

NUTRITION GARDEN: AN EFFICIENT TECHNIQUE TO MINIMIZE MALNUTRITION

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ABSTRACT

In this vast world, about 75% of the folks face a lack of essential micronutrients like Zn, Cu, I, and Fe, causing malnutrition and health woes. It's a massive global problem, stemming from insufficient intake of dietary supplements like proteins, vitamins, and minerals. Fruits and veggies are crucial sources of nutrients and phytochemicals vital for our body's growth, development, and immunity against various diseases. As the population grows, available land shrinks daily. But there's a bright solution emerging—the nutrition garden. It's gaining immense popularity as people cultivate fruits and veggies right at their doorstep or backyards. This garden ensures sufficient, safe, and proper nutrients, helping combat malnutrition-related issues and diseases. Embracing this natural connection paves the way to a healthier, thriving future for all.



INTRODUCTION

Nutri-garden is an effective effort to ensure availability of chemical free vegetables and fruits rich in nutrients at affordable prices. With a focus on fruits and vegetables, it is the best source of nutrition and meets the diverse dietary needs of the entire family. This is an effective way to eliminate malnutrition. Several fruit crops are important source of phytochemicals having health benefit (Lal et al., 2017; Lal et al., 2018; Diwan et al., 2018). In a nutrition garden, fruits and vegetables are cultivated for food and a source of income. This is a more advanced type of kitchen gardening. Nutritional gardens are especially beneficial for women and can help small and marginal farmers by providing a variety of nutritious food, as well as providing a host of other benefits, such as selling fruits and vegetables grown in nutritional gardens for additional income. The main objective of developing the concept of nutri-garden is to motivate rural women to grow food crops in the vacant land available on their doorstep or back side of the home. Not every rural household with a food garden is heavily dependent on the market to meet family nutritional requirements and in case of surplus production, the produce may also be kept for sale. In case of space constraints, nutrition gardens can be set up in the city in the form of terrace gardening, vertical gardening and container gardening.

PURPOSE OF NUTRITION GARDEN

One of the main objectives of the nutrition garden is to grow fresh and pesticide free vegetables and fruits on the farm for their family uses. The nutrition garden provides the daily needs of the family members and also provides a beautiful, pollution free and comfortable environment to the family. Malnutrition is a serious problem in rural areas especially in women and children. Women need high quality nutrients in their diet as they work whole day which requires more energy every day. Plant secondary metabolites, vitamins, mineral and fiber are found in large quantities in vegetables and fruits, which are essential for health (Teodoro, 2019; Subramaniam et al., 2019). The emphasis is on how the nutrition garden can meet local needs. Production of local vegetables and fruits will not only ensure safe food supply but will also help in creating new employment opportunities. Micronutrients are abundant in seasonal vegetables and fruits. In summer, tomatoes, chillies, okra, bitter gourd, bottle gourd, cucumber, brinjal, colocasia, amaranth and brinjal can be grown. Vegetables like tomato, cauliflower, cabbage and pumpkin can be grown in the rainy season. Establishing nutrition gardens is a potent and cost-effective solution to mitigate the current malnutrition crisis.

ESTABLISHMENT OF NUTRITION GARDEN

Generally, nutrition gardens can be established in the vicinity of the farm where there is sufficient space and availability of water. The nutrition garden should be made close to the home so that it can be protected from animals. The area for nutrition garden should be selected keeping in view the fertility potential of the land, availability of water etc. Generally the area selected may be of 400 to 500 square meters. For a 5 member family, about 200 square meters of rectangular land is best suited for the production of vegetables and fruits throughout the year. The layout of the nutrition garden, crop selection and sowing should be done according to the time availability, climate and seasonal changes.

LAY OUT OF NUTRITION GARDEN

- Choose a location for the nutrition garden where the plants get at least 6 hours of direct sunlight.
- After selecting the place for the nutrition garden, the land should be plowed or turned over at least 2-3 times.
- Sufficient vermicompost (1 kg per square meter) or farmyard manure (3-4 kg per square meter) should be applied in the soil.
- Mixing Trichomark with vermicompost or cow dung manure is also beneficial.
- A fence should be made around the nutrition garden, on which seasonal vine vegetables can be planted.

- The space selected for the nutrition garden should be divided into smaller size plots as per the requirement, each of which should be built not to exceed 2 feet in width.
- There should be a gap of at least 2 feet between the plots so that threshing and harvesting can be done easily.
- Plants of low height should be planted in the south direction and tall plants in the north direction. This will prevent taller plants from shading smaller plants.
- Fruit trees and shrubs should be planted in the north direction.
- A total of 5-6 vegetables, 2-3 green leafy vegetables and 2-3 tuber vegetables should be planted at any time of the year.
- Tuber plants like radish, beetroot, carrot should be sown on a mound-like border made of soil between two plots.

POINTS TO BE CONSIDERED FOR NUTRITIONAL GARDEN

- The land selected for the nutrition garden should have high fertility soil.
- The colours on the food plate are indicative of the various vitamins and pigments so a well-managed farm should have a "rainbow" concept.
- Perennial trees should be planted on one side of the garden so that the rest of the garden gets enough sunlight.
- Once the area for perennial crops is determined, the area of the field garden can be divided into 6 to 8 equal plots for growing annual vegetable crops.
- Shade-growing plants can be planted in beds with perennials. You can grow two to three annual crops on the same plot of land.
- Scientific practices like crop rotation, inter cropping and mixed cropping should be followed for effective use of layout.
- Passages should be provided in the middle and all four sides of the nutrition garden so that fresh vegetables can be collected without any damage.
- Vermicompost and organic manure should be used in the beds.
- The nutrition garden should be near the kitchen, so that the runoff water from the kitchen can be used.
- For optimum utilization of kitchen waste, a compost pit should be made at the corner of the poultry garden.

- A water tank should be made in one corner of the nutrition garden, so that the excess water flowing from the kitchen can be stored and used for irrigation of crops. This water tank should remain covered.
- No chemical fertilizer should be used in the nutrition garden. If necessary, bio pesticide can be used to make the crops free from pests and diseases.

BENEFITS OF NUTRITION GARDEN

- In the Nurture Garden, fruits and vegetables are grown organically, so are more nutritious and contain no chemicals.
- It helps in saving money by avoiding buying fruits and vegetables from the market.
- A steady supply of a variety of nutrient-rich vegetables and fruits can be maintained depending on the needs and preferences of the family.
- It also provides aesthetic view of the road.
- Nutritional gardens can be a useful solution to concerns such as malnutrition, excessive use of chemical fertilizers, growing populations and unpredictable weather. This is a better measure for food security and dietary diversity.

CONCLUSION

Nutritional gardens have been a foundation of traditional agricultural practices, but their importance has diminished over time. A variety of fruits and vegetables in our daily diet improves a person's ability to fight disease and boosts immunity. Various phytochemicals found in fresh fruits and vegetables are antioxidant, anti-allergic, anti-carcinogenic, anti-inflammatory and anti-viral effect. Poultry gardens are very important to eradicate malnutrition in rural areas. Nutrition garden is one of the most efficient ways to increase the nutrition level of women with minimum effort.

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