lowest income quartile) along with reasons for response
9. We understand that rural market for energy dense food is small compared to urban areas. What do you think are the reasons for this difference?
10. What is the cost of the product that you manufacture?
11. How much do you sell the product for?
12. Insights on what should be the entry strategy for rural market basis their experience across products and what has worked exceptionally well for successful products in rural markets
13. Do you think cost of the product limits the demand of Fortified Energy Foods in rural areas? (Yes/No) and reasons for response
14. In case a low cost Fortified Energy Foods is introduced, do you think it will impact demand? (Yes/No) and reasons for response
15. How much of your sales is from the domestic market and how much is exported?

Key Takeaways: _____

3.5 Questionnaire for PHCs & CHCs / Aanganwadis / ASHA

Objective	<ul style="list-style-type: none"> Incidence of undernourishment related diseases – Typical catchment area profile Remedies prescribed, Is Fortified Energy Foods prescribed? If not why? Composition of medicines/ Fortified Energy Foods prescribed if any – Role of home remedies if they do prescribe on case to case basis Role of government in the overall scheme of things as to how they are trying to address problem of malnutrition
# Respondents	10 -12 per state
Close ended questions	9
Open ended questions	3

Detailed Questionnaire & Interview Guide

A. General information
1. Name/Address of respondent
B. Food Supplement / Fortified Energy Foods Information
1. What is the number of underweight, stunted, wasted children in this area?
2. What food do you give to wasted children?
3. Is there any Energy Dense Food in the market available for wasted children? (Yes/No)
4. If there was anything available in the market for wasted children, would that have helped them to improve?
5. Do you have food and nutrition specialists in this PHC/ location? Please share the name and contact details
6. Do you think availability of Fortified Energy Foods in the market shall help alleviate undernourishment related ailments? (Yes/No) – If no then why?

Key Takeaways: _____

3.6 Questionnaire for Nutritionists / Medical officers / Private Physicians

Objective	<ul style="list-style-type: none"> Validate nutritional deficiencies from the collected data Sources to bridge the deficiencies in the target population Inputs on positioning in rural market Inputs on designing a marketing campaign for rural markets
# Respondents	2 - 3 per state
Close ended questions	4
Open ended questions	3

Detailed Questionnaire & Interview Guide

A. General information
1. Name/Specialization/Hospital or clinic of respondent
B. Food Supplement / Fortified Energy Foods Information
1. At what level are nutritionists available - District Headquarters, Tehsil, Village Cluster and Village?
2. Are there nutrition rehabilitation units in this area? (Yes/No)
3. What food is given to the wasted children?
4. What supplementary food do you recommend for underweight children, underweight adolescent, boys and girls, adults with chronic energy deficiency, the elderly and the sick?
5. Do you think availability of low cost Fortified Energy Foods in the market shall help alleviate undernutrition and micro nutrient deficiency for all age groups and the elderly and sick; which are significantly prevalent in the lower economic strata of the society?

Key Takeaways: _____

Appendix 4: District Selection Methodology

Five states, Uttar Pradesh, Odisha, Karnataka, Maharashtra and Gujarat, were covered as part of the study. A four step process, as elaborated below, was used to identify the district for data collection.

- 1. Capture population proportion for each health indicator:** For each health related indicator (listed on first slide), the percentage of population suffering from the respective indicator was captured for each district under the five states. (Data available from the district wise state reports from the National Family Health Survey, 2015-16)
- 2. Select the best and worst performing district for each indicator:** For each health indicator, the best and worst district based on the percentage of population suffering from it was selected in each state. The district with the highest proportion of population was termed as the worst, while the district with the least proportion was termed as the best
- 3. Rank the districts:** Based on the selection of the districts for each indicator, the districts with the maximum best and worst ratings were ranked
- 4. Select appropriate districts:** Based on the rankings given in the previous stage, the appropriate districts were selected as the best and worst in each state

State-wise data on the above mentioned steps is provided below:

1. Gujarat

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Ahmadabad	29%	27%	31%	63%	22%	22%
Amreli	38%	25%	32%	56%	17%	18%
Anand	48%	22%	41%	50%	36%	30%
Banaskantha	41%	22%	43%	50%	38%	28%
Bharuch	42%	29%	44%	52%	31%	24%
Bhavnagar	48%	26%	44%	54%	22%	17%
Dohad	44%	25%	51%	56%	44%	45%
Gandhinagar	37%	29%	43%	66%	31%	27%
Jamnagar	28%	31%	29%	64%	20%	13%
Junagadh	28%	30%	27%	60%	17%	16%
Kachchh	41%	31%	39%	63%	24%	21%
Kheda	46%	27%	48%	55%	39%	31%
Mehsana	41%	25%	42%	62%	27%	28%
Narmada	47%	36%	54%	56%	44%	32%
Navsari	39%	27%	37%	52%	30%	36%
Panchmahal	40%	36%	42%	50%	47%	37%
Patan	38%	25%	38%	60%	30%	31%
Porbandar	23%	25%	28%	59%	14%	15%
Rajkot	31%	23%	31%	53%	17%	16%
Sabarkantha	51%	24%	46%	67%	37%	26%
Surat	30%	26%	36%	39%	18%	23%
Surendranagar	46%	28%	46%	62%	26%	24%
Tapi	36%	36%	42%	54%	43%	34%
The Dangs	48%	43%	60%	72%	44%	35%
Vadodara	44%	16%	39%	49%	29%	26%
Valsad	43%	30%	42%	51%	23%	15%

Summary:

	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Best Performing District	Porbandar	Vadodara	Junagadh	Surat	Porbandar	Jamnagar
Worst Performing District	Sabarkantha	The Dangs	The Dangs	The Dangs	Panchmahal	Dohad

*Average population affected across various parameters

	Best Performing	Worst Performing
District	Porbandar	The Dangs
Average Affected Population*	27%	50%

2. Karnataka

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Bagalkot	47%	25%	45%	41%	21%	19%
Bangalore	28%	29%	27%	40%	14%	9%
Bangalore Rural	29%	23%	27%	46%	21%	17%
Belgaum	37%	32%	39%	41%	21%	18%
Bellary	50%	27%	53%	50%	24%	18%
Bidar	43%	24%	39%	44%	26%	25%
Bijapur	45%	29%	39%	42%	20%	11%
Chamarajanagar	31%	19%	31%	44%	26%	18%
Chikkaballapura	38%	17%	29%	54%	25%	25%
Chikmagalur	21%	22%	25%	42%	25%	21%
Chitradurga	29%	32%	30%	44%	23%	18%
Dakshina Kannada	24%	17%	22%	45%	26%	22%
Davanagere	46%	22%	42%	47%	23%	19%
Dharwad	37%	34%	41%	46%	16%	13%
Gadag	35%	43%	38%	41%	21%	15%
Gulbarga	52%	34%	57%	43%	23%	21%
Hassan	27%	19%	26%	47%	18%	18%
Haveri	44%	20%	37%	53%	22%	20%
Kodagu	30%	16%	26%	35%	20%	23%
Kolar	32%	18%	28%	45%	24%	26%
Koppal	56%	26%	50%	46%	27%	21%
Mandya	19%	23%	20%	46%	18%	14%
Mysore	25%	17%	25%	46%	19%	10%
Raichur	37%	35%	41%	50%	21%	9%
Ramanagara	22%	20%	23%	48%	22%	15%
Shimoga	35%	14%	31%	49%	23%	31%
Tumkur	29%	26%	26%	53%	20%	17%
Udupi	21%	21%	22%	45%	28%	18%
Uttara Kannada	38%	18%	30%	42%	32%	30%
Yadgir	56%	31%	50%	48%	27%	17%

Summary:

	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Best Performing District	Mandya	Shimoga	Mandya	Kodagu	Bangalore	Bangalore
Worst Performing District	Koppal	Gadag	Gulbarga	Raichur	Uttara Kannada	Shimoga

	Best Performing		Worst Performing					
District	Mandya	Bangalore	Koppal	Gadag	Gulbarga	Raichur	Uttara Kannada	Shimoga
Average Affected Population*	23%	24%	38%	32%	38%	34%	32%	30%

*Average population affected across various parameters

	Best Performing	Worst Performing
District Selected	Mandya	Gulbarga

3. Odisha

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Anugul	32%	22%	35%	44%	22%	22%
Balangir	44%	26%	45%	61%	32%	21%
Baleshwar	33%	18%	34%	41%	25%	16%
Bargarh	39%	24%	39%	69%	31%	14%
Baudh	42%	23%	44%	50%	31%	23%
Bhadrak	35%	15%	28%	44%	30%	20%
Cuttack	15%	9%	17%	38%	19%	15%
Debagarh	33%	20%	38%	43%	31%	20%
Dhenkanal	26%	19%	29%	39%	26%	23%
Gajapati	33%	18%	32%	59%	22%	17%
Ganjam	29%	16%	21%	41%	22%	18%
Jagatsinghapur	20%	13%	17%	36%	17%	17%
Jajapur	30%	17%	30%	43%	28%	21%
Jharsuguda	35%	25%	37%	69%	28%	27%
Kalahandi	37%	25%	40%	69%	34%	30%
Kandhamal	38%	23%	43%	53%	28%	24%
Kendrapara	27%	12%	24%	42%	24%	28%
Kendujhar	45%	19%	44%	41%	29%	20%
Khordha	25%	14%	20%	45%	15%	10%
Koraput	40%	29%	44%	63%	35%	25%
Malkangiri	46%	33%	52%	71%	46%	26%
Mayurbhanj	44%	17%	44%	42%	32%	16%
Nabarangapur	46%	36%	51%	72%	36%	26%
Nayagarh	28%	18%	25%	40%	16%	18%
Nuapada	38%	26%	40%	64%	34%	27%
Puri	16%	12%	17%	44%	16%	15%
Rayagada	44%	23%	42%	55%	33%	30%
Sambalpur	40%	29%	45%	73%	28%	21%
Subarnapur	48%	22%	43%	69%	32%	18%
Sundargarh	37%	31%	44%	71%	27%	15%

Summary:

	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Best Performing District	Cuttack	Cuttack	Jagatsinghapur	Jagatsinghapur	Khordha	Khordha
Worst Performing District	Subarnapur	Nabarangapur	Nabarangapur	Sambalpur	Malkangiri	Kalahandi, Rayagada

	Best Performing			Worst Performing	Second Worst Performing*				
District	Cuttack	Jagatsinghapur	Khordha	Nabarangapur	Subarnapur	Sambalpur	Malkangiri	Rayagada	Kalahandi
Average Affected Population*	19%	20%	22%	44%	39%	39%	46%	38%	39%

*Average population affected across various parameters

	Best Performing	Worst Performing
District Selected	Cuttack	Subarnapur

4. Maharashtra

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Ahmednagar	33%	22%	31%	46%	23%	24%
Akola	41%	23%	39%	39%	25%	19%
Amravati	38%	25%	33%	43%	27%	20%
Aurangabad	39%	21%	36%	45%	22%	30%
Bid	38%	30%	37%	37%	23%	28%
Bhandara	41%	16%	33%	53%	33%	30%
Buldhana	44%	21%	41%	41%	28%	25%
Chandrapur	32%	31%	40%	49%	30%	30%
Dhule	40%	30%	48%	54%	30%	26%
Gadchiroli	33%	46%	42%	52%	28%	20%
Gondiya	35%	30%	40%	55%	35%	30%
Hingoli	40%	24%	37%	42%	29%	25%
Jalgaon	36%	33%	36%	52%	19%	14%
Jalna	44%	22%	44%	44%	29%	24%
Kolhapur	27%	26%	31%	47%	23%	24%
Latur	35%	23%	35%	38%	25%	20%
Mumbai	26%	26%	23%	49%	18%	15%
Mumbai Suburban	21%	20%	29%	50%	15%	14%
Nagpur	34%	26%	34%	47%	23%	19%
Nanded	40%	20%	34%	48%	29%	26%
Nandurbar	48%	40%	55%	60%	42%	37%
Nashik	44%	32%	43%	55%	26%	17%
Osmanabad	43%	22%	45%	36%	22%	21%
Parbhani	46%	20%	42%	46%	31%	26%
Pune	22%	23%	26%	50%	18%	11%
Raigarh	30%	29%	39%	53%	22%	19%
Ratnagiri	28%	22%	29%	47%	32%	27%
Sangli	23%	18%	25%	51%	21%	19%
Satara	23%	24%	28%	49%	21%	25%
Sindhudurg	26%	20%	25%	44%	30%	17%
Solapur	25%	24%	35%	44%	19%	16%
Thane	39%	29%	40%	48%	21%	13%
Wardha	31%	26%	36%	43%	29%	20%
Washim	41%	33%	43%	36%	27%	17%
Yavatmal	47%	29%	49%	47%	29%	26%

Summary:

	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Best Performing District	Mumbai Suburban	Bhandara	Mumbai	Washim	Mumbai Suburban	Pune
Worst Performing District	Nandurbar	Gadchiroli	Nandurbar	Nandurbar	Nandurbar	Nandurbar

*Average population affected across various parameters

	Best Performing	Worst Performing
District	Mumbai Suburban	Nandurbar
Average Affected Population*	25%	47%

5. Uttar Pradesh

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Agra	45%	15%	35%	43%	19%	18%
Aligarh	49%	15%	38%	56%	23%	21%
Allahabad	44%	20%	43%	56%	21%	27%
Ambedkar Nagar	43%	23%	41%	56%	30%	30%
Auraiya	44%	27%	46%	67%	23%	31%
Azamgarh	40%	17%	33%	59%	27%	24%
Baghpet	36%	15%	33%	64%	21%	15%
Bahraich	65%	14%	44%	53%	35%	30%
Balia	40%	14%	31%	49%	22%	26%
Balrampur	63%	10%	44%	56%	27%	23%
Banda	47%	18%	42%	55%	23%	20%
Bara Banki	52%	12%	40%	38%	29%	26%
Bareilly	46%	19%	42%	54%	25%	34%
Basti	49%	14%	33%	56%	25%	29%
Bijnor	43%	22%	42%	58%	25%	29%
Buduan	55%	20%	54%	48%	31%	34%
Bulandshahar	43%	16%	34%	56%	22%	25%
Chandauli	43%	18%	35%	64%	27%	18%
Chitrakoot	51%	33%	53%	68%	33%	38%
Deoria	41%	14%	32%	57%	26%	22%
Etah	51%	10%	32%	37%	24%	25%
Etawah	53%	11%	33%	0%	28%	16%
Faizabad	50%	19%	45%	61%	30%	33%
Farukhabad	49%	8%	31%	27%	23%	25%
Fatehpur	52%	15%	40%	40%	31%	22%
Firozabad	44%	12%	28%	34%	22%	24%
Gautam Budh Nagar	32%	16%	28%	58%	14%	15%
Ghaziabad	35%	14%	30%	57%	17%	15%
Ghazipur	41%	18%	32%	62%	27%	25%
Gonda	57%	10%	39%	54%	29%	28%
Gorakhpur	42%	20%	35%	52%	22%	25%
Hamirpur	39%	32%	40%	52%	28%	25%
Hardoi	51%	15%	40%	34%	31%	33%
Jalaun	46%	32%	49%	62%	22%	19%
Jaunpur	48%	27%	53%	52%	29%	21%

District	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Jhansi	36%	27%	40%	55%	24%	16%
Jyotiba Phule Nagar	45%	23%	42%	67%	30%	30%
Kannauj	50%	12%	33%	26%	23%	31%
Kanpur Dehat	46%	15%	36%	63%	27%	34%
Kanpur Nagar	44%	24%	42%	59%	15%	17%
Kanshiram Nagar	52%	12%	33%	34%	29%	23%
Kaushambi	50%	30%	53%	58%	34%	29%
Kheri	54%	18%	41%	43%	36%	41%
Kushinagar	45%	15%	35%	51%	28%	27%
Lalitpur	41%	39%	49%	48%	27%	31%
Lucknow	38%	34%	45%	58%	15%	14%
Mahamaya Nagar	44%	10%	32%	39%	23%	23%
Maharajnagar	53%	13%	37%	48%	29%	24%
Mahoba	45%	24%	48%	65%	35%	27%
Mainpuri	47%	12%	33%	27%	21%	25%
Mathura	41%	13%	28%	45%	18%	19%
Mau	41%	20%	35%	53%	26%	36%
Meerut	35%	19%	35%	60%	19%	19%
Mirzapur	49%	21%	47%	55%	28%	25%
Moradabad	45%	16%	43%	62%	28%	28%
Muzaffarnagar	41%	19%	37%	65%	21%	26%
Pilibhit	52%	22%	44%	57%	29%	37%
Pratapgarh	41%	24%	43%	51%	28%	22%
Rae Bareli	36%	31%	41%	47%	25%	32%
Rampur	46%	21%	44%	59%	28%	29%
Saharanpur	37%	19%	36%	61%	28%	26%
Sant Kabir Nagar	51%	11%	37%	51%	26%	22%
Sant Ravidas Nagar	51%	22%	49%	55%	24%	23%
Shahjahanpur	49%	24%	54%	61%	30%	39%
Shrawasti	64%	10%	39%	49%	25%	26%
SiddharthNagar	58%	14%	44%	57%	28%	42%
Sitapur	56%	14%	49%	39%	36%	42%
Sonbhadra	46%	23%	46%	61%	25%	29%
Sultanpur	46%	19%	40%	57%	30%	25%
Unnao	47%	13%	34%	36%	27%	33%
Varanasi	45%	25%	45%	51%	24%	22%

Summary:

	Children (0-4)			Women (15-49)		Men (15-49)
	Below 5 who are stunted	Below 5 who are wasted	Below 5 who are underweight	Anaemic	BMI below normal	BMI below normal
Best Performing District	Gautam Budh Nagar	Farukkabad	Mathura	Kannauj	Gautam Budh Nagar	Lucknow
Worst Performing District	Bahraich	Lucknow	Shahjahanpur	Chitrakoot	Sitapur	Sitapur

	Best Performing	Worst Performing
District	Gautam Budh Nagar	Sitapur
Average Affected Population*	27%	39%

*Avg population affected across various parameters

4.1 List of Districts and Blocks for Data Collection

The list of districts to be covered as part of the survey across the 5 states is provided below:

State	Best Performing District	Worst Performing District
Gujarat	Porbandar	The Dangs
Karnataka	Mandya	Gulbarga
Odisha	Cuttack	Subarnapur
UP	Gautam Budh Nagar	Sitapur
Maharashtra	Mumbai Suburban	Nandurbar

Within these districts, Blocks for data collection were selected basis their distance from District Administrative Centre (Nearest, Farthest and Median). The list of blocks per district is provided below:

State	Best Performing District			Worst Performing District		
Gujarat	Porbandar			The Dangs		
<i>Blocks selected</i>	<i>Chhaya</i>	<i>Ranavav</i>	<i>Kutiyana</i>	<i>Subir</i>	<i>Waghai</i>	<i>Ahwa</i>
Karnataka	Mandya			Gulbarga		
<i>Blocks selected</i>	<i>Srirangapattana</i>	<i>Malavalli</i>	<i>Krishnarajpetta</i>	<i>Afzalpur</i>	<i>Chincholi</i>	<i>Jevagri</i>
Odisha	Cuttack			Subarnapur		
<i>Blocks selected</i>	<i>Salepur</i>	<i>Barang</i>	<i>Narasinghpur</i>	<i>Ulunda</i>	<i>Birmaharajpur</i>	<i>Dunguripali</i>
UP	Gautam Budh Nagar			Sitapur		
<i>Blocks selected</i>	<i>Dankaur</i>	<i>Bilaspur</i>	<i>Dadri</i>	<i>Misrikh</i>	<i>Laharpur</i>	<i>Mahmudabad</i>
Maharashtra	Mumbai Suburban			Nandurbar		
<i>Blocks selected</i>	<i>Chembur</i>	<i>Mulund</i>	<i>Borivali</i>	<i>Shahade</i>	<i>Akkalkuva</i>	<i>Dhadgaon</i>

Appendix 5: Food consumption amongst migrant laborers

During detailed survey activity, about 77 migrant laborers were interviewed. The profile of these respondents is as follows:

- ~33.8% were from semi-urban or urban locations
- ~66.2% were from rural locations who work as daily wage laborers either in farm or non-farm activities.
- Migrant laborers covered as part of the study has income in the range INR 1000-10000 per month.
 - Urban or semi-urban areas: Average monthly income of INR 4,596 and spends on an average about INR 3,200 on food items
 - Rural areas: Average monthly income of INR 4,799 and spends on an average about INR 2,960 on food items
- Dietary intake of migrant workers and deviation from Recommended Daily Allowance (RDA) is provided in Table 26 and Table 27. The variation of gap in dietary intake and RDA, across urban and rural areas, is provided below:

Urban Areas:

- Energy: 1,756 – 2,230 Kcal/day
- Proteins: 11 – 16 g/day
- Calcium: 262 – 324 mg/day
- Iron: 4.3 – 14.5 mg/day

Rural Areas:

- Energy: 1,591 – 2,223 Kcal/day
- Proteins: 15 – 17 g/day
- Calcium: 258 – 305 mg/day
- Iron: 4.3 – 9.7 mg/day

- Gap in dietary intake is more in rural areas as compared to urban areas

Table 26: Dietary intake of migrant laborers in urban areas

Urban	Measure	Intake				Total	RDA	Gap
		Breakfast	Lunch	Dinner	Other meal			
Male, Heavy	Energy (Kcal/Day)	137.57	464.23	533.92	124.8	1260.52	3490	2229.48
	Proteins (g/day)	4.92	15.36	19.77	4.49	44.53	60	15.47
	Calcium (mg/day)	70.62	108.15	126.63	32.2	337.59	600	262.41
	Iron (mg/day)	1.23	5.04	4.99	1.374	12.64	17	4.36
Female, Heavy	Energy (Kcal/Day)	60.7	536	496.5	-	1093.2	2850	1756.8
	Proteins (g/day)	2.5	22	19.05	-	43.55	55	11.45
	Calcium (mg/day)	77	98	101	-	276	600	324
	Iron (mg/day)	0.038	2.95	3.52	-	6.508	21	14.49

Table 27: Dietary intake of migrant workers in rural areas

Rural	Measure	Intake				Total	RDA	Gap
		Breakfast	Lunch	Dinner	Other meal			
Male, Heavy	Energy (Kcal/Day)	202.28	498.39	464.39	102.43	1267.49	3490	2222.51
	Proteins (g/day)	5.65	17.33	15.65	3.60	42.23	60	17.77
	Calcium (mg/day)	68.41	113.87	111.41	47.66	341.35	600	258.65
	Iron (mg/day)	1.96	5.01	4.98	0.73	12.68	17	4.32
Female, Heavy	Energy (Kcal/Day)	197.13	434.42	466.49	160.85	1258.89	2850	1591.11
	Proteins (g/day)	4.77	15.41	15.78	3.83	39.79	55	15.21
	Calcium (mg/day)	58.67	94.50	95.07	46.5	294.73	600	305.27
	Iron (mg/day)	1.67	3.95	4.24	1.44	11.29	21	9.71

- Average dietary intake for migrant workers and entire respondent group is provided below and is detailed in Table 28. Dietary intake of migrant workers is lower than the average of the respondent group.

Migrant Workers

- Energy: 1,220 Kcal/day
- Proteins: 42 g/day
- Calcium: 312 mg/day
- Iron: 10.7 mg/day

Entire Respondent Group

- Energy: 1429 Kcal/day
- Proteins: 50 g/day
- Calcium: 359 mg/day
- Iron: 12.8 mg/day
- Amongst the migrant workers dietary intake for Females is lower than the Males and is provided below:

Females

- Energy: 1,176 Kcal/day
- Proteins: 42 g/day
- Calcium: 285 mg/day
- Iron: 8.8 mg/day

Males

- Energy: 1,264 Kcal/day
- Proteins: 43 g/day
- Calcium: 339 mg/day
- Iron: 12.6 mg/day

Table 28: Difference in dietary intake of migrant laborers and general population

Unit	Average dietary Intake of entire respondent group	Dietary Intake for Migrant Workers			
		Male, Urban	Female, Urban	Male, Rural	Female, Rural
Energy (Kcal/day)	1429.53	1260.52	1093.2	1267.49	1258.89
Proteins (g/day)	50.34	44.53	43.55	42.23	39.79
Calcium (mg/day)	359.45	337.59	276	341.35	294.73
Iron (mg/day)	12.80	12.64	6.50	12.68	11.29

- Dietary intake of Fortified Energy Foods amongst migrant workers is provided below:

Urban Areas

- ~7.6% (2 out of 26) consume Fortified Energy Foods
- Average spend on Fortified Energy Foods is INR 250 per month

Rural Areas

- ~13% (7 out of 51) consume Fortified Energy Food
- Average spend on Fortified Energy Food is INR 233 per month

- Consumption level of Fortified Energy Foods amongst the migrant workers (7.6% for urban areas and 13% for rural areas) is lower than consumption levels (37.5%) for the entire respondent group

To sum up, nutrient indicators are lower for migrant workers as compared with general population. Also, the intake of Fortified Energy Foods is lower amongst migrant workers.



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

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