

● Vertical gardening

All the way up



GREEN WALLS With urban spaces shrinking, vertical farming seems to be the way ahead towards self-sufficiency.

When King Nebuchadnezzar created the 'Hanging Gardens of Babylon', he would not have imagined the impact it would leave for posterity. History has it that for the garden, the water was transported to the multi-storied building. And river Euphrates was the source.

Now, with urban spaces shrinking, migration on the rise and more mouths to feed, vertical gardening/farming seems to be the one-stop solution in self-sufficiency. The future of urban food on all counts lies here. Clearly, by growing one's own food, one is striding towards food security.

"Vertical, terrace and home gardening would not only help in improving the aesthetics but will also bring awareness among the present generation about the importance of ecosystems. It would certainly help in growing vegetables without any contamination," avers Dr T V Ramachandra, Energy and Wetlands Research Group, Centre for Ecological Sciences, IISc.

"Bringing awareness among the public about pollution and the likely health impacts of vegetables grown in contaminated land and water would make many to have home gardens. It ensures that stagnation of water is minimised to prevent breeding of disease vectors. Climbers like Cucurbits and Tinospora Cordifolia can be good home medicines. Certainly, a variety of medicinal plants would also help in keeping mosquitoes



T V Ramachandra



CREATIVE The garden at 'Jaaga'.

away," he informs. He points out how vegetables grown in downstreams of our lakes, which have sustained inflow of untreated sewage and industrial effluents, have higher levels of heavy metals which affect humans. "Vegetables in home gardens will be free of contaminants. It can manage the organic fraction of waste generated in the kitchen and keep everyone engaged in household work. However, this may not help much in the ecosystem functioning like groundwater recharge and maintaining soil nutrients," he adds.

Throughout the world, green walls are becoming an incredible part of the urban landscape. Closer

home too, vertical gardens are springing up at homes, corporate and public spaces like Jaaga. It was Eve Sibley, Allison Kudla and a team of green activists who designed and implemented the green wall and rooftop gardens at Jaaga.

“Vertical and terrace gardening would improve the aesthetics and bring awareness on the importance of ecosystems.”

T V Ramachandra

One can see that its front facade is lined with almost 70 square metres of vertical gardens. It is the hydroponic system that they have made use of. The plants are in a non-soil growing medium and are fed with nutrient rich water via drip irrigation.

The advantages of vertical gardening are many, points out environmentalist Yellappa Reddy. "If you stagger the



Yellappa Reddy

vertical columns, it can mitigate the problem of noise pollution as well as vertical foliage can absorb a good amount of noise. It can also trap the very fine particulate matter in the atmosphere," he says.

He goes on to explain that with good management practices, most of the native plant species found in the Western Ghats can be used for vertical gardening. The waste water at home is good enough for it.

"Leguminous plants, like pepper, apart from fruits and vegetables, can be grown at home through the process. Even if you have just 1m by 1m space, one can create a supporting structure and can grow not just one but two or three crops — both vegetables and flowering plants," he says.

Shubha Ramachandran, water sustainability consultant, Biome Environmental Solutions Pvt Limited, meanwhile stresses on the importance of garden spaces being made cultivatable. "You have to make life sustainable in the city. Large spaces of land available can be used as edible landscape. We can use our imagination for that. Wet waste and other food waste can be turned into good quality manure which can be used in horizontal spaces wisely to provide food security," she says.

Like everything else, there are challenges involved in vertical gardening too. Dr Ramachandra

says, "Precaution has to be taken to ensure that walls and terraces are not affected by the stagnation and seepage of water," he says.

The world is, clearly, not flat. The time is ripe, to look upwards and grow. **Anupama Ramakrishnan**

