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Eradication of Malnutrition: Guidelines to Achieve the Goals





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Eradication of Malnutrition:

Malnutrition refers to a condition where there is an imbalance, excess, or deficiency in a person's intake of nutrients. Malnutrition can manifest in various forms: undernutrition, micronutrient deficiency and overnutrition. Undernutrition occurs when there's a deficiency in intake of calories, protein, or essential nutrients, leading to stunting (low height for age), wasting (low weight for height), or underweight (low weight for age). Micronutrient deficiency happens when the body lacks essential vitamins and minerals like iron, iodine, and essential vitamins. Overnutrition occurs due to excessive intake of nutrients, often associated with overeating and consuming unhealthy foods high in fats, sugars, and salt. Malnutrition is a complex issue influenced by various factors including socioeconomic status, access to nutritious food, healthcare, education, and cultural practices. This can lead to health problems and negative impacts on physical and mental development.

According to the National Family Health Survey (NFHS-5) 2019-2020, 37.9% of children under five in India are stunted, 20.8% are wasted, and 35.7% are underweight. In terms of women, 22.9% of women aged 15-49 have a BMI below normal, indicating chronic energy deficiency. Bihar, being one of the poorer states in India, faces exacerbated challenges regarding malnutrition. According to NFHS-4 (2015-16), 48.3% of children under five in Bihar were stunted, 20.8% were wasted, and 42.0% were underweight. Similarly, among women in Bihar aged 15-49, 24.3% had a BMI below normal. These figures highlight the persistent problem of malnutrition in both India and Bihar, indicating the need for continued efforts and interventions to address this issue comprehensively.

Malnutrition Eradication Programme

In a significant stride towards improving the public health and well-being of Bihar state, Malnutrition Eradication Programme (MEP) for rural population has launched by the then Hon'ble Agricultural Minister of Bihar and Dr. D. R. Singh, Vice Chancellor of Bihar Agricultural University (BAU), Sabour on June 21, 2023, from Kishanganj. The Malnutrition Eradication Programme, initiated in colleges and KVKs of BAU, Sabour is a paradigm shift in public health interventions, embracing a multifaceted approach rooted in community engagement from rural villages and scientific expertise from KVKs. The comprehensive initiative aims to tackle malnutrition by addressing the root causes, conducting awareness campaigns in villages, promoting nutrition-sensitive agriculture in the form of Nutri-gardens and enhance the capacity building to make value added foods. Overall, this programme demonstrates the dedication to improving the health and well-being of vulnerable groups, especially children and women at the district level.



Vision

- To create a district with a community, including children and women, having proper access to nutrition, leading to zero malnutrition.
- To establish a measurable impact on malnutrition rates within the district, and continuously evaluating the progress to ensure improvements in nutritional outcomes.
- To implement a comprehensive approach that addresses food security, healthcare, education, sanitation and livelihood opportunities.

Mission

"Eradication of Malnutrition through Nutri-garden (Poshan Vatika Lagao, Kuposhan Bhagao)"

Objectives

- To educate the rural communities by providing training and awareness to address malnutrition by balanced diet intake.
- To improve access to diverse and nutritious food options in rural areas through initiatives such as Nutri-gardens.
- To enhance the capacity building among the rural populations to support local food production and to develop value-added products.

Activities

- Creating awareness about the nutrition and collection of health & nutrition data through baseline survey within the district and adopted villages.
- Provide technical and input support to establishment of Nutri-garden in their backyard or nearby field.
- Capacity building through training and other skill development programmes for eradication of Malnutrition.
- Social outreach through group meeting, demonstrations and other extension tools.



Bihar Agricultural University, Sabour (Bhagalpur)									
	List of villages adopted for Mal	nutrition Eradio	cation Program	me					
Sr. No.	Description	Village	Panchayat	Block					
1	Krishi Vigyan Kendra, Araria	Mahalgaon	Mahalgaon	Jokihat					
2	Krishi Vigyan Kendra, Arwal	Sarwarpur	Belsar	Kaler					
3	Krishi Vigyan Kendra, Aurangabad	Fatehpur	Badikhurd	Barun					
4	Krishi Vigyan Kendra, Banka	Bangalgarh	Dhanuvsar	Chandan					
5	Krishi Vigyan Kendra, Bhagalpur	Dhruvganj	Kharik	Bhagalpur					
6	Krishi Vigyan Kendra, Bhojpur	Doghara Tola	Doghara	Bihiya					
7	Krishi Vigyan Kendra, Jehanabad	Gorsar	Ahiyasa	Ghosi					
8	Krishi Vigyan Kendra, Gaya (Manpur)	Sondhi	Shadipur	Manpur					
9	Krishi Vigyan Kendra, Gaya (Amas)	Masuribar	Amas	Amas					
10	Krishi Vigyan Kendra, Katihar	Bathaili	Garthura	Katihar					
11	Krishi Vigyan Kendra, Khagaria	Sansarpur	Sansarpur	Khagaria					
12	Krishi Vigyan Kendra, Kishanganj	Mahingaon	Mahingaon	Kishanganj					
13	Krishi Vigyan Kendra, Lakhisarai	Bandol	Halsi	Halsi					
14	Krishi Vigyan Kendra, Madhepura	Sripur Chakla	Balamgadhia	Madhepura					
15	Krishi Vigyan Kendra, Munger	Lagma	Chaurrgaon	Asarganj					
16	Krishi Vigyan Kendra, Nalanda	Rupaspur	Sabanhua	Harnaut					
17	Krishi Vigyan Kendra, Patna	Agwanpur	Agwanpur	Barh					
18	Krishi Vigyan Kendra, Purnia	Mishrinagar	Dansar	Jalalgarh					
19	Krishi Vigyan Kendra, Rohtas	Bishuniya Bal	Jamodhi	Bikramganj					
20	Krishi Vigyan Kendra, Saharsa	Sisai	Okahi	Sattarkataiya					
21	Krishi Vigyan Kendra, Sheikhpura	Diha	Diha	Ariari					
22	Krishi Vigyan Kendra, Supaul	Gonha	Tribeniganj	Tribeniganj					
23	Krishi Vigyan Kendra, Supaul	Gonha	Gonha	Triveniganj					
24	Veer Kunwar Singh Agricultural College, Buxar	Koluha	Kushalpur	Dumraon					
25	Nalanda College of Horticulture, Noorsarai	Daroda	Noorsarai	Noorsarai					
26	Bhola Paswan Shastri Agricultural College, Purnea	Dimiya Chattarganj	Dimiya	Purnia					
27	Mandan Bharti Agriculture College, Agwanpur	Kumhar Ghat	Purikh	Sattarkataiah					
28	Dr. Kalam Agricultural College, Kishanganj	Ganiabari	Bhotathana	Pothia					

Table 1: List of villages adopted for Malnutrition Eradication Programme



Table 2: Different activities covered under Malnutrition eradication programme 2023-24):

No. of Villages	No. of women selected	No. of children selected	No. of Nutri- garden established	Trainings	Awareness Prog/ Health Camp	No. of participants	Demonstration	Total area (m²)	Production (Kg)	Increase in consumption
33	1371	1265	669	190	71	5081	2894	128245	273720	46%

Table 3: Plant Distribution under malnutrition eradication program (2023-24)

On Campus No. of Plant distributed	Off Campus No. of Plant distributed	No. of beneficiary	Total No. of Plant	
69242 45950		8462	610809	



Section-I

Collection of Basic Information of Adopted Village

MALNUTRITION ERADICATION SURVEY (HOUSEHOLD) SCHEDULE PART A

[1] Particulars of field operation

- i. Name of College/KVK
- ii. District
- iii. Name of Scientist

[1.1] Descriptive information of household					
1. Name					
2. State					
3. District					
4. Block					
5. Location	Rural	Peri-urban			
6. Village					
7. HouseholdNumber					
8.Name of HH Head					
9. Name of informant					
10.Contact No.					
11. Aadhaar no.					

[2] Household Characteristics						
1. Size (No.)	4. Religion					
2. Principal occupation	5. Caste					
3. Subsidiary occupation	6. Type of dwelling structure Kaccha-1, Semi-pucca-2, Pucca-3					

[3]]	[3] Demographic and other particulars of household members										
S.No.	Name of member	Gender (male- 1, female- 2)	Age (years)	Marital status	General education	Primary activity	Annual income (Rs.)	Weight (kg)	Height (cm.)	BMI	Hemoglobin level



[4] Land inventory and cropping pattern						
Land survey	Area					
1. Owned						
2. Leased-in						

[5]1	[5] Livestock holding (No.)						
S.	Particulars	Number					
No.							
1	Cattle						
2.	Goat						
3.	Poultry						

[6] N	[6] Monthly Expenditure pattern of Household						
S.	Particulars	Rs.					
No.							
1.	Food						
2.	Health						
3.	Education						
4.	Others						
	Total -						

[7.] Information related to crops grown in Nutri-garden (Current year)

(If, household head don't have information on Nutri-garden than you can ask this particular information to women respondents who generally engaged in this activity.)

Season	Crop sown	Area (m. sq.)	Production (in Kg)	Consumption (in Kg)	Sold (in Kg)
Kharif					
Dahi					
Rabi					

[8.] Info	[8.] Information related to crops grown in Nutri-garden (Current year)							
(If, house	ehold hea	d don't have info	rmation on Nutri-garden	than you can a	sk this particular			
informat	ion to wo	men respondent	ts who generally engaged	l in this activity	7.)			
Season	Crop	Area (m. sq.)	Production(in Kg)	Consumptio	Sold (in Kg)			
	sown			n (in Kg)				
Summer								



[9] Health and Hygiene								
S. No.	Particulars							
1.	Toilet (No.)	Very Good	Good	Fair	Poor			
2.	General cleanliness	Very Good	Good	Fair	Poor			

[10] PDS access							
S.	Particulars						
No.	Ration card Yes No						
1.	Wheat (Kg. /month):						
2.	Rice (Kg. /month):						
3.	Nutri-cereals (specify) (Kg.	/month):					

PART B:

[11] Dietary Diversity/Dietary Pattern

[Household dietary diversity score, Minimum dietary diversity for women and Individual dietary diversity for children will be measured from this section. You have to ask information of this section from female head/spouse as generally they are engaged in food preparation and food serving for respective selected group i.e. at Household level, Women (15-49 age group) and individual level (Children 2-14 years old)]

[Households: include foods eaten by *any member of the household*, and *exclude* foods purchased *and* eaten outside the home]

[11.1]	Household Dieta	ry Diversity					
When t	When the respondent recall is complete, fill in the food groups based on the information						
recorde	recorded above. For any food groups not mentioned, ask therespondent if a food item from						
this gro	oup was consumed	4. T					
S. No.	Food group	Examples	Household				
			Dietary				
			Diversity				
			YES – 1,				
			NO - 0				
1	Cereals	Rice, Wheat or Foods made from these (e.g. bread,					
		noodles, porridge or other grain products) or any					
		traditional food					
2	Millets	Sorghum, Ragi, China etc. and Coarse grain					
3	Roots and	Potatoes or Other foods made from roots					
	Tubers						
4	Vitamin A rich	Pumpkin, Carrot, Squash, or sweet potato that are					
	vegetables and	orange inside + other locally available vitamin A rich					
	tubers	vegetables (e.g. red sweet pepper)					
	D 1						
5	Dark green	Dark green leafy vegetables, including wild forms +					
	leafy	locally available vitamin A rich leavessuch as amaranth,					
	Vegetables	cassava leaves, kale, spinach					



6	Other	ther Other vegetables (e.g. tomato, onion, brinjal) + other					
	vegetables	locally available vegetables					
7	Vitamin A rich	Ripe mango, apricot (fresh or dried), ripe papaya, dried					
	fruits	peach, and 100% fruit juice made from these + other					
		locally available vitamin A rich fruits					

[11.2] Household Dietary Diversity

When the respondent recall is complete, fill in the food groups based on the information recorded above. For any food groups not mentioned, ask therespondent if a food item from this group was consumed.

			Household
S. No.	Food group	Examples	Dietary Diversity
511101	roougroup	Liximpres	YES - 1,
			NO - 0
8	Other fruits	Other fruits, including wild fruits and 100% fruit	
		juice made from these	
9	Meat	Beef, pork, goat, rabbit, chicken, duck, other birds	
10	Eggs	Eggs from chicken, duck or any other egg	
11	Fish	Fresh Fish or shellfish	
12	Legumes,	Dried beans, dried peas, lentils,	
13	Nuts and seeds	Nuts, Oseeds or foods made from these (eg. Tilkut,	
		peanut chikki)	
14	Milk and milk	Milk, paneer, curd or other milk products	
	products		
14	Oils and fats	Oil, ghee, fats or butter added to food or used for	
		Cooking	
15	Sweets	Sugar, honey, sweetened soda or sweetened juice	
		drinks, sugary foods such as chocolates,	
		candies, cookies and cakes	
16	Spices,	Spices (black pepper etc.), condiments	
	condiments,		
17	Beverages	Coffee, tea, cold drinks	
Household	Did you or anyo	ne in your household eat anything (meal or snack)	
	OUTSIDE home?		



Part C:

Knowledge on nutrition

(Please ask this section information from selected women respondents)

[12] Knowledge on nutritional related aspects (tick)

[12.1] Food intake related to different age group

Mother's milk at birth

- 1. What is the first food a newborn baby should receive?
- a) Only mother's milk
- b) Other (.....)
- c) Don't know

Reason for giving supplementary foods at six months

2. Why is it important to give foods in addition to mother's milk to babies from the age of six months?

- a) mother's milk alone is not sufficient (enough)/cannot supply all the nutrients needed for growth/from six months, baby needs more food in addition to mother's milk
- b) Other (.....)
- c) Don't know

Women's nutrition during pregnancy and breast feeding

- 3. How should a pregnant/lactating woman eat in comparison with a non-pregnant woman to provide good nutrition to her baby and help him grow?
 - a) Eat more food (more energy) Eat more at each meal (each day) Or Eat more frequently (each day)
 - b) Eat more protein-rich foods
 - c) Eat more iron-rich foods,
 - d) Use iodized salt when preparing meals
 - e) Other (.....)
 - f) Don't know

[12.2] Knowledge related to intake of nutrients

Micronutrient supplements for pregnant women

- 4. Most women would benefit from two types of supplements, or tablets, during pregnancy. Which are they?
 - a) Iron & Folic acid supplements
 - b) Other (.....)
 - c) Don't know

Recommendation of folic acid supplements

- 5. What is the health benefit for taking folic acid supplements/tablets?
 - a) For normal development of the nervous system of the unborn baby (brain, spine and skull)
 - b) To prevent birth defects/abnormalities the nervous system of the unborn baby (brain, spine and skull)
 - c) Other (.....)
 - d) Don't know
- Iron-rich foods easily absorbed

6. Can you list examples of foods rich in iron-what are the sources 1...... 2......

3.....

[b] Plant based source: a) Green leafy vegetables, b) pulses, c) fruits, d) dry fruits, e) jaggery



Foods that increase iron absorption

- 7. When taken during meals, certain foods help the body absorb and use iron. What are those foods?
 - a) Vitamin-C-rich foods, such as fresh citrus fruits (orange, lemons, aonla etc.)
 - b) Other (.....)
 - c) Don't know

Foods that decrease iron absorption

- 8. Some beverages decrease iron absorption when taken with meals. Which ones?
 - a) Coffee
 - b) Tea
 - c) Other (.....)
- d) Don't know
- Food sources of vitamin A
- 9. Can you list examples of foods rich in vitamin A?
 - [i] Animal based source -:
 - [ii] Plant based source-:
- 1) Green vegetables
- 2) Fruits (orange- or yellow-coloured non-citrus fruits)-
- 3) Foods fortified with vitamin A ()
 - [iii] Other (.....)
 - [iv] Don't know

[12.3] Knowledge on nutrition related diseases

Causes of undernutrition

- 10. What are the reasons why people are undernourished?
 - a) Not getting enough food
 - b) Food is watery, does not contain enough nutrients
 - c) Disease/ill and not eating food
 - d) Other (.....)
 - e) Don't know

Meaning of lack of weight gain among infants and young children

- 11. If the baby is not gaining weight, what does that mean?
 - a) The baby is not eating well/the baby does not want to eat
 - b) The baby may be sick often
 - c) Other (.....)
 - d) Don't know

Symptoms of iron-deficiency anemia?

- 12. Can you tell me how you can recognize someone who has anemia?
 - a) Less energy/weakness
 - b) Paleness/pallor
 - c) Spoon nails/bent nails (koilonychia)
 - d) More likely to become sick (less immunity to infections)
 - e) Other (.....)
 - f) Don't know

Consequences of iron-deficiency anemia for pregnant women

13. What are the health risks for pregnant women of a lack of iron in the diet?

a) Risk of dying during or after pregnancy



- b) Difficult delivery
- c) Other (.....)
- [c] Don't know

Causes of iron-deficiency anaemia

- 14. What causes anemia?
 - a) Lack of iron in the diet/eat too little, not much
 - b) Sickness/infection (malaria, hookworm infection, other infection such as HIV/AIDS)
 - c) Heavy bleeding during menstruation
 - d) Other (.....)
 - e) Don't know

Signs of vitamin A deficiency

- 15. Have you heard about vitamin A deficiency or lack of vitamin A?
 - a) Weakness/feels less energetic
 - b) Be more likely to become sick (less immunity to infections)
 - c) Eye problems: night blindness (inability to see at dusk and in dim light), dry eyes, corneal damage, blindness
 - d) Other (.....)
 - e) Don't know

Consequences for the unborn baby

- 16. What could be the consequences or health risks for the unborn baby of a lack of iodine in the diet of a pregnant woman?
 - a) Risk of being mentally impaired
 - b) Risk of being physically damaged
 - c) Other (.....)
 - d) Don't know

Cause of iodine deficiency

- 17. What causes iodine deficiency?
 - a) Poor or no intake of iodized salt
 - b) Other (.....)
 - c) Don't know

[12.4] Food beneficial for reducing the deficiency

Prevention of under-nutrition

- 18. What should we do to prevent under-nutrition among young children (6-23 month)
 - a) Give more food
 - b) Feed frequently
 - c) Give attention during meals
 - d) Go to the health center/hospital and check that the child is growing (growth monitoring services)
 - e) Other (.....)
 - f) Don't know



Prevention of iodine deficiency

- 20. How can iodine deficiency be prevented?
 - a) Eat/prepare foods with iodized salt
 - b) Other (.....)
 - c) Don't know

Prevention of lack of Vitamin A in body

- 21. How can one prevent a lack of vitamin A in the body?
 - a) Eat/feed vitamin-A-rich foods having/giving a diet rich in vitamin A
 - b) Eat/feed foods fortified with vitamin A
 - c) Give vitamin A supplements/sprinkles
 - d) Other (.....)
 - e) Don't know

[12.5] Knowledge on the aspect cooking of food and storage

Washing raw fruits and vegetables

- 22. What should you do before eating raw fruits and vegetables?
 - a) Wash them with clean water
 - b) Other (.....)
 - c) Don't know

[12.6] Knowledge on sanitation and hygiene

Treating unsafe water

- 23. If you know that the water you are going to use for cooking or drinking is not safe or does not come from a safe source, what should you do?
 - a) Boil it OR
 - b) Add bleach/chlorine OR
 - c) Strain it through a cloth OR
 - d) Use a water filter (ceramic, sand, composite, etc.) OR
 - e) Let it stand and settle OR
 - f) Discard it and get water from a safe source
 - g) Other (.....)
 - h) Don't know



Section-II

Technical Programme

A. Establishment of Nutri-garden

Details of Established Nutri-garden:

Season	Number	Area (m ²)	Production (Kg)
Kharif			
Rabi			
Summer			
Total			

Layout of Nutri-garden: (Model-1)



Model-2

LAYOUT OF NUTRI-GARDEN



Bihar Agricultural University, Sabour (Bhagalpur)



Month wise crop cycle of Nutri-garden

MONTH	CROPS				
JANUARY	Cauliflower, Cabbage, Chilli, Carrot, Coriander, Okra, Spinach, Brinjal, Radish				
FEBRUARY	Cauliflower, Cabbage, Chilli, Brinjal, Radish, Tomato, Okra, Bottle gourd, Sponge				
	gourd, Bitter gourd, Cucumber				
MARCH	Coriander, Okra, Brinjal, Bottle gourd, Sponge gourd, Ridge gourd, Cucumber				
APRIL	Brinjal, Tomato, Okra, Cucumber, Snake gourd, Amaranthus				
MAY	Brinjal, Amaranthus, Bottle gourd, Ridge gourd, Papaya, Lemon, Curry leaves				
JUNE	Chilli, Brinjal, Okra, Amaranthus, Bottle gourd, Snake gourd				
JULY	Bottle gourd, Bitter gourd, Amaranthus, Tomato, Okra, Chilli				
AUGUST	Indian bean, Moringa, Tomato, Radish, Banana				
SEPTEMBER	Indian bean, Lobia, Coriander, Chilli, Spinach, Radish				
OCTOBER	Indian bean, Lobia, Spinach, Radish, Amaranthus, Coriander, Carrot, Beet root				
NOVEMBER	Cauliflower, Cabbage, Chillis, Carrot, Coriander, Tomato, Methi, Amaranthus,				
	Pea, Spinach, Faba bean				
DECEMBER	Cauliflower, Cabbage, Carrot, Coriander, Tomato, Radish, Okra, Spinach				
*FRUIT CROPS					
Papaya, Karon	da, Lemon, Guava, Curry leaves, Moringa, Banana, Hybrid mango variety				

Agro-climatic zone/ crop wise details of Nutri-garden's crops (Optional)

ZONE	DISTRICT	KHARIF	RABI	SUMMER
ZONE-	Katihar, Purnea,	Okra, brinjal,	Cabbage,	Bottle gourd, bitter
II	Kishanganj,	chilly, tomato,	cauliflower,	gourd, sponge gourd,
	Araria, Supaul,	bottle gourd,	knolkhol, raddish,	ridge gourd, water
	Sahasra,	kharif onion,	onion, chilli,	melon, lobia, okra,
	Madhepura,	cowpea, early	broccoli, carrot,	long melon, musk
	Khagaria	cauliflower	methi, palak,	melon, cucumber,
			mustard leaf,	amaranthus
			potato, coriander,	
			amaranthus, beet,	
			chow-chow	
ZONE-	Banka,	Okra, cowpea,	Cauliflower,	Bottle gourd, bitter
III A	Bhagalpur,	Amaranthus	cabbage,	gourd
	Munger,	brinjal, tomato,	broccoli,	, sponge gourd, ridge
	Sheikhpura,	Methi, sponge	coriander,	gourd, cucumber,
	Jamui,	gourd, bottle	vegetable pea,	water melon, musk
	Lakhisarai	gourd,turmeric	beans, palak,	melon,brinjal, tomato,
		early	carrot, radish,	okra, lobia,
		cauliflower,	beet, capsicum,	amaranthus
		bitter gourd,	chilli, tomato,	
		Elephant foot	amaranthus	
		yam		



ZONE-	Kaimur,	Okracowpea,	Cauliflower,	Bottle gourd, bitter
III B	Nalanda, Buxar,	amaranthus,	cabbage,	gourd, sponge gourd,
	Patna, Rohtash,	brinjal, tomato,	broccoli,	ridge gourd,
	Aurangabad,	methi, sponge	coriander,	cucumber, water
	Bhojpur, Arwal,	gourd, bottle	vegetable pea,	melon, musk melon,
	Jehanabad, Gaya,	gourd,	beans, palak,	brinjal, tomato, okra,
	Nawada	turmeric, early	carrot, radish,	lobia, amaranthus
		cauliflower,	beet, capsicum,	
		bitter gourd,	chilli, tomato,	
		elephant foot	amaranthus	
		yam		

A. Capacity building and other activities:

S.	Name of activities	Number of	Pa	Total Number/Area		
NO.		activities	Children	Female	Male	Number / III ca
1.	Awareness program					
2.	Trainings					
3.	Front Line Demonstration (FLD)					
4.	On Farm Trail/Testing (OFT)					
5.	Health Camp Organized					
6.	Other activities, (As per observation/need)					



Section-III

Output (Result) of Malnutrition Eradication through post programme survey:

[1] Particulars of field operation

i. Name of College/KVK

ii. District

iii. Name of Scientist

[1.1] Descriptive information of household						
2. Name						
2. State						
3. District						
4. Block						
5. Location	Rural	Peri-urban				
6. Village						
7. HouseholdNumber						
8.Name of HH Head						
9. Name of informant						
10.Contact No.						
11. Aadhaar no.						

[2] Household Charac	teristics
1. Size (No.)	4. Religion
2. Principal occupation	5. Caste
3. Subsidiary	6. Type of dwelling structure
occupation	Kaccha-1, Semi-pucca-2, Pucca-3

[3]]	[3] Demographic and other particulars of household members										
S.No.	Name of member	Gender (male- 1, female- 2)	Age (years)	Marital status	General education	Primary activity	Annual income (Rs.)	Weight (kg)	Height (cm.)	BMI	Hemoglobin level



[4] Land inventory and cropping pattern				
Land survey	Area			
2. Owned				
2. Leased-in				

[5]1	[5] Livestock holding (No.)					
S.	Particulars	Number				
No.						
1	Cattle					
2.	Goat					
3.	Poultry					

[6] Monthly Expenditure pattern of Household			
S.	Particulars	Rs.	
No.			
1.	Food		
2.	Health		
3.	Education		
4.	Others		
	Total -		

[7.] Information related to crops grown in Nutri-garden (Current year)

(If, household head don't have information on Nutri-garden than you can ask this particular information to women respondents who generally engaged in this activity.)

Season	Crop sown	Area (m. sq.)	Production (in Kg)	Consumption (in Kg)	Sold (in Kg)
Kharif					
Pahi					
Rabi					

[8.] Info (If, house informat	[8.] Information related to crops grown in Nutri-garden (Current year) (If, household head don't have information on Nutri-garden than you can ask this particular information to women respondents who generally engaged in this activity.)								
Season	Crop sown	Area (m. sq.)	Production(in Kg)	Consumptio n (in Kg)	Sold (in Kg)				
Summer									



[9] Hea	[9] Health and Hygiene							
S. No.	Particulars							
1.	Toilet (No.)	Very Good	Good	Fair	Poor			
2.	General cleanliness	Very Good	Good	Fair	Poor			

[10] P	[10] PDS access					
S.	Particulars					
No.	Ration card	Yes	No			
1.	Wheat (Kg. /month):					
2.	Rice (Kg. /month):					
3.	Nutri-cereals (specify) (Kg. /	month):				

PART B:

[11] Dietary Diversity/Dietary Pattern

[Household dietary diversity score, Minimum dietary diversity for women and Individual dietary diversity for children will be measured from this section. You have to ask information of this section from female head/spouse as generally they are engaged in food preparation and food serving for respective selected group i.e. at Household level, Women (15-49 age group) and individual level (Children 2-14 years old)]

[Households: include foods eaten by *any member of the household*, and *exclude* foods purchased *and* eaten outside the home]

[11.1] Household Dietary Diversity When the respondent recall is complete, fill in the food groups based on the information recorded above. For any food groups not mentioned, ask therespondent if a food item from this group was consumed.

S. No.	Food group	Examples	Household
			Dietary
			Diversity
			YES – 1,
			NO - 0
1	Cereals	Rice, Wheat or Foods made from these (e.g. bread,	
		noodles, porridge or other grain products) or any	
		traditional food	
2	Millets	Sorghum, Ragi, China etc. and Coarse grain	
3	Roots and	Potatoes or Other foods made from roots	
	Tubers		
4	Vitamin A rich	Pumpkin, Carrot, Squash, or sweet potato that are	
	vegetables and	orange inside + other locally available vitamin A rich	
	tubers	vegetables (e.g. red sweet pepper)	
5	Dark green	Dark green leafy vegetables, including wild forms +	
	leafy	locally available vitamin A rich leavessuch as amaranth,	
	Vegetables	cassava leaves, kale, spinach	



6	Other	Other vegetables (e.g. tomato, onion, brinjal) + other	
	vegetables	locally available vegetables	
7	Vitamin A rich	Ripe mango, apricot (fresh or dried), ripe papaya, dried	
	fruits	peach, and 100% fruit juice made from these + other	
		locally available vitamin A rich fruits	

[11.2] Household Dietary Diversity

When the respondent recall is complete, fill in the food groups based on the information recorded above. For any food groups not mentioned, ask therespondent if a food item from this group was consumed.

			Household
S No	Foodgroup	Fyamples	Dietary Diversity
5. NU.	roougroup	Examples	YES - 1.
			NO - 0
8	Other fruits	Other fruits, including wild fruits and 100% fruit	
		juice made from these	
9	Meat	Beef, pork, goat, rabbit, chicken, duck, other birds	
10	Eggs	Eggs from chicken, duck or any other egg	
11	Fish	Fresh Fish or shellfish	
12	Legumes,	Dried beans, dried peas, lentils,	
13	Nuts and seeds	Nuts, Oseeds or foods made from these (eg. Tilkut,	
		peanut chikki)	
14	Milk and milk	Milk, paneer, curd or other milk products	
	products		
14	Oils and fats	Oil, ghee, fats or butter added to food or used for	
		Cooking	
15	Sweets	Sugar, honey, sweetened soda or sweetened juice	
		drinks, sugary foods such as chocolates,	
		candies, cookies and cakes	
16	Spices,	Spices (black pepper etc.), condiments	
	condiments,		
17	Beverages	Coffee, tea, cold drinks	
Household	Did you or anyor OUTSIDE home?	ne in your household eat anything (meal or snack)	
L			L



Part C:

Knowledge on nutrition

(Please ask this section information from selected women respondents)

[12] Knowledge on nutritional related aspects (tick)

[12.1] Food intake related to different age group

Mother's milk at birth

- 1. What is the first food a newborn baby should receive?
- d) Only mother's milk
- e) Other (.....)
- f) Don't know

Reason for giving supplementary foods at six months

2. Why is it important to give foods in addition to mother's milk to babies from the age of six months?

- d) mother's milk alone is not sufficient (enough)/cannot supply all the nutrients needed for growth/from six months, baby needs more food in addition to mother's milk
- e) Other (.....)
- f) Don't know

Women's nutrition during pregnancy and breast feeding

- 4. How should a pregnant/lactating woman eat in comparison with a non-pregnant woman to provide good nutrition to her baby and help him grow?
 - a) Eat more food (more energy) Eat more at each meal (each day) Or Eat more frequently (each day)
 - b) Eat more protein-rich foods
 - c) Eat more iron-rich foods,
 - d) Use iodized salt when preparing meals
 - e) Other (.....)
 - f) Don't know

[12.2] Knowledge related to intake of nutrients

Micronutrient supplements for pregnant women

- 5. Most women would benefit from two types of supplements, or tablets, during pregnancy. Which are they?
 - a) Iron & Folic acid supplements
 - b) Other (.....)
 - c) Don't know

Recommendation of folic acid supplements

- 6. What is the health benefit for taking folic acid supplements/tablets?
 - a) For normal development of the nervous system of the unborn baby (brain, spine and skull)
 - b) To prevent birth defects/abnormalities the nervous system of the unborn baby (brain, spine and skull)
 - c) Other (.....)
 - d) Don't know
- Iron-rich foods easily absorbed

6. Can you list examples of foods rich in iron-what are the sources 1...... 2......

3.....

[b] Plant based source: a) Green leafy vegetables, b) pulses, c) fruits, d) dry fruits, e) jaggery



Foods that increase iron absorption

- 8. When taken during meals, certain foods help the body absorb and use iron. What are those foods?
 - a) Vitamin-C-rich foods, such as fresh citrus fruits (orange, lemons, aonla etc.)
 - b) Other (.....)
 - c) Don't know

Foods that decrease iron absorption

- 9. Some beverages decrease iron absorption when taken with meals. Which ones?
 - a) Coffee
 - b) Tea
 - c) Other (.....)
 - d) Don't know
- Food sources of vitamin A
- 10. Can you list examples of foods rich in vitamin A?
 - [i] Animal based source -:
 - [ii] Plant based source-:
- 1) Green vegetables
- 2) Fruits (orange- or yellow-coloured non-citrus fruits)-
- 3) Foods fortified with vitamin A ()
 - [v] Other (.....)
 - [vi] Don't know

[12.3] Knowledge on nutrition related diseases

Causes of undernutrition

- 11. What are the reasons why people are undernourished?
 - a) Not getting enough food
 - b) Food is watery, does not contain enough nutrients
 - c) Disease/ill and not eating food
 - d) Other (.....)
 - e) Don't know

Meaning of lack of weight gain among infants and young children

- 12. If the baby is not gaining weight, what does that mean?
 - a) The baby is not eating well/the baby does not want to eat
 - b) The baby may be sick often
 - c) Other (.....)
 - d) Don't know

Symptoms of iron-deficiency anemia?

- 13. Can you tell me how you can recognize someone who has anemia?
 - a) Less energy/weakness
 - b) Paleness/pallor
 - c) Spoon nails/bent nails (koilonychia)
 - d) More likely to become sick (less immunity to infections)
 - e) Other (.....)
 - f) Don't know

Consequences of iron-deficiency anemia for pregnant women

14. What are the health risks for pregnant women of a lack of iron in the diet?

a) Risk of dying during or after pregnancy



- b) Difficult delivery
- c) Other (.....)
- [c] Don't know
- Causes of iron-deficiency anaemia
- 15. What causes anemia?
 - a) Lack of iron in the diet/eat too little, not much
 - f) Sickness/infection (malaria, hookworm infection, other infection such as HIV/AIDS)
 - g) Heavy bleeding during menstruation
 - h) Other (.....)
 - i) Don't know

Signs of vitamin A deficiency

- 16. Have you heard about vitamin A deficiency or lack of vitamin A?
 - a) Weakness/feels less energetic
 - b) Be more likely to become sick (less immunity to infections)
 - c) Eye problems: night blindness (inability to see at dusk and in dim light), dry eyes, corneal damage, blindness
 - d) Other (.....)
 - e) Don't know

Consequences for the unborn baby

- 17. What could be the consequences or health risks for the unborn baby of a lack of iodine in the diet of a pregnant woman?
 - a) Risk of being mentally impaired
 - b) Risk of being physically damaged
 - c) Other (.....)
 - d) Don't know

Cause of iodine deficiency

- 18. What causes iodine deficiency?
 - a) Poor or no intake of iodized salt
 - b) Other (.....)
 - c) Don't know

[12.4] Food beneficial for reducing the deficiency

Prevention of under-nutrition

- 19. What should we do to prevent under-nutrition among young children (6-23 month)
 - a) Give more food
 - b) Feed frequently
 - c) Give attention during meals
 - d) Go to the health center/hospital and check that the child is growing (growth monitoring services)
 - e) Other (.....)
 - f) Don't know



Prevention of iodine deficiency

- 21. How can iodine deficiency be prevented?
 - a) Eat/prepare foods with iodized salt
 - b) Other (.....)
 - c) Don't know

Prevention of lack of Vitamin A in body

- 22. How can one prevent a lack of vitamin A in the body?
 - a) Eat/feed vitamin-A-rich foods having/giving a diet rich in vitamin A
 - b) Eat/feed foods fortified with vitamin A
 - c) Give vitamin A supplements/sprinkles
 - d) Other (.....)
 - e) Don't know

[12.5] Knowledge on the aspect cooking of food and storage

Washing raw fruits and vegetables

- 23. What should you do before eating raw fruits and vegetables?
 - a) Wash them with clean water
 - b) Other (.....)
 - c) Don't know

[12.6] Knowledge on sanitation and hygiene

Treating unsafe water

- 24. If you know that the water you are going to use for cooking or drinking is not safe or does not come from a safe source, what should you do?
 - a) Boil it OR
 - b) Add bleach/chlorine OR
 - c) Strain it through a cloth OR
 - d) Use a water filter (ceramic, sand, composite, etc.) OR
 - e) Let it stand and settle OR
 - f) Discard it and get water from a safe source
 - g) Other (.....)
 - h) Don't know

Summary of Post Programme Survey

	Height (m)	Weight (Kg)	BMI (Weight/Height in m ²)			Hb(g/dL)		
Particulars			Below (<18.5)	Normal (18.5- 25)	Above (>25)	Moderate (7.0-9.9)	Mild (10.0- 10.9)	Normal (≥11)
Female								
Male								
Children								



Section-IV

Reporting of Achievements of Malnutrition Eradication Programme:

Activity calendar of Malnutrition Eradication Programme-

Sl.	Seaso	Activities	Detail/No.	Milestone and DeliverableQ1Q2QQ4ApriJuly3JanIOctMarcJuneSepDec.ht****			
No	n			Q1	Q2	Q	Q4
				Apri	July	3	Jan
				l-	-	Oct	Marc
				June	Sep	Dec.	h
					t.		
	Khari	Awareness	0		*		
	f	Programme	1				
	i.	Health	0		*		
		Check-up	1				
		(Post-					
		evaluation)					
	Ii	Training Prog.	0		*		
-			2				
	Iii.	Demonstration	1. Nutritional garden (Seed,		*		
			Sapling and Fruit plants)				
			2. Millet crops				
I.			3. Bio fortified crops				
			4. Mushroom				
			cultivation				
			(Ovster)				
			5. Any Other				
	iv.	Field Visits	02				
	V.	Field Day	01				
	Vi.	Data	Production and Consumption			*	
		compilati	-				
		on of					
		Kharif					
		season					

SI. N	Season	Activities	ities Detail/No.		Milestone and Deliverable		
0.				Q1 Apri l- June	Q2 July - Sep t.	Q3 Oc t De c.	Q4 Jan Marc h
	Rabi	Awareness	0			*	
		Programme	1				
II.	I.	Training	0			*	
			2				
		Demonstration	 Nutritional Garden Kit (Seed,Sapling and Plants) Value added Products Mushroom (Oyster & Button) Any Other 			*	
	Ii.	Field Day	0 1			*	

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	Iii.	Data compilation	Production and Consumption			*	*
		of Rabi					
		season					
	Iv.	Post Survey &	Collection of survey data &				*
		Health	Data				
		check up	Analysis				
	V.	Annual Report					*
		Preparation					
	Summ	Training	0	*			
	er	Programme	2				
	I.	Demonstration	1. Nutritional Garden Kit	*			
		S	(Seed)				
			2. Value added Products				
			3 Mushroom Cultivation				
ш			(MilkyWhite) etc				
111			A Any Other				
•	::	Field Visite		*			
	11.	Field VISIts	02				
	iii.	Data	Production and consumption		*		
		Compilat					
		ion for					
		summer					
		season					

Format of Monthly Progress Report (MPR):

Name of the College/KVK..... Month of

1. Awareness Programme/health camp

Sl. No.	Date	Place/Village	No. of participants		Total	Remarks (if any)	
			Male	Female	Children		
1							-
2							

2. Performance of Nutri Garden in village:

Sl.	Number of	Season	Fruits &	Total Area	Total Yield
No.	Nutri-garden		vegetables	(M ²)	(Kg.)
			_		
3.	Capacity Building	/field day			
Sl.	Topic	Name	Date I	No. of Beneficiaries	Feedback of

Sl. Topic Name Date No. of Beneficiaries Feedback of Beneficiaries No. Male Female Total



1. Other demonstrations in Village

Sl. No.	Crop/ Millets/ Enterprise	Variety	Area (Acre/ Number)	Remarks (if any)

2. Other Achievements (if any):

Sl.	
No.	

Name and Designation of Nodal Scientist KVK..... Name and Designation of Senior Scientist & Head KVK.....