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Indoor Plants for Cutting Down the Air Temperature and Improving the Air Condition

Happy[1] & Kannoj[2]

[1]Hawkesbury Institute for the Environment, Western Sydney University, Australia
[2]Department of Agronomy, CCS Haryana Agricultural University, Hisar, India
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Introduction

Humans have a close relationship with nature, so integrating nature into indoor space could effectively increase people's engagement with nature, which in turn may benefit their health and comfort. Humans spend 80 to 90% of their time indoors; thus, the inside area of the house or office plays an essential role in our health and wellness. Modern-day impervious sealed constructions keep away noise pollution and heat at the cost of fresh air in the indoor environment through reduced air exchange. In Northern India, the temperature goes up to 48 ºC, by which heat makes the indoor climate worst with the challenge of humidity. Low humidity level enhances the susceptibility of infections like viral fevers; on the other hand, higher than optimum levels also have impacts on human health. The use of air-conditioning and fanning units creates temporary exposure to temperature, which can harm our health. Indeed, these standard air-conditioning devices are known as "brewers" of bacteria and viruses in closed indoor spaces. Exposure to volatile organic compounds (VOC) can cause a series of effects towards human health. VOC is also associated with Sick Building Syndrome and other building-related illnesses.

There is a natural way to enhance the quality of air and keep the temperature low in indoor spaces in the summer. Indoor plants can bring down the air temperature and create a pleasant aesthetic environment that improves our health and productivity in work at home or office. The role and importance of indoor plants in human health and comfort according to the following four criteria: photosynthesis; transpiration; psychological effects; and purification. Plants lose water during transpiration, which cools the air around the plants, leaving air purified and fresh. Indoor plants have potential applications in other fields, including sensing, solar energy, acoustic, and people's health and

comfort. Making full use of the various effects of plants provides benefits to human health and comfort. (Deng *et al.*, 2018).

Plants absorb carbon dioxide (CO_2) and emit oxygen. There is a direct relationship between carbon (CO_2) and temperature; when the concentration goes up, the temperature goes up and when the CO_2 concentration goes down, the temperature goes down. After six potted plants were hung from the ceiling, the mean CO2 concentration decreased **from 2004 to 1121 ppm.** Many potted plants are also known to reduce harmful toxins from the air and make the indoors more beautiful (Liu *et al*., 2007). This issue arose when the National Aeronautics Space Administration (NASA) tried to find ways to reduce pollutants inside future space habitats (NASA 1974). Plants also have a tendency to control humidity to within the optimum range. Dr Leonard Perry, a professor at the University of Vermont, adds that "a USDA estimate is that proper use of plants could decrease air temperature in an office by as much as ten degrees. Plus, the moisture released by these plants helps maintain indoor humidity in the human comfort zone of 30 to 60 per cent, and helps prevent materials such as wood from cracking when dried out."

Usually, home gardeners know that indoor plants create a better decorative environment, but they don't know plants are also energy efficient, reducing the energy. We all know that outdoor plants help to conserve energy by keeping a house warm or cool, but many of us don't know that indoor plants can also reduce energy costs. Apart from bringing down the air temperatures and improving indoor air quality, indoor plants are also known to have the following encouraging effects:

1. Increase positivity, improve mental health and reduce stress and depression.
2. Indoor plants create better concentration levels, increasing work productivity in offices.
3. Speedy recovery from physical ailments and mental tiredness.
4. Indoor plants create a decorative environment.
5. Improved image as interiors is perceived as "more expensive" and gives a royalty look to the room compared to a room without plants.

Plant Choices

- The best houseplant for improving the ambient environment, Areca Palm (with a thicker base), is also an excellent air humidifier. Plants with trunk diameters under an inch prove to be tricky to maintain.

- Aloe Vera also provides protection from high heat and effectively removes formaldehyde from the air.
- The snake plant (Mother-in-law's Tongue) is a perfect bedroom plant because it emits Oxygen at night and keeps the temperature cooler at night. It absorbs toxins such as nitrogen oxides, formaldehyde, trichloroethylene, xylene, toluene and benzene.
- One of the most decorative indoor plants, the Boston Fern is a natural humidifier and air purifier that cleanses that removes formaldehyde and other toxins from the air.
- Money Plant/ the Golden Pothos is often cited as the best house plant for improving indoor air quality. It also removes indoor pollutants such as formaldehyde, benzene, xylene and carbon monoxide Golden.
- Syngonium, Peace lily, Anthurium and Spider plants also work effectively towards air purification and humidifying spaces.




Conclusion

We recommend not staying outdoors too long, exposed to the blazing summer heat, but rather enjoying the coolness and freshness of well-aerated indoor accommodations. If you’re looking for a natural, inexpensive way to keep your house cool, consider getting the indoor plants mentioned above in 12-15 numbers indoors, which can help keep temperatures down.

Reference

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