

Case Study

Community Nutrition Garden



Introduction

The conceptualisation of nutrition garden under a Farming Systems for Nutrition approach aims at optimal utilization of land to grow vegetables that can contribute to the requirements of a balanced diet as well as address particular nutrition deficiencies. Nutrition gardens are nothing but home gardens of natural and bio-fortified fruits and vegetables of high nutritive value where the species selection is inclusive of the three vegetable groups viz., green leafy vegetables, roots and tubers and other vegetables with specific attention to addressing micronutrient deficiencies, particularly iron and vitamin A. Steps were initiated in late 2013 to establish nutrition gardens in the backyard land area of households in five villages under a Farming System for Nutrition Study in Wardha district. Women from households having no land or very less backyard land area were encouraged to come together and set up community nutrition garden (CNG) on Panchayat¹ land or on land taken on lease, with provision for watering the gardens (Nagarajan et al. 2014). The gardens are maintained by a group of 7-12 women in each village. Seeds of both fruits and seasonal vegetables were provided from the project along with information on their nutrient content and what deficiencies they can help address. For better access to seeds and planting materials and to minimize the cost of seed purchase, community seed banks were promoted in the villages in 2017; the seed banks will serve to ensure availability of vegetable seeds for upcoming seasons. They are managed by groups of women, most of who are also engaged in the CNG activity. They are being trained to maintain registers to record the seed collection and distribution.

¹ Local government body

Objectives of Community Nutrition Garden (CNG)

- Generate awareness about nutritionally rich vegetable and fruits.
- Increase availability of nutrient rich fruits and vegetables for household consumption
- Learn scientific method of cultivating vegetables and fruits.
- Demonstrate cultivation of new species (orange flesh sweet potato, cassava, yam).
- Demonstrate the efficacy of collective action by women in promoting intake of nutritious food at the household level

Process of establishment of CNG

Land for community nutrition garden was finalized in discussion involving the Panchayat, village community, women who had come forward to form and manage the CNG and project staff. The selected land was cleaned and fenced. Seeds of seasonal vegetables were purchased from the local market and saplings of fruit plants were purchased from the nursery of the College of Agriculture in Nagpur and government nurseries. Planting material of orange flesh sweet potato was sourced from the Regional Centre of the Central Tuber Crops Research Institute (CTCRI) in Bhubaneswar. Each community nutrition garden was provided with one drum for water storage, two water cans and pipe for irrigation purpose.



Harvesting of vegetables

Roles and responsibilities of CNG members

- Work in CNG for half an hour everyday
- Undertake cleaning, weeding, sowing, watering, monitoring plant status
- Keep record of inputs (seeds etc), costs incurred and harvest of vegetables and fruits.
- Record and share the produce.

Vegetables cultivated in CNG

The garden is designed in such a manner that all three types of vegetables viz., green leafy vegetables, root & tuber and other vegetables are available round the year as per the season. The fruit plants are grown on the boundaries / bunds in between the vegetable beds.

1. Fruit bearing plants and other plant species

Mango, sapota, amla, guava, custard apple, lemon, jack fruit, pomegranate, moringa, agati and curry leaves

2. Leafy vegetables

Rajgira, chavlai (Amranthus), fenugreek, coriander, spinach, green sorrel, shepu

3. Root and tubers

Orange flesh sweet potato, cassava, yam, turmeric

4. Other vegetables

Ladies finger, cluster bean, tomato, dolichos, cow pea, cabbage, cauliflower, ridge gourd, bitter gourd, cucumber



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Community Nutrition Garden
Demonstration under LANSA, Bargaon



LANSA
Learning Agriculture for
Nutrition in South Asia

सामुहिक पोषण बाग प्रात्यक्षिक, बोरगांव
Classification of Garden (वर्गीकरण)

- 1) Fruit Plants (फलझाडे)
- 2) Leafy Vegetables (पालेभाज्या)
- 3) Root Vegetables (कंदवर्गीय)
- 4) Common Vegetables (इतर भाज्या)
- 5) Climbers (वेलवर्गीय)

संपूर्ण क्षेत्रफळ : २५ x १५ मी.
सहभागी महिला : १०

M. S. SWAMINATHAN RESEARCH FOUNDATION

Display board of CNG, Bargaon

The CNG in Borgaon Gondi village is discussed here.

Community Nutrition Garden (Borgaon Gondi)

The CNG in Borgaon Gondi village is on 25 m x 15 m land area, belonging to the forest department. There are eleven women members. The fixed cost of establishing the CNG in 2013 was approximately INR 14000 (₹163) as detailed in Table 1. Fruit and vegetables seeds worth about INR 2000 (₹23) were provided. The water supply comes from the village tap. The annual recurring cost is towards land preparation, seeds and payment of water tax.

Table 1: Total expenditure of community nutrition garden

Particulars	Amount (INR)
Fixed cost	
Fencing (Chain link, gate, labour charges)	7600
Fruit plants	1434
Accessories (Drum, pipe and water can)	2015
Transportation (Chain link, Fruit plants and Accessories)	1200
Tap connection	1600
Total	13,849

Details of production in the CNG during the period 2013-18 are given in Table 2. The produce was shared by the members and consumed at the household level. They also shared with relatives and neighbors and gave surplus produce to the village school.

Table 2: Production of vegetables and fruits in community nutrition garden (2013-18)

Name of vegetables	Amounts in kilogram (kg)					Avg. market price per kg (INR)
	(Sept 2013- April 2014)	(August 2014 –April 2015)	^a (August 2015 –April 2016)	(August 2016– April 2017)	(August 2017 – November 2018)	
Leafy vegetables	68.5	61	27	22	21	50
Roots and Tubers	26.5	32	8.5	8	*	70
Other vegetables	47.5	98.5	58	124	45.5	60
‡Tree species and Fruits	0	0	0	12	23.5	80

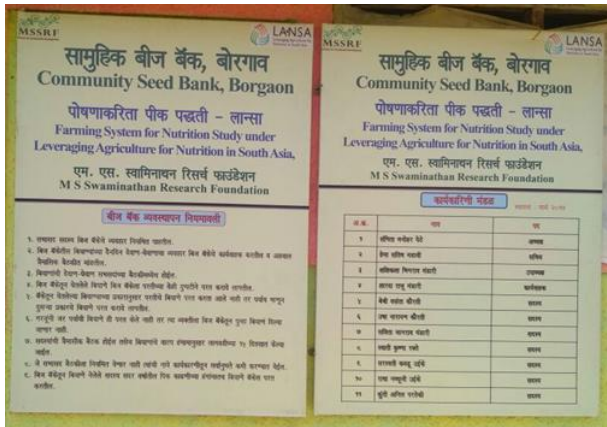
‡ tree species and fruits took 3-4 years to bear the produce; *Still in the field; not harvested.

^aDuring 2015-16, production was affected by rainfall aberrations. Long period of dry spell followed by high intensity of untimely rainfall damaged the seedling establishment of seasonal vegetables in the CNG.

Table 2 also includes a column highlighting the average price per kilogram under each category to give an indication of the monetary savings from own production vis-à-vis market purchase.

Seeds for sowing in 2017-18 came from the Community Seed Bank in the village.

Community nutrition garden ensures greater availability of fresh, nutritive vegetables to the households having no land or very less backyard land area. Local capacity is also built to disseminate nutrition awareness amongst the community. The CNG members have started sharing their experience in different public and private platforms (see Box 1).




Details of community seed bank, Bargaon Gondi



Community Seed Bank, Bargaon Gondi

Harmonising the CNGs with other production sub-systems such as backyard poultry and arable farming of nutrition rich crops can help holistically address the issue of nutritional deficiencies of the community.

Box 1:



“From CNG, we are harvesting the produce two to three times in a week and sharing it equally. Sometimes we give the surplus after sharing to the local school for use in the Midday Meal. We all are now getting most of the vegetables from the CNG and are no longer dependent on the market. We have also planted some fruit trees viz., lemon, sapota, mango, guava, moringa etc. which will also provide fruits in coming days. Also during awareness activities, we have learnt some recipes to be prepared from newly introduced leafy and root vegetables such as OFSP, bottle squash, coriander”

➤ **Ushatai Kourati, CNG member,
Village: Bargaon Gondi**

-Shared at District level consultation on nutrition garden and nutrition awareness to address malnutrition, Wardha, 23 May 2017

References:

Nagarajan, S., Bhavani R V., and Swaminathan, M. S. 2014. Operationalizing the concept of farming system for nutrition through the promotion of nutrition-sensitive agriculture. *Current Science* **107**(6):959-964.

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