



Terrace Gardening: A Zero Acreage Cultivation

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These days, when monsoon is giving knock on the door, it looks very interesting to spend time in home and use the rooftop for the vegetable garden in pots in your own house at roof top. In containers you can plant almost any vegetable. Choose large and deep pots, avoid thin and poor quality plastic pots because they heat up quickly and drain poorly. Terrace gardening is a set of activities that involves growing one's own food on one's home's terrace. Everything from cereals to pulses, herbs, vegetables, and fruits can be grown. People prefer to grow vegetables and fruits than any other despite a variety of constraints. It is a garden, in one sense, is a garden that is established on a terrace, roof, or patio, typically in a house with limited gardening space. These gardens are especially popular in cities, and they are sometimes used in restaurants and other establishments.



A terrace garden is an excellent option for anyone who lives in a cramped flat or house with no backyard. Terraces receive a lot of sunlight. They are simple to maintain and are ideal for growing organic vegetables and fruits as well as establishing a flower bed.

Rapid population growth and migration to cities increased the demand for food, shelter, water, and other basic necessities among city dwellers. Growing poverty, a lack of formal employment opportunities, hunger, demand for food produce, proximity to markets, and the availability of cheap resources such as organic wastes and wastewater in cities have fueled the



development of urban and peri-urban agriculture in many developing countries (UPA). "Urban and peri-urban agriculture can be broadly defined as the production, processing, and distribution of foodstuffs derived from crop and animal production, fish, ornamental, and flower production within and around urban areas." Synergies between agriculture and buildings create a small scale resource saving system in the innovative form of green urban architecture known as "Z Farming" (Zero-acreage farming). Urban agriculture can help with climate change adaptation by lowering the urban energy footprint and relieving pressure on agricultural land. Understanding of UPA production systems based on balconies and terraces of urban centres in India are still scarce, so adopting and implementing of terrace gardens is an utmost necessary thing. (Prem Jose Vazhacharickal, 2014)

Considerations to be followed

1. Terrace Capacity:

- The first thing to consider before beginning a terrace garden is whether the roof surface can support the weight of the soil.
- Soil, especially wet soil, is much heavier than most people realise.
- A terrace garden should be created on the rooftop of a substantial building or a house built with load bearing floors, rather than on structures that have shown signs of weakness and structural damage.

2. Waterproofing and drainage:

- The roof should be waterproofed to prevent water from seeping into the room below. It is impossible to avoid the civil work required for complete waterproofing.
- The terrace should have sufficient drainage so that rain and irrigation water can drain quickly.
- If the plantation is to be done directly on the terrace floor, drainage cells and a geotextile membrane should be installed before the layer of soil is laid down.
- It is also a good idea to install a drip irrigation system rather than watering by hand.

3. Container gardening on the terrace:

- Installing a proper terrace drain-cell system can be costly.
- You can always arrange a series of soil-holding containers such as pots, boxes, troughs, tubs, drums, and so on. Find out more about container gardening pots and planters.
- These containers are placed over wedges or bricks to allow for proper drainage and air passage between them and the roof.

4. Flower beds on the terrace:

- Small flower beds can be built right on the roof. This can be accomplished by placing the soil between the parapet and an inner-side wall. Learn more about creating beautiful flower beds.
- Moisture-resistant wood shuttering, stones, or bricks can be used to construct the inner wall of the flower bed.
- Flowering annuals for terrace gardens include Antirrhinum, Stocks, Sweet peas, Pansy, Dahlia, Chrysanthemum, Marigold, Alyssum, Phlox, Dianthus, and Verbena, among others.

5. Landscaping principles for terrace garden:

- A terrace garden, like any other type of gardening, should have a dominant focal point,



such as a lawn, a water garden, a rock garden, or even a small tree. Plumeria, Bottlebrush, Christmas tree, Brassia, and so on.

- The visitor's gaze tends to travel outwards in the horizon. As a result, the planner's effort will be to obstruct their view with a barrier of masses of bright colour and tall growing plants at the terrace's outer edge.

6. Go vertical

- Because gardening space on a terrace is limited, it is a good idea to encourage vertical gardening.
- This is why a terrace gardener should include more climbers and trailers in his garden.
- Some of which can climber over a supporting pillar or an ornamental arch, while others can rampantly spill over the top of the boundary wall and hand down the side of the building, camouflaging the brick and concrete. Railway creeper, Passion flower, Thunbergia, Bougainvillea, Climbing Roses, and other attractive creepers
- Hanging baskets are an important part of the terrace garden.
- Various types of baskets containing either flowering or foliage plants can be displayed effectively in strategic locations.

Advantages of Terrace gardening:

- Lower the indoor temperature by 6 to 8°C and save money on air conditioning.
- Lower overall heat absorption of buildings and insulate them against heat and cold.
- The ease of obtaining safe, pesticide-free, nutritious green and fresh fruits and vegetables.
- Promotes regular physical activity, clean air, and being in nature.
- Terrace gardens increase the amount of oxygen in the air.
- Enhancing Air Quality The presence of any greenery around is always capable of absorbing dust and other airborne toxins, which are then washed away into the drains during rainy seasons. As a result, plants serve as natural filters for dust and other toxins. so, plants purify the air in and around the garden. (Poornima Rao, 2016)
- Green roof tops with living vegetation provide green spaces, reduce urban heat islands, conserve energy, improve air quality, and increase biodiversity. Balcony and terrace gardens provide pleasure to city dwellers as well as an opportunity to improve creativity and psychological well-being. Furthermore, they alter the visual appearance of the building, providing screening from neighbours and concealing an unsightly pipeline and unappealing scenery. (Prem Jose Vazhacharickal, 2014)
- In rainy regions, green roofs aid in stormwater management; in urban areas, they reduce the urban heat island effect; and in hot regions, they reduce cooling loads and provide thermal comfort within buildings. Green roofs help to cool buildings in the summer and increase heat in the winter by increasing the thermal capacity of the roofs. (Chitra Chidambaram *et al.*, 2020).

Conclusion:

With rapid urbanization and food adulteration, terrace gardening/balcony gardening is the most practical option for staying healthy with healthy food and preserving the ecosystem by incorporating green into one's life. After all, our children and grandchildren will be living on Mother Earth, and it is our responsibility to keep the ecosystem in good condition.



References

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