



Terrace vegetable garden

Utsav V. Patel¹, Hasmukh Leua¹ and R. D. Prajapati²

¹College of Horticulture, S.D. Agricultural University, Jagudan, Mehsana (Gujarat) India

²Department of Horticulture, Patan (Gujarat) India

(Email: hasmukh.hort@gmail.com)

What is a terrace garden? It is a garden that cultivates vegetables, fruits or flowers on the terrace, balconies or roof of buildings, also called as a roof garden. The kitchen garden, a standard in every Indian household, has shifted to the roof due to constraints of space, and called a terrace garden.

Basic requirement for terrace gardening:

Space: Balcony, ground space and terrace of the building where terrace garden can be possible. Basically any location which gets at least 2-3 hours or more of direct sunlight. A place where you can keep a few containers. The number 1 question asked by newbies - "Will my terrace/balcony be able to hold the weight of pots/plants/containers?" Yes, it will! The average RCC/concrete slab can take huge amounts of weight. Just make sure adequate waterproofing has been done.

Containers: A container is any object like a pot in any shape/size. Most importantly, it should be able to hold water and soil and other ingredients in the container.

Sunlight: Different plants have different sunlight requirements. Some do well in semi shade, some need 3-4 hours of sunlight, some require more and some require less. Seeds sown in a seed tray (or anything similar) don't need direct sunlight for the first 1-2 weeks. If your plants don't do too well under the scorching sun, then you can consider installing a shade net, which cuts off the amount of sunlight hitting the plants. And not only the sun, even the rain too.

Water: Do not over water and do not under water. On an average, watering every alternate day is good enough. Monitor your plants and you will notice when they look dried up or not. If you over water, the water that drains out, will take away the nutrients.

Selection of plant for terrace gardening: "You can grow commonly used vegetables on your terrace, including leafy vegetables such as amaranthus (dantu, keerai), coriander (dhaniya, kothambari), fenugreek (menthe), Indian spinach (basale) and lettuce; gourds like pumpkin, ash gourd (boodukumbala), ridge gourd (hirekai), bitter melon (hagalakai), bottle gourd (sorekai), chow chow (semebadane), cucumber, little gourd (thondekai), sponge

gourd (thuppadahirekai), snake melon (padavalakai), watermelon (kallangadihannu) and muskmelon (karabooja); root vegetables such as radish, carrot, beetroot, onion, garlic, ginger and mango ginger (mavinashunti) and other vegetables such as cabbage, cauliflower, capsicum, chillies, tomato, okra (bendekai) and brinjal.

Containers used for terrace gardening: Containers of all sizes, shapes, whether of plastic, ceramic, metal or mud can be used. If you are an environment buff, you just need to use your imagination! coke bottles, take away plastic boxes, old sacks, coconut shells, old broken buckets, your dented kitchen pots and pans, just about everything can be recycled and used as containers.

Growing media used for terrace gardening:

Compost: This is a broken down, decomposed form of kitchen waste, dried leaves, cow dung, and more. The process of decomposition takes about 6-8 weeks. When this breaking down process is done with the help of a specific breed of earth worms (common name: Red Wiggler; scientific name: *Eiseniafetida* or *Eiseniaandrei*), the end result is called vermicompost. On an average, compost costs approximately 4 to 25 Rs. /kg.

Cocopeat: This is made from coconut husks and has absolutely no nutrition in it, but has excellent water retention capacity. It is added so that the container retains more moisture for the plants and it reduces the weight on your balcony/terrace. Cocopeat is available in a few forms:

– **Compressed block:** In 1/2/5 kilogram blocks, it looks like a solid brick. Soak it in water and it expands in size. You use it until it becomes powdery. It's easy to carry and price of the block is 120-130 Rs. /5 kg block.

– **Loose, uncompressed powder:** Difficult to carry as it is sold in about 30 kg gunny bags. Not sure of the cost.

Red soil: Red soil can get from any good nursery or farmers field but it can be really heavy.

Cow dung : Dried cow dung is sold in the form of cakes; imagine it to be a thick papad. Cow dung having some nutrition value. On an average you get it for about Rs. 2-5 per piece.

Horse/Sheep/Goat dung: Sheep/goat manure is



considered to be very rich in nutrients. So use with caution and guidance.

Neem oil/powder/cake: The *Neem* tree is considered to be very sacred in India. Its oil, combined with water, is used to protect plants from insects. After the oil is extracted from the seeds, the leftover is the cake.

This cake is later converted into a powder form. Use of the powder while preparing the potting mix, as it helps to avoid root based infections. Cake is also used, but it tends to be very hard and have the extra manual effort of breaking it down into smaller pieces. Neem oil costs about Rs. 150 for 250 ml, *Neem* cake about Rs. 40 per kg and *Neem* powder about Rs. 20 per kg.

Sand: The sand used in construction, also referred to as river sand, is sieved to get rid of larger pieces. Adding sand prevents the potting mix from becoming too clayey, and helps the mix to be well drained. Like cocopeat, sand has no nutritional value.

Proportions of each of these components depends on the plant you are growing, experience, availability, etc. On an average, a good mix is 1:1:1 of compost : cocopeat : red soil, plus handfuls of *Neem* powder and sand. Some plants need a loose mix (well drained), so put less red soil and more sand. Mix up all these ingredients well. There should be no lumps. Move this mixture into a container.

Make sure the container has drainage at the bottom,

as it is very important that there is no water stagnation. In case you are using a container with more holes or holes larger than a marble, cover them with coconut husk or a small piece of net or something similar, so that there is water drainage, but no potting mix drains out of the pot. Fill the pot till about 3/4th of its depth. This is so that you can add more compost and nutrients in the future.

Once the container is filled, pour in water lightly until all the potting media gets wet and water starts to seep out of the holes, and your container is ready!

Advantages of terrace gardening? Some of the benefits to health, aesthetics and environment are:

- Convenience of safe, pesticide free, healthy green and fresh vegetables
- Conducive to a routine of physical exercise, clean air and close to nature
- Increases amount of oxygen in air
- Reduces overall heat absorption of buildings, Insulates the building against heat and cold
- Reduces sound pollution.
- Acts as a habitat for city weary birds and animals
- Reduces indoor temperature by 6- 8 degree and can reduce air conditioning cost by 25 per cent to 50 per cent.