What is a Kitchen Garden ?

Farmers from Mulsam in Jajarkot, Nepal, display vegetables from their kitchen gardens

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.

In this chapter we provide information on how to establish and manage kitchen gardens with minimum input for maximum output, and show how to produce varied and nutritious crops of herbs and vegetables for use in the kitchen.

Why make a 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, fruit 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.

Benefits of the Kitchen Garden

- to grow healthy, fresh vegetables yourself;
- to save the cost of buying vegetables and herbs;
- waste resources such as sweepings, kitchen scraps and dirty water can be recycled onto the garden;
- wasteland around the house can be made productive.

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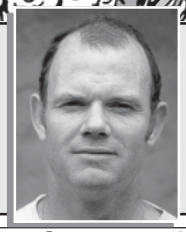


How to make a Kitchen Garden ?

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.

These vegetables have wilted because of lack of water

In this chapter easy methods are described to solve these sorts of problems, and so help the family to be able to grow good produce from their kitchen garden.

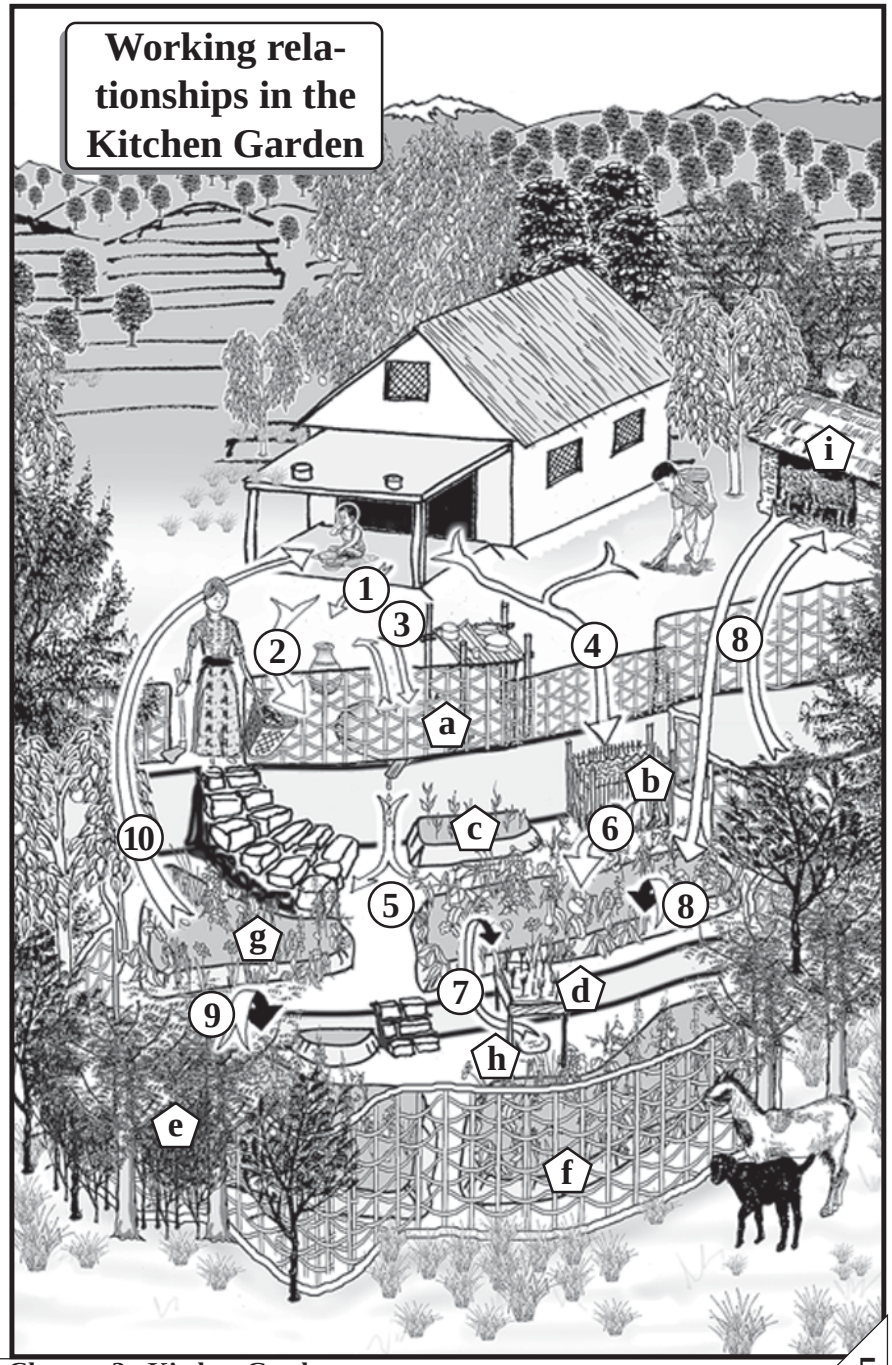
Beneficial Connections in the Kitchen Garden

- (a) **collecting waste water**
- (b) **sweepings pit**
- (c) **home nursery** (hot bed, fruit nursery, etc.)
- (d) **air nursery**
- (e) **living fence**
- (f) **fence** (not living)
- (g) **vegetable beds**
- (h) **liquid manure**
- (i) **livestock stall**

How to make the work easier in the Kitchen Garden

1. **domestic waste water collection**
2. **ash, water, hair, etc. composting resources from the house to the land**
3. **seeds from the garden to house and from house to garden**
4. **sweepings from the house and courtyard**
5. **waste water used for irrigation in the kitchen garden**
6. **use of compost**
7. **liquid manure also used to control pests and disease**
8. **fodder from the land and live fence, and compost returned to the land**
9. **mulch material from the live fence and edges**
10. **vegetables etc. from the kitchen garden to the house**

Working relationships in the Kitchen Garden



Things to pay attention to

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

1. Site selection
2. Protection
3. Water management
4. Fertility
5. Seed & seedlings
6. Design of the garden

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

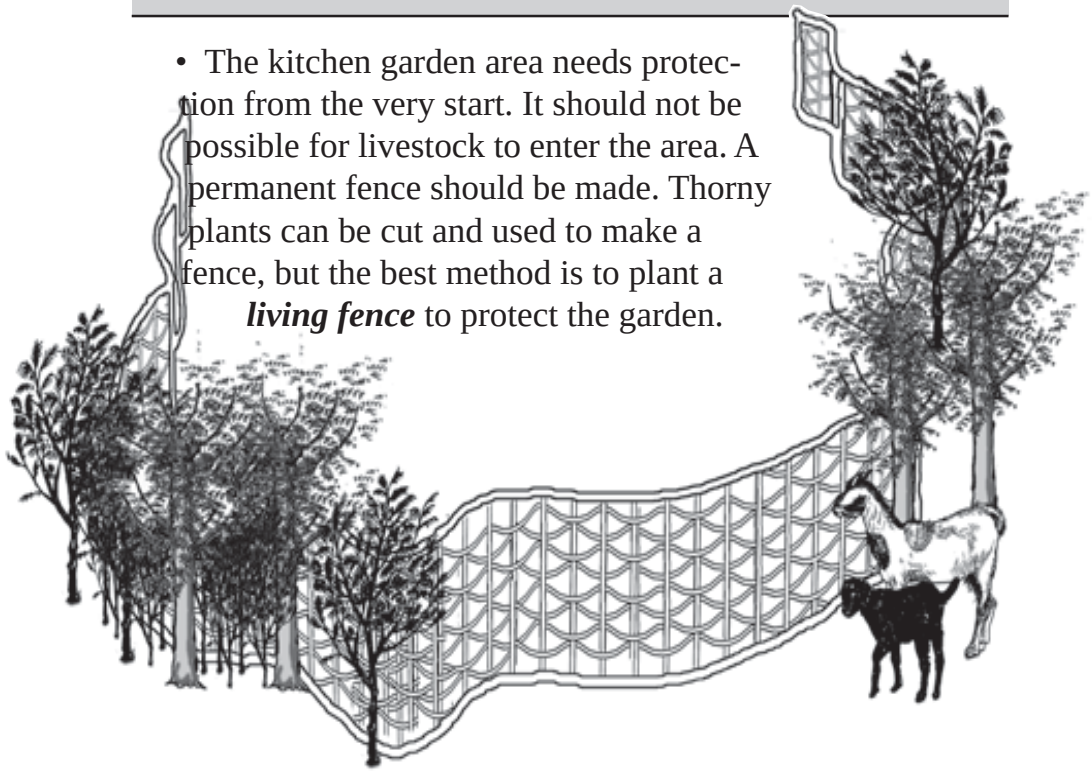
1. Site selection

If you already have a kitchen garden you may not need to choose a new site, it's enough to improve the old site. If you are making a new garden, there are many factors to consider. For example :-

- 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 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.

2. Protection



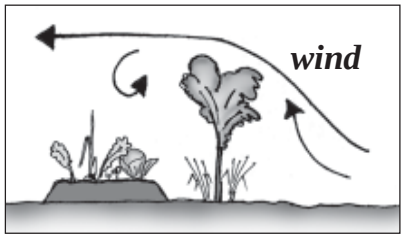
- The kitchen garden area needs protection from the very start. It should not be possible for livestock to enter the area. A permanent fence should be made. Thorny plants can be cut and used to make a fence, but the best method is to plant a ***living fence*** to protect the garden.

- Then, the crops <u>within</u> the garden will also need protection from damage 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. There is more information about crop protection in the chapter ***Integrated Pest Management***.

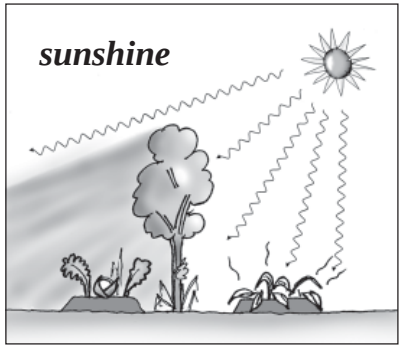
3. Water Mangement

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;
- **Green Manures** : also cover the soil, and so help in conserving water;
- **Windbreak** : wind will dry out the soil, so stopping the wind helps to conserve soil moisture;



- **Provide shade** : in the hot season trees can provide shade to the kitchen garden. A few small trees, such as *Lucaena*, mulberry, *Moringa* (drumstick), Persian lilac, or even fruit trees in the fence or within the garden can be used for this. As well as giving shade, these trees can also provide other benefits, such as firewood, fodder or mulch material.

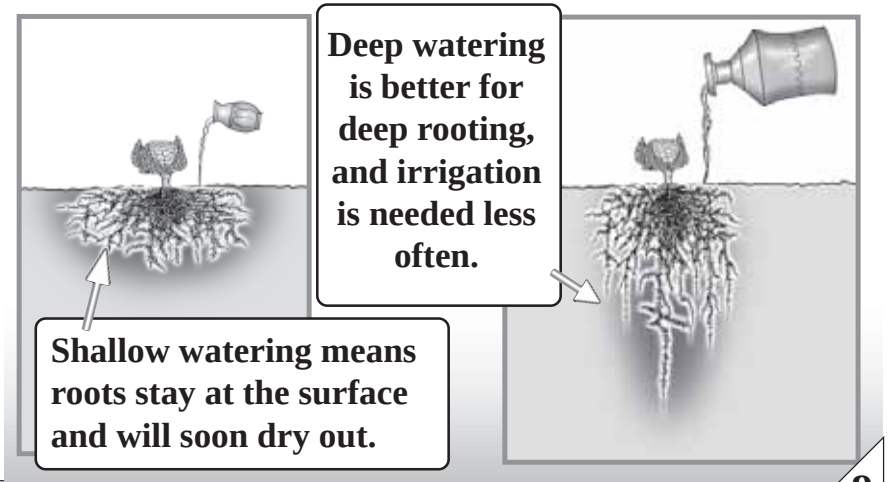


- **Mist collection** : mist collects on the leaves of trees around and within the kitchen garden, and drips onto the soil to provide extra moisture.

- **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. But 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 tapstands can be used on kitchen gardens.

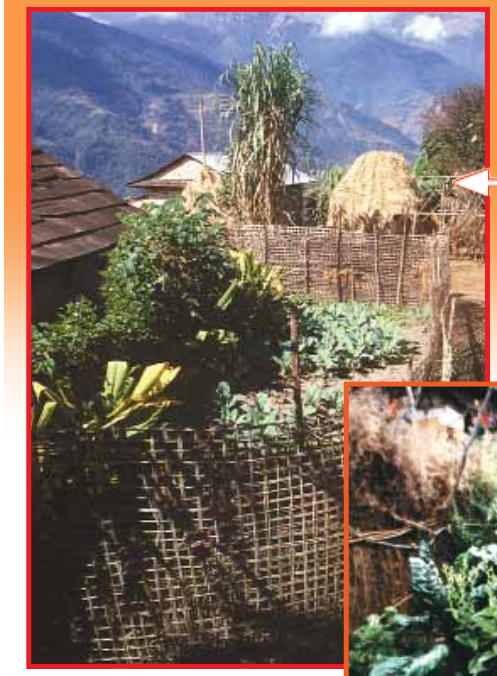
Guidelines for Irrigation

By only putting a little water over a wide area, only the surface will be kept moist. This can cause roots to stay near the soil surface and in strong sun they can dry out very easily. So it's much better to irrigate less area with more water, so the moisture goes deeper in the soil. Then this area will not need watering again for a long time. In the hot season, irrigate in the evening or at night, and not in the daytime.



Let's See

How to make a Kitchen Garden



Kitchen garden protected inside a woven bamboo fence.

Even chickens can't get through this fence made from wormwood stalks.

Near the house many types of food plants can be grown in the same place.

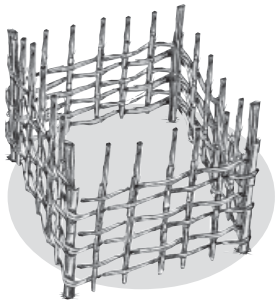
Planting mixed vegetables helps to protect them from pests and diseases.

Edge plants provide useful mulch close to the garden beds where they are needed.

In mixed vegetable planting, no space is wasted and the soil is always covered.

4. Fertility

All farmers know that without fertility in the soil, crops won't grow. But fertility can be as limited as water. If there isn't enough compost for the field crops, it can't 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 :-



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

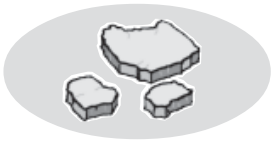
- **Liquid manure** :- liquid manure made in a pit or a drum gives nutrients to the plants as well as protecting them from pests and diseases.

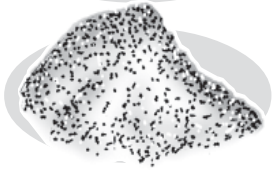
- **Mulching** :- putting a thick layer of biomass mixed with compost on the soil helps to increase fertility.

- **Green manures** :- sowing seeds of green manure helps to protect the soil and gives extra fertility for more production

- **Legumes** :- planting legumes such as peas, beans, *Sesbania*, sun hemp, etc., provides extra nitrogen to the soil which is good for other crops

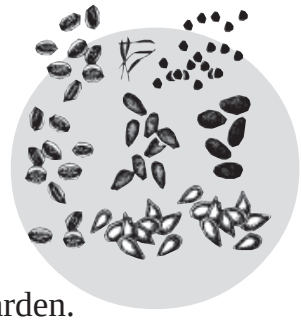
- **Other sources** :- ash, oil seed cake, hair etc. are all resources which can be added to the soil to increase fertility, as well as helping to prevent pests and disease.





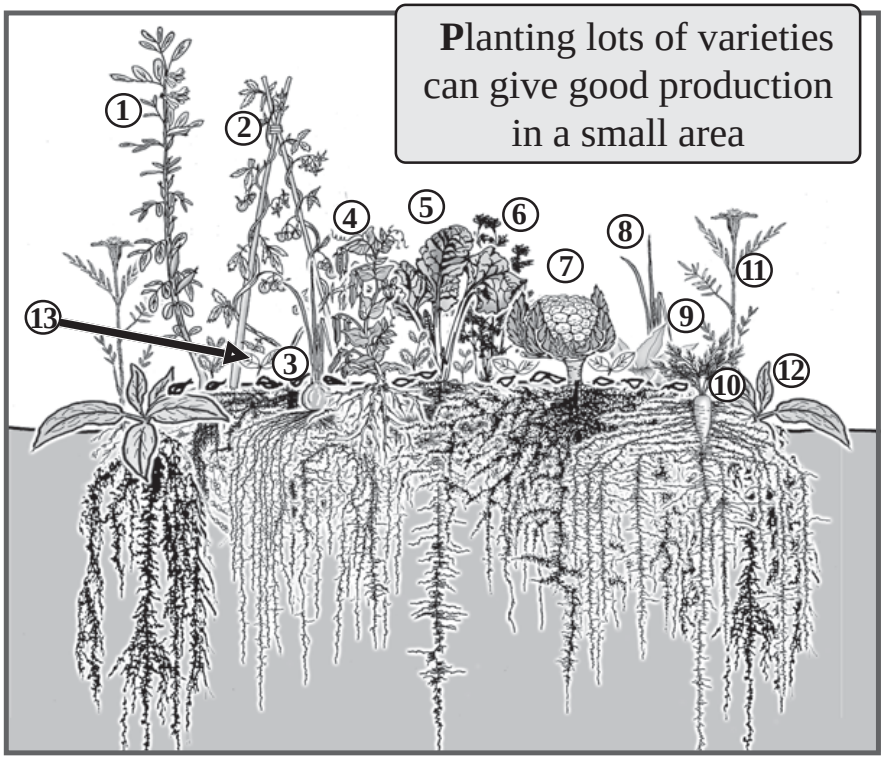
5. Seeds and Seedlings

A kitchen garden can provide very good food from local, traditional vegetables, and it's important 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. Information about seed saving is given in the ***Seed Saving*** chapter. From good seed, it is important to be able to raise good, healthy seedlings for transplanting into the kitchen garden. Nursery techniques are described in the ***Home Nursery, Air nursery, Hot bed*** and ***Leaf Pots*** chapters.



6. Garden Design

- **More production in a small place**



① **broad bean**	② **tomato**	③ **onion**
④ **peas**	⑤ **Swiss chard**	⑥ **coriander**
⑦ **cauliflower**	⑧ **garlic**	⑨ **beetroot**
⑩ **carrot**	⑪ **marigold**	⑫ **comfrey**

⑬ **new seedlings - see *"succession"* on the next page**

Species not shown, but also possible to plant

Vegetables :- cabbage, kale, radish, turnip, kohl rabi, chilli, broad leaf mustard, spinach, lettuce, aubergine, beans, etc.

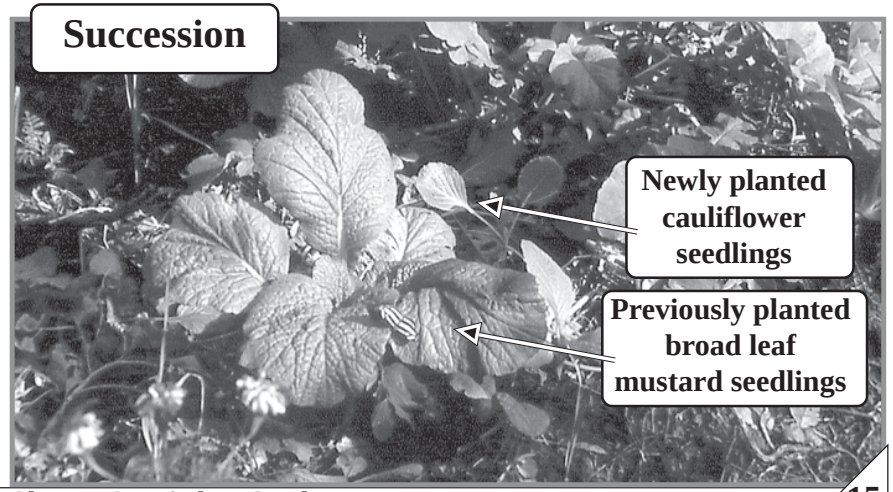
Vegetable or herb companion plants :- fennel, dill, basil, tansy, etc.

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's 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.

- **Succession**

As smaller vegetables are harvested for food, this makes space for the longer lasting vegetables, while in between new seedlings can be planted.



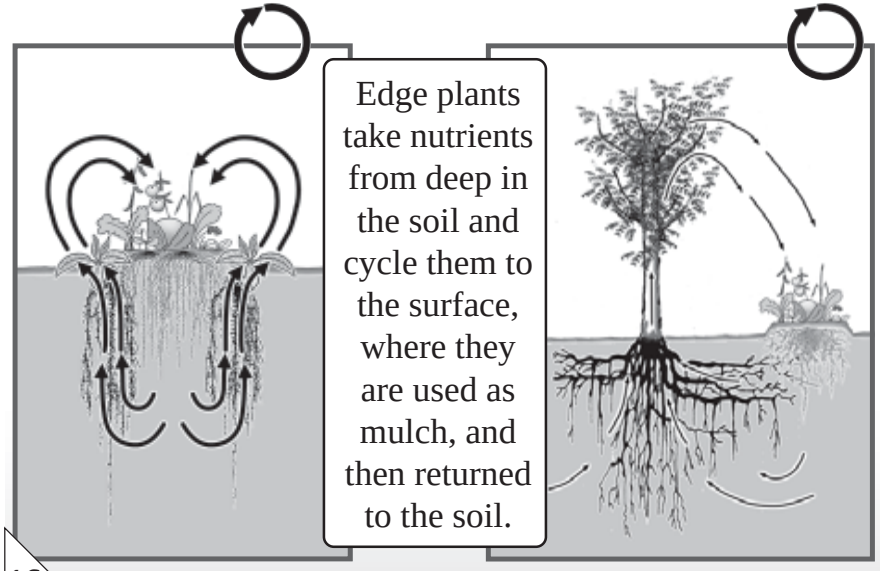
Edge Planting

It's not only the *making* of the kitchen garden, we must also be able to *maintain* it easily. It can be fun to create and plant a garden, but having to work every day to maintain it may soon become difficult, and so the garden gets neglected. Edge planting helps to make maintenance work easy in the kitchen garden.

"Edge planting" means the growing of support crops, or companion plants, 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 wormwood, *Adhatoda vasica*, marigold, comfrey, lemon grass, nettles, *Lucaena*, mulberry, basil, tansy, and many others are good for edge planting.

Benefits of Edge Planting

Edge planting helps with protecting the garden and also producing fodder, fuel, nectar for bees, herbs for medicines, soil conservation (terrace stabilisation), habitat for pest predators, etc.

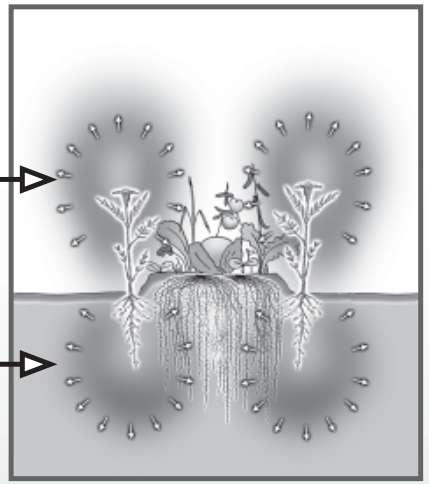


Edge plants take nutrients from deep in the soil and cycle them to the surface, where they are used as mulch, and then returned to the soil.

Beneficial predator insects take nectar from the flowers.

Then they attack pest insects.

The smell of marigold flowers and leaves help to repel many types of pest insect. They also produce a substance from their roots which repels damaging soil nematodes.



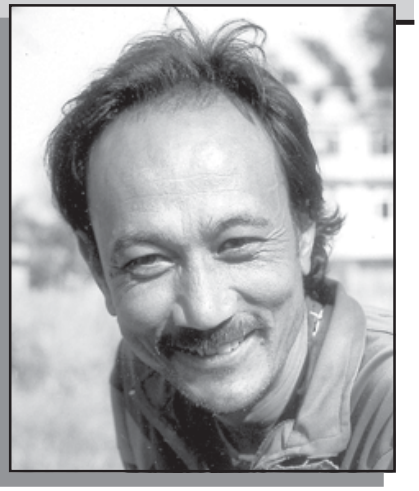
Where to plant ?

- in fences
- on terrace edges
- on path edges
- on the edge of the compost heap, waste water pit, sweepings pit, path, etc.
- in agro-forestry
- on the edges of vegetable beds
- around the edge of the courtyard

Farmers' Experience

Mr Shyam Shrestha

Mr Shyam Shrestha owns Sunrise Farm in Sita Paila-4, Kathmandu, Nepal. He has experience making kitchen gardens, so let's hear his story.



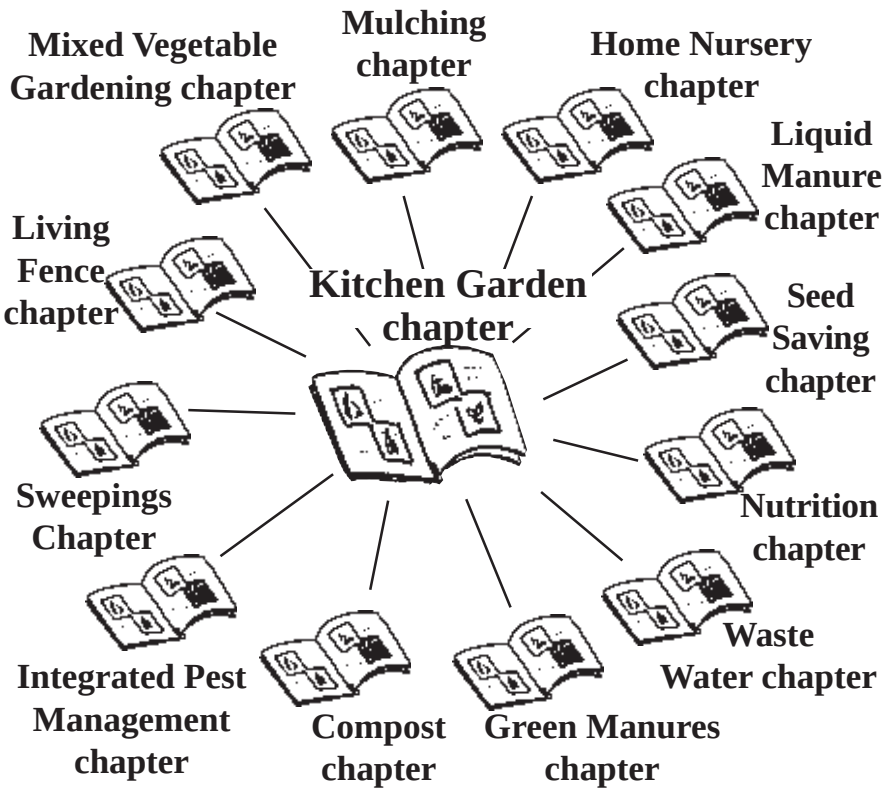
Shyam Shrestha

" At first I used to farm the traditional way but doing this, one type of vegetable was grown all together so there were more pest problems, and more maintenance was needed as well. I've been collecting waste water from the kitchen for irrigation. For compost, I collect the rubbish around the house and cow shed into a sweepings pit. When I plant various types of vegetables mixed together, there are less pest problems. There's less weeding too, because they're planted so closely, and I mulch where I can. When I harvest, I clear whatever weeds there are and mulch them back on the beds - that's more compost. I collect seed from the best plants of everything. With this method, I plant once and then need very little work or maintenance - just harvesting, and eating. Nowadays, others are starting to learn these methods here for vegetable gardening themselves. "

Read On !

Subjects Related to Kitchen Garden

This book provides enough information to be able to make and manage your own kitchen garden. However, this information is also linked to other methods. For extra benefits let's read, learn and practice from these related chapters.



Mixed Vegetable Gardening :- how to grow lots of vegetables easily by planting many varieties at one time

Mulching chapter :- how to grow more crops with less work while keeping the soil covered

Integrated Pest Management chapter :- how to use local resources and knowledge in many different methods of controlling pests and diseases

Seed Saving chapter :- information on methods to produce and store various quality seeds at home.

Sweepings chapter :- how to make good compost from sweeping the house and yard.

Waste Water chapter :- how to get irrigation for the garden from domestic waste water.

Green Manures chapter :- sow a green manure seeds to add fertility to the soil and produce more crops

Compost chapter :- information on how to make good compost quickly is given in this chapter

Liquid Manure chapter :- how to use local plants to make a liquid for fertilizer and pest control

Nutrition chapter :- information about needs and sources of a healthy diet for all the family.

Living Fence chapter :- how to plant not just a fence but also produce fodder, fuelwood, mulch and other benefits

Home Nursery chapter :- make nurseries from local resources to grow many types of plants at home