



## Kitchen gardening for nutritional security

Hiralal Jana

Department of Agricultural Extension, College of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Agricultural Farm, BURDWAN (W.B.) INDIA (Email: [janahirallal@yahoo.in](mailto:janahirallal@yahoo.in))

A kitchen garden is where herbs and vegetables are grown around the house for household use. Since early times a small plot near to the house has been used for growing a variety of vegetables according to the season. Local varieties such as radish, broad leaf mustard, chilli, beans, pumpkins etc. are all grown in the kitchen garden. It is worldly wisdom that we should eat our greens. That is the way to health, and if we grow our own greens, we will have health and happiness. Whenever you take up any creative activity you are bound to be happy, if gardening is included. Kitchen gardening adds so much spice to one's life. Our elders laid much emphasis on the importance of garden produce for good diet, well before doctors started advising us about vitamins, minerals and fibres.

### Importance of kitchen garden :

For people to stay healthy it's very important to have a healthy diet. A healthy diet means a balanced mix of rice, bread, pulses, vegetables, herbs, fruits etc. Vegetables are a very important part of a good diet as they contain various nutrients for many body functions. For growing, energy and protection against disease, vegetables play an essential role.

Vegetables are especially important for the young, and for pregnant and nursing women. Importance of vegetables in relation to their role in human nutrition, national economy and health standards are very well recognized. They are rich source of vitamins, proteins and minerals. Income from vegetables per unit area and time is much higher than any other crop. Being short duration crops, they fit well in home gardening and availability of many of them as all the year round. The nutritional home gardening is generally located close to the house and is used for growing vegetables, fruits and other food crops for the family. It is the patch of earth in the yard that is developed by the members of a household to grow varieties of vegetables, spices, fruits etc. to supplement

the immediate needs of the kitchen, not only ensuring a healthy diet, but cut down on living expenses and supplement the family income. Home gardens can help recycle household and scraps especially when a compost pit is developed.

### Benefits of the kitchen garden :

- To save the cost of buying vegetables and herbs;
- To be healthy, grow vegetables yourself;
- Wasteland around the house can be made productive;
- Waste resources such as sweepings, kitchen scraps and dirty water can be recycled into the garden.

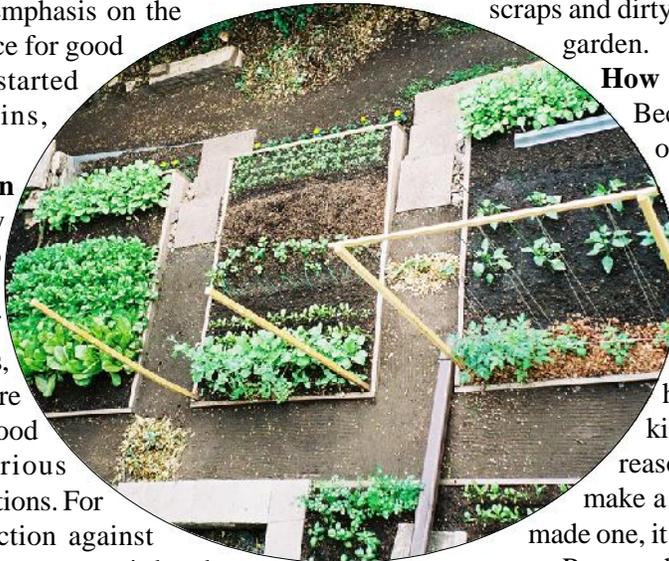
### How to make a kitchen garden?:

Because there's often no tradition of kitchen gardens, many people can't grow the vegetables they need for a good diet. Or they spend lots of money on vegetables, or their health suffers from lack of vegetables. It may be that you haven't been able to make a kitchen garden. There are several reasons why it may be difficult to make a kitchen garden, or if you have made one, it is not successful. For example:

- Pests, diseases or livestock have destroyed the crop;
- No good seed or seedlings;
- Lack of space;
- Lack of water;
- Lack of fertility
- No spare time
- Lack of the right skills

To make and manage a kitchen garden easily, and to give best production, the following things are important :

- Site selection
- Protection
- Water management
- Fertility
- Seed and seedlings



- Design of the garden.
- Edge planting

Good management of the garden needs knowledge of all these. Then we can make our kitchen garden more successful.

**Site selection :** If you have already had a kitchen garden you may not need to choose a new site, it is enough to improve the old site. If you are making a new garden, there are many factors to be considered :

- How to protect from livestock?
- How can you bring water to the site and distribute it?
- How is the soil? How can the fertility needs to be managed?
- Where is the sunlight coming from?
- How can the area be accessed easily from the house?

When these issues are considered, the best site can be chosen and the work of making the garden will be easier.

**Protection :** The kitchen garden area needs protection from the very start. It should not be possible for livestock to enter the area. A permanent fence should be made. Thorny plants can be cut and used to make a fence, but the best method is to plant a living fence to protect the garden. Then, the crops within the garden will also need protection from damaged by many types of pest and disease. There are many ways

to do this. Mixed cropping, rotations, liquid manure, etc. are all ways of protecting crops.

**Water management :** It is important to provide enough moisture for the kitchen garden. There are many ways of conserving and increasing the moisture available. For example:-

**Mulching :** Prevents the wind and sun drying the bare soil.

**Mist collection :** Mist collects on the leaves of trees around and within the kitchen garden, and drips into the soil to provide extra-moisture.

**Provide shade :** In the hot season trees can provide shade to the kitchen garden. A few small trees or even fruit trees in the fence or within the garden can be used for

this purpose. As well as giving shade, these trees can also provide other benefits, such as firewood, fodder or mulch materials.

**Windbreak :** Wind will dry out the soil, so stopping the wind helps to conserve soil moisture.

**Irrigation :** If there is no irrigation for main food crops, it is likely that there is also not enough water to irrigate the kitchen garden. If the above methods are used, then more water is conserved and so less is needed. Collecting and using waste water from the kitchen can be enough to water the garden. Also, direct water from communal tap stands can be used on kitchen gardens.

**Fertility :** All farmers know that without fertility in the soil, crops won't grow. But fertility can be as limited as water. If there is not enough compost for the field crops, it cannot be taken and used for the kitchen garden. So our kitchen garden needs to be self-reliant for fertility. Suggestions for sources of fertility are given below:

**Liquid manure :** Liquid manure made in a pit or a drum gives nutrients to the plants as well as protecting them from pests and diseases.

**Sweepings pit :** By collecting everyday sweepings from the house and yard in one place, you can make enough compost for the kitchen garden.

**Legumes :** Planting legumes such as peas, beans, sesbania, sunn hemp, etc., provides extra nitrogen to the soil which is good for other crops.

**Green manure :** Sowing seeds of green manure helps to protect the soil and gives extra fertility for more production.

**Mulching:** Putting a thick layer of biomass, mixed with compost on the soil, helps to increase fertility.

**Other sources :** Ash, oil seed cake, etc are all resources which can be added to the soil to increase fertility, as well as helping to prevent pests and diseases.

**Seeds and seedlings :** A kitchen garden can provide very good food from local, traditional vegetables, and its importance not to lose these local varieties. However, sometimes farmers are also interested to try new varieties. So, it's very important to save and protect any good seed- this is the farmer's responsibility. From good seed, it is important to be able to raise good, healthy seedlings for transplanting into kitchen garden. Good quality seed can enhance yield upto 20 per cent; therefore, it is



recommended that gardeners should emphasis on high yielding and hybrid seeds along with local varieties. Cultivated crops for kitchen gardening are generally- tomato, brinjal, chilli, capsicum, cauliflower, cabbage, broccoli, knolkhol, radish, carrot, peas, bottle gourd, bitter gourd, cucumber, okra, french bean, palak, sweet potato, ginger, turmeric, dolichos bean and colocasia.

**Garden design :** If seeds and seedlings are planted too wide apart, much of the space in between goes to waste, where weeds will grow. Weeds use precious water and compost, and cause extra work to keep clear. You also have to work harder to replace the water and compost which are lost to the weeds. This is why it's best to plant vegetables densely. But if only one type of vegetable is planted densely, it will compete with itself for space above and below ground, and so not be a good crop. So it is better to plant a mix of small and large types, to make different layers of crops on the same bed. These will also have different layers of roots in the soil. This means many plants can be grown in a small space, but there is no competition between crops for space, water and nutrients.

**Edge planting :** Edge planting helps to make maintenance work easy in the kitchen garden. Edge planting means the growing of support crops or companion crops in the edges around the garden and its beds. These plants help support the garden by providing mulch, protection from weeds, windbreaks, repelling pests, and producing other useful resources. Plants such as marigold, lemongrass, mulberry, basil, and many others are good for edge planting. Edge planting helps to protect the garden and also produces fodder, fuel, nectar for bees, herbs for medicines, soil conservation, habitat for pest predators, etc. Edge plants take nutrients from deep in the soil and cycle them to the surface, where they are used as mulch, and then returned to the soil.

Constraints in adoption of scientific kitchen gardening

**General constraints :** (1) High poultry and monkey menace, (2) Problem of proper protection of local goat and cattle grazing, (3) Less priority of kitchen gardening as compared to other farm activities, (4) Frequent deluge of kitchen garden during rainy season.

**Input constraints :** (1) Unavailability of quality planting materials for fruits and vegetables, (2) Lack of irrigation facility due to scarcity of water in area, (3) Unavailability of land for kitchen gardening near residential zone, (4) Cow dung is utilized as fuel hence organics are less available, (5) Specific eco-friendly insecticides are unavailable in market.

**Technical constraints :** (1) Lack of knowledge regarding

sowing time, improved varieties and seed rate, (2) Lack of knowledge regarding nutritious fruits and vegetables selection, (3) Lack of knowledge regarding major pests, their identification and management, (4) Lack of knowledge regarding critical growth stages of crops for irrigation, (5) Lack of knowledge about manures and fertilizers recommendation, (6) Lack of knowledge about seed multiplication, (7) Lack of knowledge about seed treatment.

**Socio-cultural constraints :** (1) Fear of farm produce robbery, (2) Prejudices/orthodoxy (3) Adoption of age-old traditional practices, (4) Migration of rural youth towards urban area, (5) Low involvement of housewives in cultivation practices.

**Post-harvest constraints :** (1) Lack of storage facility for surplus small quantity produce, (2) Problem in selling surplus small quantity produce, (3) Unavailability of local market at village level, (4) Difficulty in immediate payment after selling at local level, (5) Lack of knowledge about fruits and vegetables preservation.

**Remembrance:** You can be sure the kitchen garden crops are free from all chemicals and poisons when you grow your own. You plant a good seed; provide organic manure, kitchen waste and water that are all. No fertilizer, no poisonous insecticides, fungicides, viricides, bactericides, or weed killer. Any poison you put on your crop, you have to eat it yourself in the end. Thus remember this simple truth.

**Conclusion :** In green revolution period and afterwards, we emphasized much on foodgrains production to meet the food requirements of our country's ever-increasing population. Constituents of food comprise carbohydrate, protein, fat, vitamins, minerals, fibres and water. Foodgrains are sufficient to provide sufficient amount of carbohydrate, protein, fat but, insufficient to provide required amount of vitamins, minerals, fibres in human body. Due to deficiency of sufficient amount of vitamins, minerals, fibres in consumed meal for a long period, our countrymen (especially poor and landless) are the victim of malnutrition causing child mortality, morbidity, anemia etc. Therefore, time has come to find out the ways to provide the vitamins, minerals, fibres in our diet. It is observed that nutritionally, vegetables and fruits provide sufficient amount of vitamins, minerals and fibres in human diet undoubtedly. Generally, we collect vegetables and fruits by purchasing it from market. Due to highly commercial mindedness of vegetable growers and fruit growers and due to input intensive cultivation, the market products contain pesticides residue which is detrimental for our health. Consumption

of these types of vegetables and fruits in a consistent manner causing several diseases in our body like-weakness, irritated mind, nerval system problems, digestive system problems and others. In this background doctor is prescribing us for a healthy diet. In this respect-kitchen gardening provides us the best option to provide healthy foods overcoming the limitations. Kitchen gardening is one of the simplest forms of cultivation, but has greater impact on our daily life by maintaining proper health. Kitchen gardening is a very simple technology where a small piece of land near to home (preferably near to kitchen) is cultivated mainly vegetables and fruits crops for consumption of those by family members. Hence, nutritional security of family members are maintained properly especially providing the pesticides free crops surely emphasizing organic farming. Therefore, the time has come to consider this aspect deeply. For making our family members' happy, we do lot of activities-earn more, labour more, take proper family planning, provision of

electricity, provide the costly dresses etc. but we have lack of interest or zero interest to make a kitchen garden at home. Basically we are neglecting the health of our family members by neglecting to make a kitchen garden. Hence, we are unable to provide ultimate happiness to our family members, because we know-health is wealth and health is happiness. Practically, a healthy beggar is happier than a sick king. So, maintaining health of family members nutritionally is the prime concern for a happy family. We also know a healthy family is the base of a healthy nation, so, we can say health is not only individual wealth but also national wealth. If we realize this thing heartily, we will be motivated spontaneously toward kitchen gardening. It can be concluded that it is better to make a habit to go kitchen garden instead of making a habit to go doctors' chamber.

“If you have a garden and a library, you have everything you need.” - Cicero

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