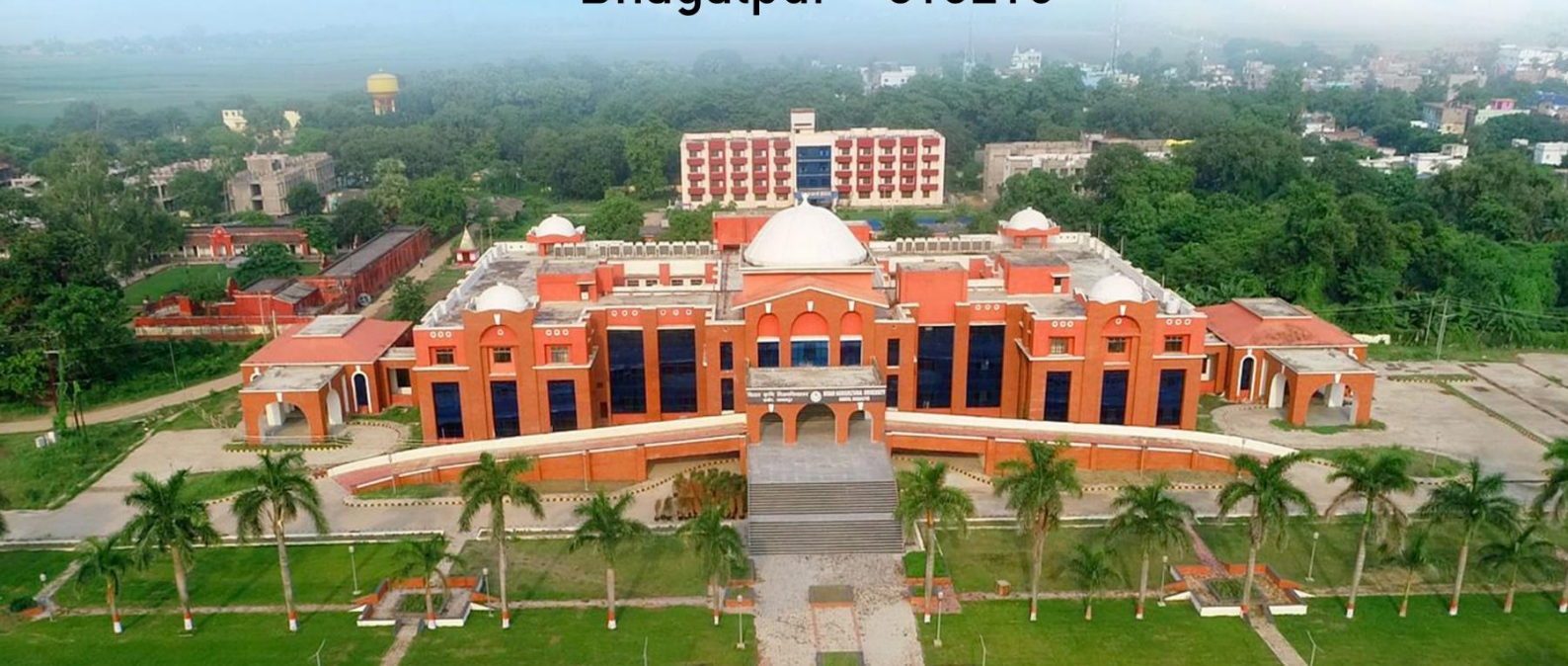


# Eradication of Malnutrition: Guidelines to Achieve the Goals



**Bihar Agricultural University, Sabour  
Bhagalpur - 813210**





## **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.



Table 1:List of villages adopted for Malnutrition Eradication Programme

Bihar Agricultural University, Sabour (Bhagalpur)				
List of villages adopted for Malnutrition Eradication Programme				
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	SripurChakla	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	DimiyaChatta rganj	Dimiya	Purnia
27	Mandan Bharti Agriculture College, Agwanpur	Kumhar Ghat	Purikh	Sattarkataiah
28	Dr. Kalam Agricultural College, Kishanganj	Ganiabari	Bhotathana	Pothia



**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 (m <sup>2</sup> )	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**

**MALNUTRITIONERADICATIONSURVEY(HOUSEHOLD)SCHEDULE PART A**

<b>[1]Particularsoffieldoperation</b>	
i. Nameof College/KVK	
ii. District	
iii. NameofScientist	

<b>[1.1]Descriptiveinformationofhousehold</b>		
1.Name		
2.State		
3.District		
4.Block		
5.Location	Rural	Peri-urban
6.Village		
7. HouseholdNumber		
8.NameofHHHead		
9.Nameofinformant		
10.ContactNo.		
11.Aadhaarno.		

<b>[2]HouseholdCharacteristics</b>		
1.Size(No.)		4.Religion
2.Principaloccupation		5.Caste
3.Subsidiaryoccupation		6.Typeofdwellngstructure <i>Kaccha-1,Semi-pucca-2,Pucca-3</i>

<b>[3]Demographicandotherticularsofhouseholdmembers</b>											
S.N o.	Name ofmember	Gender (male-1,female-2)	Age(years)	Maritalstatus	Generaleducation	Primaryactivity	Annualincome(Rs.)	Weight(kg)	Height(cm.)	BMI	Hemoglobin level



[4]Landinventoryandcroppingpattern	
Landsurvey	Area
1. Owned	
2. Leased-in	

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

[6]MonthlyExpenditurepatternofHousehold		
S. No.	Particulars	Rs.
1.	Food	
2.	Health	
3.	Education	
4.	Others	
	Total-	

[7.]InformationrelatedtocropsgrowninNutri-garden(Currentyear) (If,householdheaddon'thaveinformationonNutri-gardenthanyoucanaskthisparticularinformationtowomenrespondentswhogenerallyengagedint hisactivity.)					
Season	Cropsown	Area (m.sq.)	Production (inKg)	Consumption(in Kg)	Sold (inKg)
Kharif					
Rabi					

[8.]InformationrelatedtocropsgrowninNutri-garden(Currentyear) (If,householdheaddon'thaveinformationonNutri-gardenthanyoucanaskthisparticularinformationtowomenrespondentswhogenerallyengagedint hisactivity.)					
Season	Cropso wn	Area(m.sq.)	Production(inKg)	Consumptio n(in Kg)	Sold(inKg)
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. No.	Particulars		
	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 food eaten by any member of the household, and exclude food 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 the respondent 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 Tubers	Potatoes or Other foods made from roots	
4	Vitamin A rich vegetables and tubers	Pumpkin, Carrot, Squash, or sweet potato that are orange inside + other locally available vitamin A rich vegetables (e.g. red sweet pepper)	



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5	Dark green leafy vegetables	Dark green leafy vegetables, including wild forms + locally available vitamin A rich leaves such as amaranth, cassava leaves, kale, spinach	
6	Other vegetables	Other vegetables (e.g. tomato, onion, brinjal) + other locally available vegetables	
7	Vitamin A rich fruits	Ripe mango, apricot (fresh or dried), ripe papaya, dried 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 the respondent if a food item from this group was consumed.

S.No.	Food group	Examples	Household Dietary Diversity
			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, 0 seeds or foods made from these (eg. Tilkut, peanut chikki)	
14	Milk and milk products	Milk, paneer, curd or other milk products	
14	Oils and fats	Oil, ghee, fat 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, condiments,	Spices (black pepper etc.), condiments	
17	Beverages	Coffee, tea, cold drinks	
Household	Did you or anyone 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 breastfeeding**

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 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?
- Vitamin-C-rich foods, such as fresh citrus fruits (orange, lemons, aonla etc.)
  - Other (.....)
  - Don't know

Foods that decrease iron absorption

8. Some beverages decrease iron absorption when taken with meals. Which ones?
- Coffee
  - Tea
  - Other (.....)
  - 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-:
- Green vegetables
  - Fruits (orange- or yellow-coloured non-citrus fruits)-
  - 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?
- Not getting enough food
  - Food is watery, does not contain enough nutrients
  - Disease/ill and not eating food
  - Other (.....)
  - 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?
- The baby is not eating well/the baby does not want to eat
  - The baby may be sick often
  - Other (.....)
  - Don't know

Symptoms of iron-deficiency anemia?

12. Can you tell me how you can recognize someone who has anemia?
- Less energy/weakness
  - Paleness/pallor
  - Spoon nails/bent nails (koilonychia)
  - More likely to become sick (less immunity to infections)
  - Other (.....)
  - 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?
- 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 the 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 of 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



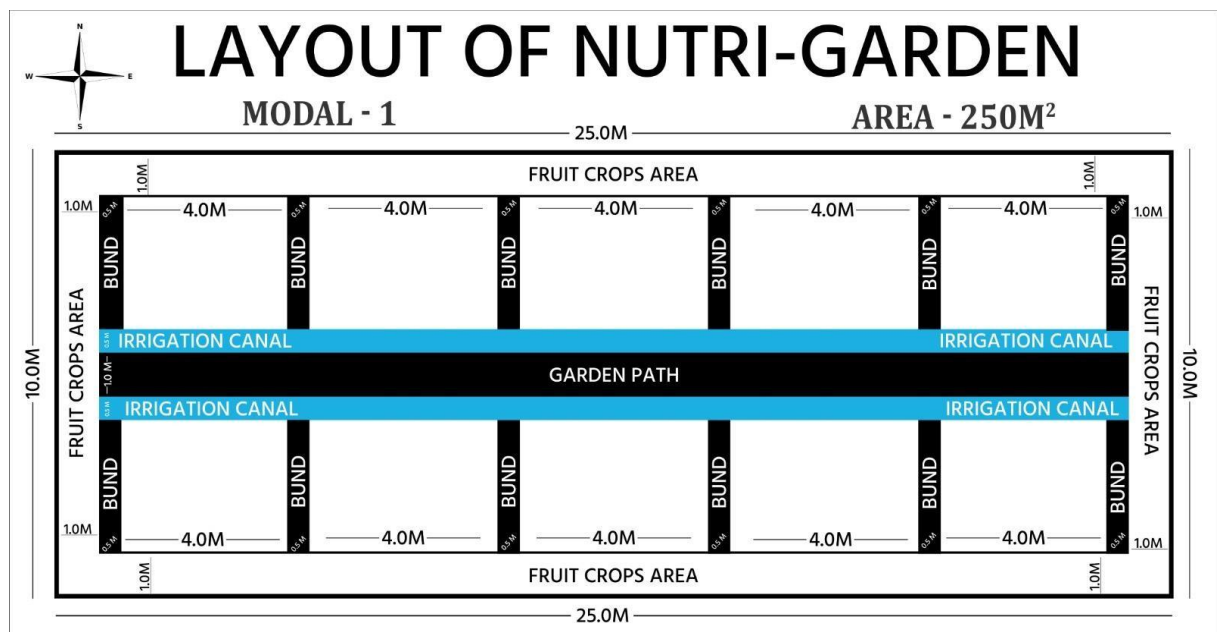
**Section-II**

**Technical Programme**

**A. Establishment of Nutri-garden**

Details of Established Nutri-garden:

Season	Number	Area(m <sup>2</sup> )	Production(Kg)
Kharif			
Rabi			
Summer			
<b>Total</b>			

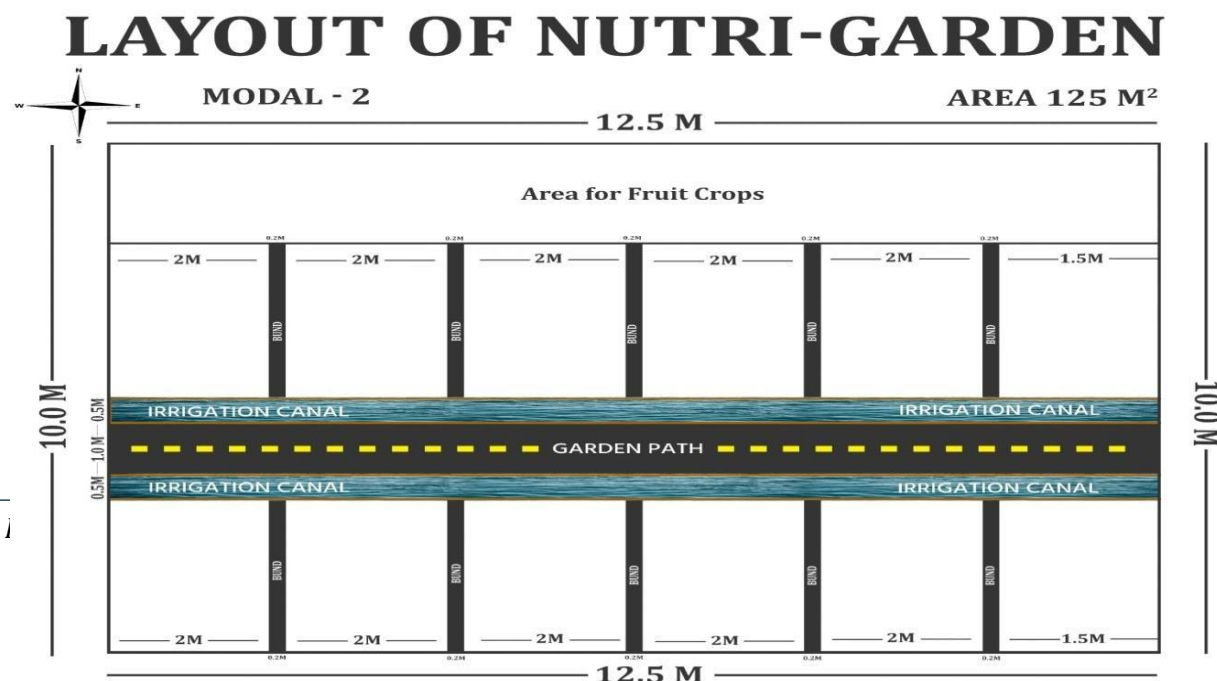


Layout of Nutri-garden: (Model-1)

Model-2

Monthwise crop cycle of Nutri-garden

MONTH	CROPS
JANUARY	Cauliflower, Cabbage, Chilli, Carrot, Coriander, Okra, Spinach, Brinjal, Radish





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FEBRUARY	Cauliflower, Cabbage, Chilli, Brinjal, Radish, Tomato, Okra, Bottlegourd, Spongegourd, Bittergourd, Cucumber
MARCH	Coriander, Okra, Brinjal, Bottlegourd, Spongegourd, Ridgegourd, Cucumber
APRIL	Brinjal, Tomato, Okra, Cucumber, Snakegourd, Amaranthus
MAY	Brinjal, Amaranthus, Bottlegourd, Ridgegourd, Papaya, Lemon, Curryleaves
JUNE	Chilli, Brinjal, Okra, Amaranthus, Bottlegourd, Snakegourd
JULY	Bottlegourd, Bittergourd, Amaranthus, Tomato, Okra, Chilli
AUGUST	Indianbean, Moringa, Tomato, Radish, Banana
SEPTEMBER	Indianbean, Lobia, Coriander, Chilli, Spinach, Radish
OCTOBER	Indianbean, Lobia, Spinach, Radish, Amaranthus, Coriander, Carrot, Beetroot
NOVEMBER	Cauliflower, Cabbage, Chillis, Carrot, Coriander, Tomato, Methi, Amaranthus, Pea, Spinach, Fababean
DECEMBER	Cauliflower, Cabbage, Carrot, Coriander, Tomato, Radish, Okra, Spinach
<b>*FRUITCROPS</b>	
Papaya, Karonda, Lemon, Guava, Curryleaves, Moringa, Banana, Hybridmango variety	

**Agro-climatic zone/cropwise details of Nutri-garden's crops (Optional)**

ZONE	DISTRICT	KHARIF	RABI	SUMMER
<b>ZONE-II</b>	Katihar, Purnea, Kishanganj, Araria, Supaul, Sahasra, Madhepura, Khagaria	Okra, brinjal, chilli, tomato, bottlegourd, kharifonion, cowpea, earlycauliflower	Cabbage, cauliflower, knolkhol, raddish, onion, chilli, broccoli, carrot, methi, palak, mustard leaf, potato, coriander, amaranthus, beet, chow-chow	Bottlegourd, bittergourd, spongegourd, ridgegourd, watermelon, lobia, okra, long melon, muskmelon, cucumber, amaranthus
<b>ZONE-III A</b>	Banka, Bhagalpur, Munger, Sheikhpura, Jamui, Lakhisarai	Okra, cowpea, Amaranthus, brinjal, tomato, Methi, spongegourd, bottlegourd, turmeric, earlycauliflower, bittergourd, Elephantfootyam	Cauliflower, cabbage, broccoli, coriander, vegetable pea, beans, palak, carrot, radish, beet, capsicum, chilli, tomato, amaranthus	Bottlegourd, bittergourd, spongegourd, ridgegourd, cucumber, watermelon, muskmelon, brinjal, tomato, okra, lobia, amaranthus





**Eradication of Malnutrition: Guidelines to Achieve the Goals**

<b>ZONE- IIB</b>	Kaimur,Nalanda, Buxar,Patna,Roh tash,Aurangaba d,Bhojpur,Arwal ,Jehanabad,Gaya ,Nawada	Okracowpea, amaranthus,bri njal,tomato,me thi,spongegour d,bottlegourd,t urmeric,early cauliflower,bitt ergourd,elepha ntfootyam	Cauliflower,cabbag e, broccoli,coriander, vegetable pea, beans, palak,carrot,radis h,beet,capsicum,c hilli,tomato,amara nthus	Bottlegourd,bittergou rd,spongegourd,ridge gourd,cucumber,wate rmelon,muskmelon,b rinjal,tomato,okra,lob ia, amaranthus
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**A. Capacitybuildingandotheractivities:**

S. No.	Nameofactivities	Number ofactivities	Participants			TotalNumber/Area
			Children	Female	Male	
1.	Awarenessprogram					
2.	Trainings					
3.	FrontLineDemonstration (FLD)					
4.	OnFarmTrail/Testing(OFT)					
5.	HealthCampOrganized					
6.	Otheractivities, (Asperobservation/need)					



**Section-III**

Output(Result)ofMalnutritionEradicationthroughpostprogrammesurvey:

<b>[1]Particularsoffieldoperation</b>
i. Nameof College/KVK
ii. District
iii. NameofScientist

<b>[1.1]Descriptiveinformationofhousehold</b>		
2.Name		
2.State		
3.District		
4.Block		
5.Location	Rural	Peri-urban
6.Village		
7. HouseholdNumber		
8.NameofHHHead		
9.Nameofinformant		
10.ContactNo.		
11.AadhaarNo.		

<b>[2]HouseholdCharacteristics</b>		
1.Size(No.)		4.Religion
2.Principaloccupation		5.Caste
3.Subsidiaryoccupation		6.Typeofdwellngstructure <i>Kaccha-1,Semi-pucca-2,Pucca-3</i>

<b>[3]Demographicandotherparticularsofhouseholdmembers</b>											
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	
Landsurvey	Area
2. Owned	
2. Leased-in	

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

[6] Monthly Expenditure pattern of Household		
S. No.	Particulars	Rs.
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 his activity.)					
Season	Crops own	Area (m.sq.)	Production (inKg)	Consumption (in Kg)	Sold (inKg)
Kharif					
Rabi					

[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 his activity.)					
Season	Crop own	Area (m.sq.)	Production (inKg)	Consumption (in Kg)	Sold (inKg)
Summer					



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[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. No.	Particulars		
	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 food eaten by any member of the household, and exclude food 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 the respondent 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 Food 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 Tubers	Potatoes or Other food made from roots	
4	Vitamin A rich vegetables and tubers	Pumpkin, Carrot, Squash, or sweet potato that are orange inside + other locally available vitamin A rich vegetables (e.g. red sweet pepper)	



5	Dark green leafy vegetables	Dark green leafy vegetables, including wild forms + locally available vitamin A rich leaves such as amaranth, cassava leaves, kale, spinach	
6	Other vegetables	Other vegetables (e.g. tomato, onion, brinjal) + other locally available vegetables	
7	Vitamin A rich fruits	Ripe mango, apricot (fresh or dried), ripe papaya, dried 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 the respondent if a food item from this group was consumed.

S.No.	Food group	Examples	Household Dietary Diversity
			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, 0 seeds or foods made from these (eg. Tilkut, peanut chikki)	
14	Milk and milk products	Milk, paneer, curd or other milk products	
14	Oils and fats	Oil, ghee, fat 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, condiments,	Spices (black pepper etc.), condiments	
17	Beverages	Coffee, tea, cold drinks	
Household	Did you or anyone 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?

- 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 breastfeeding**

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 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 of 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**

Particulars	Height (m)	Weight (Kg)	BMI (Weight/Height in m <sup>2</sup> )			Hb (g/dL)		
			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. No.	Season	Activities	Detail/No.	Milestone and Deliverable			
				Q1 April- June	Q2 July- Sept.	Q3 Oct.- Dec.	Q4 Jan.- March
I.	<b>Kharif</b>	Awareness Programme	0 1		*		
	i.	Health Check-up (Post-evaluation)	0 1		*		
	ii.	Training Prog.	0 2		*		
	iii.	Demonstration	1. Nutritional garden (Seed, Sapling and Fruit plants) 2. Millet crops 3. Biofortified crops 4. Mushroom cultivation (Oyster) 5. Any Other		*		
	iv.	Field Visits	02				
	v.	Field Day	01				
	vi.	Data compilation of Kharif season	Production and Consumption			*	

Sl. No.	Season	Activities	Detail/No.	Milestone and Deliverable			
				Q1 April- June	Q2 July- Sept.	Q3 Oct.- Dec.	Q4 Jan.- March
II.	<b>Rabi</b>	Awareness Programme	0 1			*	
	I.	Training	0 2			*	



**Eradication of Malnutrition: Guidelines to Achieve the Goals**

	Demonstration	1. Nutritional Garden Kit (Seed, Sapling and Plants) 2. Value added Products 3. Mushroom (Oyster & Button) 4. Any Other			*	
	ii. Field Day	0 1			*	
	iii. Data compilation of Rab is season	Production and Consumption			*	*
	iv. Post Survey & Health checkup	Collection of survey data & Data Analysis				*
	v. Annual Report Preparation					*
<b>II I.</b>	<b>Sum mer</b>	Training Programme	0 2	*		
	i.	Demonstrations	1. Nutritional Garden Kit (Seed) 2. Value added Products 3. Mushroom Cultivation (Milk y White) etc. 4. Any Other	*		
	ii.	Field Visits	02	*		
	iii.	Data Compilation for summer season	Production and consumption		*	

**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. No.	Number of Nutri-garden	Season	Fruits & vegetables	Total Area (M <sup>2</sup> )	Total Yield (Kg.)

**3. Capacity Building/field day**

Sl. No.	Topic Name	Date	No. of Beneficiaries			Feedback of Beneficiaries
			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.....