

LEADS DEVELOPMENT MODEL

Nutrition Security & Sustainable Livelihood Initiative

MODEL : NUTRITION GARDEN

Background

Malnutrition and micronutrient deficiencies remain major challenges among rural families in Jharkhand, particularly among women and children. Most poor and marginal households possess 1–1.5 decimals of homestead (backyard) land, which often remains underutilised. This small piece of land can be transformed into a Nutrition Garden to produce fresh vegetables and fruits throughout the year.

To address these challenges, LEADS has developed the Nutrition Garden Model, a household-based initiative that promotes year-round cultivation of diverse vegetables, leafy greens, and fruit plants on homestead land. The model helps families improve household food and nutrition security, adopt healthy dietary practices, and make productive use of locally available resources..

Concept

The Nutrition Garden Model is a household-based farming system established on 1–1.5 decimals of homestead (backyard) land located near the house. The model promotes the cultivation of seasonal vegetables, leafy vegetables, fruit plants, and climber vegetables using organic farming practices.

Each Nutrition Garden consists of 6–8 vegetable beds (approximately 5 square metres each), climber vegetables grown along the boundary and rooftop, fruit plants planted at the four corners, a NADEP compost pit, and a Jalkund (water storage tank) for conserving and reusing household wastewater. The produce is primarily meant for self-consumption to ensure year-round availability of fresh, safe, and nutritious food rather than for commercial sale.



The model is supported by community awareness on health and nutrition, particularly focusing on maternal nutrition, exclusive breastfeeding, complementary feeding, dietary diversity, and the first 1,000 days of life, enabling families to improve their nutritional status through homestead agriculture.

Steps of Implementation

Step 1: Community Sensitisation- Conduct awareness sessions with women farmers and community members on health, nutrition, dietary diversity, maternal nutrition, exclusive breastfeeding, complementary feeding, and the importance of the first 1,000 days of life.

Step 2: Site Selection- Identify 1–1.5 decimals of homestead (backyard) land near the house with adequate sunlight and access to water for establishing the Nutrition Garden.

Step 3: Layout Preparation- Prepare 6–8 vegetable beds of approximately 5 square metres each for cultivating different seasonal vegetables.

Step 4: Boundary Plantation- Plant climber vegetables along the boundary fence and rooftop structures to maximise the use of available space.

Step 5: Fruit Plantation- Plant Moringa (Drumstick), Papaya, and Guava at the four corners of the Nutrition Garden during the Kharif season.

Step 6: Compost Preparation- Construct a NADEP compost pit for preparing organic manure using locally available biomass and household organic waste.

Step 7: Water Conservation- Construct a Jalkund (water storage tank) to collect and reuse household wastewater for irrigation throughout the year.

Step 8: Crop Cultivation and Nutrition Education- Cultivate seasonal vegetables throughout the year while promoting nutrition-sensitive agriculture and encouraging families to utilise Government health and nutrition services available through Anganwadi Centres and Primary Health Centres.



Cropping Pattern

The Nutrition Garden follows a diversified cropping system to ensure year-round availability of nutritious vegetables, leafy greens, root crops, and fruits.

Kharif Season

Vegetables: Tomato, Brinjal, Cucumber, Bottle Gourd, Bitter Gourd, French Bean, Kundri, Pumpkin, Sponge Gourd, Ridge Gourd, Cowpea, Lady's Finger, Bean, Cauliflower, and Chilli.

Leafy Vegetables: Spinach, Red Sag, Bathua, Malabar Spinach (Poi), and Drumstick Leaves.

Root Vegetables: Radish, Elephant Foot Yam, Pachki (Local Tuber), and Sakhin (Local Root Crop).



Fruit Crops: Papaya, Drumstick (Moringa), and Guava.

Rabi Season

Vegetables: Tomato, Brinjal, Cucumber, Bottle Gourd, Bitter Gourd, French Bean, Kundri, Pumpkin, Sponge Gourd, Ridge Gourd, Cowpea, Lady's Finger, Bean, Cauliflower, Bakla, and Capsicum.

Leafy Vegetables: Spinach, Bathua, Mustard, Chickpea Leaves, Red Sag, Malabar Spinach (Poi), and Drumstick Leaves.

Root Vegetables: Carrot, Beetroot, Onion, and Garlic.

Zaid Season

Vegetables: Tomato, Brinjal, Cucumber, Bottle Gourd, Bitter Gourd, French Bean, Kundri, Pumpkin, Sponge Gourd, Ridge Gourd, Cowpea, Lady's Finger, Bean, and Cauliflower.

Leafy Vegetables: Spinach, Red Sag, Bathua, Malabar Spinach (Poi), and Drumstick Leaves.

Root Vegetables: Radish, Elephant Foot Yam, Pachki (Local Tuber), and Sakhin (Local Root Crop).

Outcome for Sustainability

1. Household food and nutritional security improve through year-round availability of fresh vegetables and fruits.
2. Women and children gain regular access to nutritious food produced on their own homestead land.
3. Families adopt healthy dietary practices and improve dietary diversity.
4. Organic manure prepared through the NADEP compost pit improves soil fertility.
5. Household wastewater is effectively utilised through the Jalkund for irrigation.
6. Household expenditure on vegetables and fruits is reduced.
7. Community awareness on health, nutrition, and kitchen gardening is strengthened.
8. The model promotes sustainable household food production and long-term nutritional security.



LEADS Experience

LEADS has established and promoted 148 Nutrition Gardens across Jharkhand to strengthen household food and nutrition security among rural families. The initiative has enabled women and marginal households to utilise their homestead land for cultivating nutritious vegetables, fruits, and leafy greens using sustainable farming practices. The model has significantly improved dietary diversity, strengthened nutrition awareness, encouraged healthy food habits, and promoted sustainable household food production through active community participation.



Concluding Remarks

The Nutrition Garden Model demonstrates how a small piece of homestead land can become a sustainable source of nutritious food for the entire family. By integrating seasonal vegetables, fruit plants, organic composting, water conservation, and nutrition education, the model strengthens household food and nutritional security while promoting healthy lifestyles and sustainable agriculture. It offers a simple, low-cost, and easily replicable approach for improving the health and well-being of rural families across Jharkhand.



Agri Nutrition Garden

