

Indoor Plants for Cleaner Air

The office buildings, condominiums and homes of today are all very energy efficient, tightly sealed pollution traps. Scientists are now calling this 'Sick Building Syndrome.' Many dangerous vapours occupy these places, emitted by building materials, cleaning solvents, furniture, carpeting, copying machines, second hand smoke, etc.

Studies done by NASA and the Foliage for Clean Air Council are finding that plants have incredible air cleansing abilities in the home or office. Dr. Bill Wolverton, a NASA research scientist, believes that eight to 15 plants in an average size home will significantly improve air quality. The plants take in the harmful molecules, process them, and release fresh air.

By improving the quality of air in the office, employees will feel and perform better. Most symptoms of sick building syndrome (indoor air pollution) are similar to allergy symptoms at first, but can lead to much severe problems. With the installation of plants, these symptoms will subside. Buildings that have natural ventilation and high numbers of microorganisms (associated with sickness) have less employee health problems than buildings with mechanical ventilation and low microorganisms. Therefore, it's not microorganisms in the majority of cases, which cause employee absenteeism.

Some of the vapours are very dangerous and toxic. The NASA research team has found at any one time, up to 107 different toxins or gases in the air we breathe indoors. Following is a description of three of the most common chemicals found. These chemicals are greatly reduced by plant introduction.

Trichlorethylene (TCE)

Trichlorethylene is a potent liver carcinogen. It is found in the metal degreasing and dry cleaning industries, in printing inks, paints, lacquers, varnishes and adhesives.

Benzene

This chemical has long since been known to cause skin and eye irritation. It can also cause dizziness, nausea, headaches, and loss of appetite, blurred vision, respiratory diseases, irregular heart beat, tremors, liver and kidney damage, paralysis and unconsciousness. Benzene is found in gasoline, inks, oils, paints, plastics, rubber, detergents, explosives and pharmaceuticals.

Formaldehyde

This chemical will cause irritation to the upper respiratory tract (nose and throat) and eyes. It irritates mucous membranes and can cause dermatitis. Formaldehyde is used in foam insulation, particleboard and pressed wood, grocery bags, paper towels, facial tissues and waxed paper. Most products which require a resin to produce it will probably have formaldehyde.

Some plants appear to cleanse the air more efficiently than others do.

Dealing with indoor pollution

With each plant, we are providing you its light requirements and a list of the pollutants in the order they cleanse the air.

Trichlorethylene

Low light: Dracaena marginata, Peace lily, Mother-in-law's tongue, and Bamboo palm.

Bright indirect light: English ivy and all of the low light plants listed above.

Full sun: Gerbera Daisy

Benzene

Low light: Mother-in-law's tongue, Dracaena warneckeii, Peace lily, Chinese evergreen, Dracaena marginata, Bamboo palm.

Bright indirect light: Pot mums, English ivy, and all of the low light plants listed above.

Full sun: Gerbera Daisy

Formaldehyde

Low light: Mother-in-law's tongue, Bamboo palm, Heartleaf philodendron, Spider plant and Golden pothos.

Bright indirect light: English ivy, and all of the low light plants listed above.

Full sun: Banana tree (use a dwarf variety).



It should be noted that the plants are listed by their efficiency per square centimetre, so a larger plant of a lower efficiency may do a better job than a smaller plant of high efficiency.

As you can see, the plant world will make or break us. We should see that these years of research have also revealed to us another underlying theme. Man needs to realize how dependent we are on the plants and ecological cycles around us which we are now destroying. We can act now, individually, on this article to change our lives inside our offices or homes, but we need collective action to change and save the indoor atmosphere. All the plants in the world can't stop the pollution without our genuine and immediate help and hope.



Landscape Ontario Horticultural Trades Association represents the leading garden centres in Ontario. As one of the select garden centres which has achieved "Approved Member" status, we assure our customers receive a high level of service, a good range of quality plants and associated products, together with professional advice and information.