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Terrace Gardening: A Way Forward to Green Living

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SUMMARY

Terrace garden is the new aesthetic area for the urban sector which can be build over the terrace and balcony region. Benefits in terms of Environment, Economics, social as well as aesthetic results in tremendous scope of terrace gardens specially in the urban areas where land is a major constraint. Type of terrace garden depends upon the utility. Major components like Water proofing and insulation layer should be viewed thoroughly before complete set up.

INTRODUCTION

Terrace Garden is a garden which is established on a terrace, roof or Patios, usually in a house where there is limited gardening space. These type of terrace garden are especially popular in urban areas. Terrace garden also known as Roof garden. This is one of the best ways we can move our urban societies towards green living. Its benefits towards modern day livings are discussed under different headings:

1) Environmental benefits: Besides improving air quality, it also reduces urban heat, carbon dioxide level. Increase in oxygen level can be seen along with ecological and wild life values.

2) Economic benefits: There is a sharp rise in the values of property where green roof and terrace gardens can be seen. Visitors in hotels prefer rooms with terrace gardens and willingly pay more for such rooms. Urban people have less or no space for farming, so terrace as a garden serves as a best way towards urban agriculture. Better insulation on the roofs results in cooling of the rooms below, thus saves the energy spent on cooling.

3) Social benefits: Such terrace gardens facilitates recreational and leisure activities leading to immense pleasure. They also become a point for contact for different social activities.

4) Aesthetic benefits: Aesthetic appeal of a simple terrace garden may increase three folds when various garden plants of ornamental importance are planted along with vegetables and aromatic plants. Vegetation can provide visual contrast and relief from the highly built-up environment.

Types of Terrace gardens:

- Extensive (Shallow)
- Intensive (Deep)

Extensive: This type contains shallow growing light weight media which may vary from 1 to 4 inches in depth. Such gardens are suitable for roofs with mild slope or the areas which are less indulged in human activities. This type requires less maintenance & has comparatively longer life. Since it requires low maintenance so is relatively less expensive. But the major drawback of extensive type is that it is less energy efficient & has very little choice of plants (generally no trees and tall shrubs are planted).

Intensive: This type contains 6 inches plus growing media depth & hence it is suitable for greater diversity of plants & habitats. Good insulation properties ensures greater cooling. It can be made very attractive by placing wide range of ornamental plants. Beside higher capital & maintenance costs, it also requires regular labour for timely managing the plants & other garden features.

Components of Roof garden:

There are three distinct layers in a green roof from the bottom namely:

- Structural layer

- Growing media
- Vegetative layer

Roof deck: The most important layer on a green roof, it can be concrete or wood structure and is capable of taking the load of the green roof.

Waterproofing: The waterproofing membrane is the major components in this type of construction. The membrane material must possess the ability to prevent moisture from entering the facility, resist root penetration, can withstand severe temperature changes and atmospheric conditions, can withstand attacks by insects and microbes, subsoil animals and soil chemicals.

Insulation: The roof is the primary location for heat transfer and the insulation restricts the transfer of heat energy through the roof by creating a barrier between spaces of different temperature.

Protection layer: Green roofs contain living and growing materials, a protection layer and a root barrier are one of the most important barriers of the elements of the assembly.

Drainage and retention layer: A drainage course allows moisture to move laterally through the green roof system. It prevents over saturation, ensure root ventilation and provide additional space for the roots to grow. It is a porous, continuous layer over the entire roof surface just above the concrete slab.

Root permeable filter layer: This layer separates the growing medium from the drainage layer and protect the medium from shifting and washing away.

Plants used in Roof gardening:
Foliage plants: Asparagus, Coleus, Croton and Pothas.
Flowering plants: Carnation, Chrysanthemum, Dahlia, Rose, Tuberose and Gerbera.
Shrubs: Acalypha, Bougainvillea, Camellia, China rose, Nerium, Geranium and Jasmine.
Trees: Weeping Willow, Bottle brush and Plumaria alba.
Climbers: Ipomea, Passiflora and Begnonia.
Fruits and vegetables: Gooseberry, Strawberry, Peach, Pear, Brinjal, Broccoli, Chillies and Tomato.

CONCLUSION

As the world is heading towards the depletion of natural resources and the loss of forest/ garden area due to urbanization, there is a great need of terrace gardens. Due to the population explosion and increasing demand of land per unit individual, terrace garden becomes an alternate source of aesthetic property there by meeting our personal demand for space. Over population has created the ecological imbalance which can cause tremendous harm to our generations. When we cannot avoid utilizing open spaces on the ground for the construction of buildings and other utilities then at least the open space available above these buildings can be utilized for the plantations and gardens to minimize the ecological imbalance. There are many benefits of these terrace gardens, such as waste recycling, ecological benefits, energy conservations, water conservations, decorative enhancement of buildings, attracting birds and animals.

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