

Improving the quality of life indoors too

Scientific studies show that plants play an important role in cleaning the air we breathe, both indoors and outdoors, writes **N.CHANDRAMOHAN REDDY**

GREEN MATTERS

Our green friends are also Good Samaritans of the earth. We humans may not bother much about their survival, but they enrich our existence through their very own. That plants in general reduce outdoor pollution is everybody's knowledge. But few are aware of how they enhance the quality of life indoors too.

In highly industrialised urban lifestyle, more and more people spend longer hours indoors. It is estimated that in the cities people spend almost 90 per cent of their time indoors. Scientific studies in the last several years indicate that the air within offices, homes and other buildings can be more seriously polluted than the air outdoors.

Indoor pollution

Contemporary homes and buildings are often tightly sealed to avoid energy loss from cooling or heating systems. The synthetic materials used in modern constructions produce potential pollutants that remain trapped in these poorly ventilated buildings, and these pollutants result in what is often called the Sick Building Syndrome (The condition in which occupants of a building



GREEN FRIENDS: Research has proved that certain plants could be effective in abating indoor air pollution. -PHOTO: N. CHANDRAMOHAN REDDY

experience health hazards). Pollution sources that release gases or particles into the indoor air are the primary cause of air quality problems in buildings. Inadequate ventilation, high temperature and humidity levels can increase concentrations of the pollutants.

Many of the volatile organic

compounds (VOCs), which are emitted as gases from wide range of solids or liquids, cause short-term and long-term adverse health effects. Concentrations of the VOCs may be ten to thousand times higher indoors than outdoors. The pollution sources include - paints, paint removers, pesticides, build-

ing materials and furnishings, televisions, gas stoves, copiers, printers, computers, correction fluids, glues and adhesives, permanent markers, wood preservatives, cosmetic sprays, tobacco smoke, disinfectants and air fresheners, wall and floor coverings, plastic products, synthetic fabrics, upholstered furni-

Plants to fight pollution indoors	
Common name	Scientific name
Chinese Evergreen	<i>Aglaonema modestum</i>
Bamboo palm	<i>Chamaedorea seifrizii</i>
Spider plant	<i>Chlorophytum comosum</i>
Janet Craig Dracaena	<i>Dracaena fragrans 'Janet Craig'</i>
Cornstalk Dracaena	<i>Dracaena fragrans 'Massangeana'</i>
Warneck Dracaena	<i>Dracaena fragrans 'Warneckii'</i>
Red-edged Dracaena	<i>Dracaena marginata</i>
Areca palm	<i>Dypsis lutescens</i>
Golden Pothos, Money plant	<i>Epipremnum aureum</i>
Weeping Fig	<i>Ficus benjamina</i>
Long-leaf Fig	<i>Ficus binnendijkii</i>
Rubber plant	<i>Ficus robusta (F. elastica)</i>
Boston Fern	<i>Nephrolepis exaltata 'Bostoniensis'</i>
Cut-leaf Philodendron	<i>Philodendron bipinnatifidum (P. selloum)</i>
Heartleaf Philodendron	<i>Philodendron hederaceum 'oxycardium'</i>
Elephant-ear Philodendron	<i>Philodendron x domesticum</i>
Pygmy date palm	<i>Phoenix roebelenii</i>
Lady palm	<i>Rhapis excelsa</i>
Mother-in-law's tongue	<i>Sansevieria trifasciata</i>
Peace Lily	<i>Spathiphyllum species</i>

ture, central heating and cooling systems, compressed and laminated wood products and so on.

While pollutant levels from individual sources may not pose a significant health risk by themselves, most homes have more than one source that contributes to indoor air

pollution. There can be a serious risk from the cumulative effects of these sources.

Health effects

There are more than 900 identified VOCs that may pose acute and chronic health problems to individuals who live and work inside the

buildings. The extent and nature of the effects depend on many factors including level and duration of exposure. Eye and respiratory tract irritation, headaches, fatigue, dizziness, skin allergies, visual disorders, and memory impairment are among the immediate symptoms that people may experience soon after exposure to some VOCs. Some of these organic compounds can cause long term health problems such as asthma while some are even carcinogenic.

Role of plants

Scientific studies show that plants play an important role in cleaning the air we breathe, both indoors and outdoors. Plants are known to clean the air through their food processing called photosynthesis. In the process, they clean the air by absorbing carbon dioxide, and by releasing lifesaving oxygen into the air. Plants are also proven to be effective in absorbing certain VOCs and reducing dust accumulation.

A team of National Aeronautics and Space Administration (NASA) scientists led by Dr. Bill Wolverton tested the effect of house plants on the three major indoor air pollutants - Benzene, Formaldehyde and Trichloroethylene. Formaldehyde is used in many building materials

and cleaning products where as Benzene and Trichloroethylene are found in oils, paints, adhesives, inks and varnishes.

Plants clean air

Research has proved that certain plants could be effective in abating indoor air pollution. These are common indoor foliage plants which are easily available in local nurseries. In the NASA study, certain houseplants were found to remove about 87 per cent of indoor air pollutants within 24 hours. Scientists suggest that for the plants to be effective, it is necessary to use one potted plant per 100 square feet of home or office space. They also recommend that the plants be grown in six-inch containers or larger for more leaf area.

These exciting revelations in the last few decades have helped us realize that a house plant, valued for its aesthetic value, quietly but efficiently works in the background to enhance our well-being. Hence we can rest assured that plants within built spaces help to soothe and calm our senses and purify and refresh the air we breathe.

(The author is a forest officer, presently Additional Commissioner (Parks) in GHMC and can be contacted at 'nchandramohanreddy@gmail.com')

Latest range of whirlpool from Oyster

Oyster Bath Concepts has come out with latest range of whirlpool with several features which the company says, are sure to redefine luxury in the bathroom.

The range include 1.5 HP Austrian Whirlpool System which comes with adjustable spiral massage jets, four whirlpool-jet, 20 bubble-jet with a 3KW online heater for the hot and cool experience.

The Discover range of whirlpool systems enlivens with the sound of Arroyo, Billabong and Breathe Deep coming out from these water jets to enable perfect rejuvenation for sleep and relaxation, says a press release issued here. The aural mixture not only has a soothing effect on the body and mind but is also quite effective at masking external sounds so that one can relax and sleep better.

Highlights of the range include basic features such as surround sound, feather touch digital control panel, hydro massage jets, motor for bubble bath, multi-flow hand



The whirlpool bathtubs are made of Lucite Sheet

shower and remote control. The safety features incorporated include Earth Leakage Circuit Breaker, dry burning

protection and water level sensor. These whirlpool bathtubs made of Lucite Sheet comes with a lifelong warranty

and are available across all major outlets with a price tag of Rs.2,77,000 onwards, the press release added.

King-size tiles from Somany

Somany Ceramics has launched what it describes as the king of all slabs being offered for the first time in the country.

The king-sized tiles measuring 600x1200 mm come with marble and wooden finishes and the company says it has incorporated enough appealing characteristics to offer the home space a luxurious and affluent look.

These have been manufactured under digital technology and the large formats have been designed to ensure a spacious appearance to the home.

Claiming these latest and innovative offerings are made available for the first time in the country, Somany in a press release says that the glazed tiles are designed to enhance the appearance of the house wall and floorings and add an opulent and magnificent feel.

Also, their rectified features provide a seamless tiling option.

Abhishek Somany, Joint



The tiles measuring 600x1200 mm come with marble and wood finish.

Managing Director, Somany says the large format glazed vitrified tiles have been introduced keeping in mind

the latest trends in the tile industry. "We further aim to come out with many more similar and advanced offer-

ings to meet the constantly changing demands and needs in the market," he says.

More than just a businessman

Vijay Kunchum's desire to make furniture and handicrafts out of wood and bamboo was born out of an age-old association with the forests, writes **RASHI TIWARY**



Vijay Kunchum

Vijay Kunchum, owner of Crafts Forever, is more than just a businessman. He is passionate about wood and bamboo and is a self-taught craftsman cum designer.

"The desire to make furniture and handicrafts out of wood and bamboo was born out of an age-old association with the forests. As a child, I often visited the forests of Andhra and Maharashtra with my father as he was a contractor.

It is here, that I felt the raw, rustic intelligence of the forest-dwellers could be moulded into something much bigger," he says.

After that, there was no looking back. Determined as he was, Mr. Kunchum did vast



A dining table set made from bamboo.

research before he opened Crafts Forever, which he says was initiated to "recreate contemporary products within the traditional framework".

Since then, he has taken the initiative to train several tribal people in making products from locally supplied bamboo.

He makes it a point not to

transport bamboo from the north-east, where it is available in huge quantities, because he does not want to increase carbon footprints, which the process of transportation would involve.

Involving tribal people

Moreover, it wasn't easy getting the tribal people in-

volving in new ventures and projects. Most of them would always be sceptical and it was only the actually physical demonstration of his skill that made them trust Mr. Kunchum.

Many argue that the use of wood goes against the idea of a green environment but Mr. Kunchum claims that wood

can be re-grown and it also decomposes on its own.

Besides generating employment for tribal people, Mr. Kunchum also wants that the monotony and drudgery in the lives of craftsmen and other workers be done away with.

For this reason, he wants workers to use different tools;

for instance, he claims that even a power saw used in place of a simple saw could make work easier and the product more chiselled.

In the workshops conducted by him, he also talks extensively about enhancing worker's productivity through constant innovation and bettering their products keeping in mind the clientele. He occasionally also contributes articles to a magazine called 'Woodnews' on sundry issues like 'the demise of the carpenter', 'toy-makers' and bullock-cart wheels, just to reiterate their worth.

Most importantly, Mr. Kunchum is self-funded. Admittedly, the business of bamboo and wooden handicrafts is not very profitable but he is trying to garner more funds. In the past, the AP Forest Department has funded some training programmes conducted by him but other than that, there has been no monetary support from anywhere.

In the near future, he hopes to work with local tribal people, particularly the nomadic who make bats out of local wood, to help them refine their artistry and make it amenable to urban taste.

And of course, the quest for planting more trees and re-growing wood, is another of his long-term goals.

'All construction projects should have sewage treatment plants'

All constructions projects which have obtained Consent for Establishments (CFE) from the Andhra Pradesh Pollution Control Board (APPCB) were required to construct and operate Sewage Treatment Plants (STPs) in their premises, according to the PCB Member Secretary, M. Ravi Chandra.

Common areas

In a press release issued here, Mr. Chandra informed that they were also required to set up Solar Energy systems to tap Solar Power to light the common areas and for heating requirements in their project premises.

Public health

These conditions were imposed to protect the environment and public health and to conserve fossil fuels.

Conditions

The Andhra Pradesh Pollution Control Board had observed that the construction projects were not complying with the conditions stipulated in this re-

gard. Mr. Ravi Chandra said the Regional Officers were directed to inspect all the projects in their respective jurisdictions to verify the CFE compliance conditions with particular reference to installation of Sewage Treatment Plants, Solar Energy Systems and Plantation.

Consent

Mr. Ravi Chandra also said that the Andhra Pradesh Pollution Control Board issued the Consent for Establishments as required under Section 25/26 of Water (Prevention and Control of Pollution) Act 1974 and under Section 21/22 of Air (Prevention and Control of Pollution) Act 1981 to various construction projects such as building/construction projects/area development projects and townships (residential, commercial and institutional) which were covered under Environment Impact Assessment Notification.