



Consumer Attitude towards Organic Terrace Gardening- A Study in Bangalore City

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ABSTRACT

Urban areas have a sharply increasing population. Travellers from adjacent towns who are looking for work and a living make up a larger portion of the population. They left a serene green setting and arrived on firm ground. The majority of them think their kids miss out on the advantages and experiences of growing up in a stable, regular rural setting. In any event, visiting guardians are unable to endure the polluted city air for a week. Smoke and debris are everywhere. In actuality, even sound individuals feel suffocating. People who suffer from asthma and allergies find it difficult to breathe and complain about it. Senior citizens only have fond memories of town life. They are unable to go back at this time.

A kitchen garden offers a tiny solace for each of these feelings. There is no room left for a population that is actually growing. Where do you then envision a garden? The suitable response is Rooftop or terrace gardens.

Therefore, the goal of our study is to thoroughly examine the impact of terrace gardening. Numerous ecosystem services are provided by terraces, such as the improvement of grain yields and soil moisture levels, as well as the reduction of runoff and silt. The researcher's goal in this study is to examine consumer perceptions and difficulties of organic terrace gardens in Bangalore, India.

However, as terraces get older, a number of drawbacks gradually materialise, such as obstructions to water flow and the emergence of significant environmental issues brought on by improperly planned or badly maintained terraces.

In light of this, the purpose of this paper is to evaluate terrace gardening's advantages and downsides, examine research gaps, and offer preventive and corrective actions to minimise any potential negative effects.

Keywords: Ecosystem, Terraces, Terrace abandonment, Terrace management, Soil and water loss

INTRODUCTION

Terrace gardening is a relatively new idea in India, but it is gradually gaining popularity, especially in large cities. One such city that struggles with significant urbanisation and lack of open space is Bangalore.

As a result, in order to feel more connected to nature from the comfort of their homes, the citizens of this modern, fast-paced city have to take porch gardening. In a city like Bangalore, a porch garden would obviously not be as natural as one you would create on the ground in your Terrace. Additionally, there is a restriction in the apartments and on the kind of plants that can be included in a porch garden, primarily due to a lack of space, soil erosion.

Tall constructions, halting areas, and the layout of streets have gained significant metropolitan land in the current urban environment. The rooftop and porch of buildings provide a large likely source of outdoor space that is accessible to the structure's clients in an especially congested location.

A growing number of elevated structures that deny their occupants any visual contact with nature have increased the need for terrace gardens. Terrace gardens moderately restore the lost bond between humans and nature.



SCOPE OF THE STUDY

The study concentrates on terrace farming and its role with special reference to Bangalore city.

GOALS OF THE STUDY

1. Researching and comprehending what a terrace garden is, as well as the fundamentals of terrace gardening.
2. Make a preliminary analysis of Bangalore's terrace farming.
3. To investigate the difficulties respondents encountered when working in terrace gardening.
4. Examining consumer perceptions of organic terrace gardening

REVIEW OF LITERATURE

Their founder Daphne Gomez, according to Monica Augustin, the headmistress of Chempaka Kindergarten in Pallimukku, inspired them to begin terrace farming. When the kids learn how veggies are actually grown, they become engaged and excited during their "Vegetable Day." Their professors purchase the food, and the funds raised are put toward farming endeavours.

For individuals who would love to start farming but are occupied with many other things, web developer Joji Mathew has developed the idea of "weekend farming." They lease land so that these people can visit on the weekends to take care of the plants.

The Mahila Kisan Sasha ktkaran Pariyojana (MKSP), a programme for the empowerment of women farmers, was recently agreed to be implemented in Kerala, according to Manjula Bharathi, COO of the Kudumbashree State Mission. The initiative aims to support terrace farming in urban areas, empower women economically and help them achieve their goals, support organic vegetable cultivation on urban farms, and urban places with terraces.

According to Priyesh Kumar (President, Mararikulam Panchayat, 2010), Kerala State imports veggies. Organic vegetable cultivation on homesteads is becoming more and more popular.

The Panchayat Development Society has established a strong marketing structure and provides small incentives for cultivating vegetables to encourage production.

Terrace farming began as a solitary endeavour by individuals and small groups, according to Gopakumar, a retired PWD superintending engineer who has been engaged in it for over ten years. Terrace farming has now evolved into a trend.

Houses in semi-wild areas like Idukki and Wayanad, as well as in big cities like Thiruvananthapuram, Kochi, and Kozhikode, have fruit- and vegetable-laden plants growing on their roofs.

Extreme heat, wind, and UV radiation are all things that green roofs shield roof membranes from. The daily expansion and contraction of the roofing membrane can be prevented thanks to vegetation and a thick substrate layer.

Green roofs, often known as "eco-roofs," "living roofs," or "roof gardens," are essentially roofs that have vegetation growing on top of them (Cox, 2010; Parizotto and Lamberts, 2011).

Typically, green roofs are constructed to increase a building's energy efficiency.

Due to how much energy and resources buildings use, a number of environmentally friendly strategies and energy-efficient technologies have been proposed and implemented to create low-energy buildings (Zhou et al., 2014; Ghaffarian Hoseini, 2013).

Advanced eco-technologies, energy-saving devices, and renewable energy sources are a few of these. Green roofs are frequently cited as an effective tactic for increasing a building's sustainability (Ghaffarian Hoseini, 2013).

WHAT IS TERRACE / ROOF GARDENING?

Terrace gardening is the practise of creating a garden on a building's roof or terrace rather than on the ground. It can either be used for practical purposes with plants that produce fruits and vegetables or for decorative purposes with plants that develop blooms and have a pleasing appearance. Because there isn't enough room to build a garden, it has become highly well-known in large cities.

WHY DO WE NEED TERRACE / ROOF GARDENING?

Having a terrace garden has many advantages in addition to cost savings.

1. You may obtain fresh, pesticide-free fruits and veggies.
2. cooling for the building
3. aids in rainwater collection
4. keeps us in touch with nature
5. The terrace garden might help you de-stress for 15 to 20 minutes.
6. assists in lowering pollution
7. You can also grow herbs and medicinal plants, which makes the house more aesthetically pleasing.
8. Do you recall people paying a premium for vegetables and waiting in lengthy lines to get them during the Corona Lockdown?
9. Terrace gardening can help you prevent that to some extent.

HOW TO SET IT UP AND MAINTAIN IT?

Setting up a terrace garden requires finalising the layout as the first stage.

1. What kind of room do you have?
2. How many plants are needed?
3. Which species of plants?
4. How will you position it?

The answer to each of these queries is to create a layout on your own. Once the layout is created, you will have completed half of the garden setup. Contact a terrace gardening specialist to confirm the work, and inquire with their current clients.

WHAT KIND OF PLANTS, VEGETABLES OR FRUITS CAN WE GROW IN BANGALORE?

Vegetables		Herbs		Fruits	Flowers
Annual	Perennial	Annual	Perennial		
Beans	Capsicum	Coriander	Ginger	Strawberry	Petunia
Beetroot	Chilli	Fenugreek	Saffron	Blueberry	Geranium
Bitter Melon	Pepper	Garlic	Holy Basil	Fig	Begonia
Carrot		Basil	Thyme	Tomato	Lobelia
Bottle Gourd		Carom	Turmeric	Pineapple	Pansy
Cucumber		Dill	Rosemary	Cantaloupe	Impatiens

WHAT WILL BE TERRACE GARDENING COST IN BANGALORE?

It can cost around 125–175/sqft. But it also depends on the following other variables, which are listed.

1. What kind of plants you want to grow
2. The kind of plant-growing containers you select, such as grow bags, pots, plastic cans, etc.
3. What kind of irrigation system, if any, will you employ—manual or automated?
4. Type of surface: If the building is brand new, the terrace would be in good shape and not require waterproofing; if the building is older, waterproofing is required.

DISADVANTAGES OF TERRACE GARDENING

Comparing the downsides to the benefits, terrace gardening has very few, although there are some difficulties in setting one up.

Below is a list of a few of them.

1. Before installing the terrace garden, the terrace must be adequately waterproofed to prevent roof leaks.
2. If the terrace is not properly sloped, rainwater may stand still in the spaces between the plants.



3. When compared to the ground level, the wind speed on the terrace would be higher, thus the plants need to be properly protected to avoid damage.
4. There may need to be frequent upkeep and cleaning due to the loss of dry leaves.

WHAT ARE THE FUNDAMENTAL PRE REQUISITES TO BEGIN TERRACE GARDENING IN BANGALORE?

When considering how to build up a garden that will provide you with a respectable harvest of produce that will last throughout the year, planning is essential.

Before you get your hands dirty, here is a list of the essential items you need.

1. Make sure your terrace or roof has some hidden areas and enough light.
2. To water the plants and continuously keep the area clean, simple access to water is a need.
3. Having a shade net would be very helpful in tropical and subtropical areas like Bangalore.
4. Purchase enough lattice or poles to support veggies like creepers and climbers that need support to grow.
5. Gather all of your gardening tools, including gloves, spades, wedges, scoops, support shears, and others that are used to mix soil, trim or prune, remove leaves and branches, and gather the harvest.
6. Knowing which plant belongs in which container is also essential.
7. You wouldn't want to plant a tree in a small pot only to have its roots burst the pot by growing in all directions.
8. Get large containers for climbers that are at least 2x2x1 feet in size.
9. For short, lush veggies, wide boxes with a depth of 6 to 12 inches would be excellent.
10. However, perennial plants that grow to be tall trees, like papaya and banana, require pots that are at least 5 to 6 feet deep.
11. Lastly, make sure you buy enough seeds.

HOW TO BEGIN TERRACE GARDENING IN BANGALORE?

Let's start gardening now that you have all the materials necessary to set up your terrace garden. Be prepared to provide your terrace garden with opportunities. It will need as much love and care as is logically necessary. Getting your hands dirty when gardening is one of the best parts. Try not to be alarmed by the dirt and anything living in it. You'll encounter a tonne of insects, insects, insects, birds, and other critters who also need to enjoy the delicious by-products of the soil from your garden.

Create a strategy for the types of plants you need to grow. Put this arrangement into action by arranging them to make the most of your terrace's available area. Life includes disappointments as a natural part of it. Growing plants is similar. If things don't turn out the way you expected them to, resist the urge to give up. Overwatering, severe manuring, cramming plants, insufficient watering, and insufficient manuring are a few causes of disappointment. Not only does preparation involve obtaining the necessary items, but it also involves doing some research. Investigate thoroughly gardening hints and tricks, watch instructional videos on YouTube, and determine which gardening method is ideal for you.

We need to be aware that the plants in your terrace garden resemble your children, and that you have given them a great deal of attention, love, and care. Even one sapling could make it challenging for you to travel in different directions. In any event, resist being dejected.

RESEARCH METHODOLOGY

This descriptive and analytical study analyses consumer behaviour toward organic terrace gardening by describing it. It examines the socioeconomic factors affecting buyers of organic products. A combination of primary and secondary sources can be used to gather the data. A well-structured questionnaire can be used to get the data.

The survey was primarily concerned with issues like demographic information, driving forces, attitudes, behaviours, challenges, and satisfaction with organic terrace gardening.

The study collected a sample of 100 clients from Bangalore City, Karnataka, using a practical sampling technique. A five-point Likert scale questionnaire with the respondents' answers was used to gather the data.

RESULT AND DISCUSSIONS

Demographic Profile

Factor	Options	Frequency	Percentage
Age	Below 35	26.25	17.5
	35-45	51	34
	Above 45	72.75	48.5
	TOTAL	150	100
Gender	Female	99	66
	Male	51	34
	Total	150	100
	Graduation	90.75	60.5
	Post-graduation	40.5	27
	Others	18.75	12.5
	Total	150	100
Income	Below 30000	39.75	26.5
	30,001-40,000	73.5	49
	Above 41,000	36.75	24.5
	Total	150	100
Occupation	Salaried	55.5	37
	Self employed	15.75	13.5
	Pensioner	78.75	49.5
	Total	150	100

Inference

The chart reveals that out of 150 respondents, 48.5 percent are above 45 years old, which is the majority of the respondents. The great majority of respondents (66%) fall within the female gender. Out of 150 responders, (60.5%) fall within the category of graduate-level education. The majority of responders (49%) fall into the income range of \$30,001–\$40,000. On the subject of occupation, the majority of respondents (49.5%) are retirees.

PROBLEMS FACED BY ORGANIC TERRACE GARDENER

Considerations	Percentage
Effect of catastrophic	44
Rainwater saturation of the terrace ground	56
Requires huge inputs of labour to construct and maintain.	26
Soil erosion, often downslope from the terracing	58
Leaching can result in a decline in the soil's quality.	9

Inference

He aforementioned table made it abundantly evident that, in addition to its many advantages, terrace gardening's main disadvantage is the saturation of the ground with rainwater. It occurs when terracing retains a significant amount of water, which is absorbed by the earth or soil. The problem with ground saturation is that it might lead to flooding after heavy downpours. More hazardous spill overs may result from it than from an undeveloped area. And 58% of the respondents responded that soil erosion was another issue regarding terrace gardening. If not precisely kept up, terraces can prompt more significant soil erosion, regularly downslope from the terracing, than in non-terraced regions.

CONSUMER ATTITUDE TOWARDS ORGANIC TERRACE GARDENING

Considerations	Frequency & Percentage			
	Yes	%	No	%
Do you wish to start Organic terrace garden at your home?	55	36.67	95	63.33
Do you think Terrace gardening can reduce the stress levels?	121	80.67	29	19.33
Are you Willing to put your hands on dirt?	45	30	105	70
Do you agree that terrace gardening is more expensive?	134	89.33	16	10.67
Perform as a habitat for city weaning birds, squirrels, worms	150	100	0	0
A source of oxygen production	130	86.67	20	13.33

Inference

According to the aforementioned table, 86.67% of the survey's participants thought terrace gardening would be a source of oxygen production. The majority of respondents (80.67%) claim that it would lower stress levels the residents were not in an intension to start the terrace gardening as they live in rented homes, and apartments where it is difficult for them to start the organic terrace garden. Finally, 100% said that it would function as a habitat for birds.

The biggest disadvantage of terrace gardening, despite all of its advantages, is the saturation of the ground with rainwater. It occurs when terracing retains a significant amount of water. The problem is that it might lead to flooding after heavy downpours. Additionally, 58% of the respondents said that soil erosion was a problem for terrace gardening. Terraces have the potential to cause more significant soil erosion if they are not properly maintained.

CONCLUSION

Although using the terracing technique for cultivation is advantageous. However, it has a limitation of its own. Terrace and rooftop gardening is not intended for the highest level of profit-making or creativity. It enables the development and use of novel, poison-free veggies and organic products. The terrace garden offers senior citizens a fantastic opportunity to invest their energies and promotes good health. It provides metropolitan homemakers with sufficient real exercise. Children can gain exposure to the world of plants. It entices their curiosity about plants, insects, birds, and the natural world. Gardening on terraces is an interesting change of pace for employed adolescents at the end of the week.

Terrace gardeners may have the satisfaction of somewhat reducing urban pollution. A cool microclimate is created by the terrace garden on the hot, open patio. In this way, it keeps the house below cool. A terrace garden can be a good location for morning activities and evening get-togethers with friends. Different benefits are guaranteed even if plant output falls short of expectations. If the yield is substantial due to proper planning and assistance, it prevents the constant consumption of vegetables.

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