

## Plants & Indoor Air Pollutants



Bamboo palm, *Chamadorea elegans* or *C. erumpens*

**Table 1. Common houseplants that have been found to be effective in cleaning indoor air**

Plant name	Description	Chemical vapor removal*	Light requirement	Remarks
Areca palm (butterfly palm), <i>Dyopsis lutescens</i>	Clusters of erect, slender, cane-like stalks with feathery yellow-green fronds.	8	Sun to semi-sun	Releases an abundant amount of moisture into the air. Fast growing.
Bamboo palm, <i>Chamadorea elegans</i> or <i>C. erumpens</i>	Clusters of small slender canes. Graceful fans with rich green color.	9	Semi-sun	Releases an abundant amount of moisture into the air. Easy to care for.
Boston fern, <i>Nephrolepis exaltata</i>	Stiff fronds arch outwards, drooping downward as they age.	9	Semi-sun	Releases an abundant amount of moisture into the air. Ideal for hanging baskets. Mist and water frequently to reduce leaf drop.
Corn plant, <i>Dracaena fragrans</i> 'Massangeana'	Shiny medium green leaves with a bold yellow-white stripe down the center. Develops a solid woody stem. Leaves <del>erect at the top of each stem.</del>	8	Semi-shade	Survives in dimly lit areas. Occasionally will send up a small spray of fragrant white flowers.
Dendrobium orchid	Has beautiful exotic blooms, usually in clusters or in a row along canes.	7	Semi-sun	Flowers are long lasting.
<i>Dracaena deremensis</i> 'Janet Craig'	Erect stems with a rosette of broad, smooth, glossy, darkgreen leaves 12 inches long and 2 inches wide.	8	Semi-shade	Grows quickly. Tolerates dimly lit areas, but growth will be slow.
<i>Dracaena deremensis</i> 'Warneckeii'	Leaves, 2 feet long and 2 inches wide, are green with white and gray-green stripes.	6	Semi-shade	Grows slowly. Tolerates low light and dry air. Retains its variegation in low light.
Dragon tree, <i>Dracaena marginata</i>	Smooth, gray, erect canes. Leaves, 2 feet long and 1/2 inch wide, are deep, glossy green with red edges along the margins. Leaves cluster at the end of each cane.	6	Semi-sun to semi-shade	Tolerates relatively low light and dry air.

Dumbcane, <i>Dieffenbachia</i> varieties*	Wide, blotched green and white (cream) leaves. Unbranched stems arch downward.	7	Semi-sun to semi-shade	Fast growth.
Dwarf date palm, <i>Phoenix roebelinii</i>	Stately main trunk with graceful, green fans that droop elegantly. Fronds reach 3 feet and grow horizontally.	9	Semi-sun	Very slow grower. Adapts well to low light levels.
English ivy, <i>Hedera helix</i> *	Vigorous climber which sends out aerial roots that attach to any surface. Dark green leaves have 3 to 5 lobes.	9	Semi-sun to semi-shade	Easy to grow. Ideal for hanging baskets. Generally does not do well in high temperatures.
<i>Ficus bennendijkii</i> 'Alii'	Slender dark green leaves.	7	Full sun and semi-sun	Easy to grow. May have some leaf drop until it adjusts to its new location.

\*Rating 1 to 10, with 10 being excellent. May be hazardous or toxic if eaten or comes in contact with eyes or skin; keep plants away from children.

**Table 2. Sources of some emissions that cause indoor air pollution**

Source	Emission					
	Formaldehyde	Xylene/toluene	Benzene	Ammonia	Alcohols	Acetone
Adhesives	•	•	•		•	
Bioeffluents <sup>1</sup>		•		•	•	•
Carpeting					•	
Caulking compounds	•	•	•		•	
Ceiling tiles	•	•	•		•	
Cleaning products				•		
Cosmetics					•	•
Draperies	•					
Electrophotographic printers		•	•	•		
Fabrics	•					
Facial tissue	•					
Floor coverings	•	•	•		•	
Grocery bags	•					
Nail polish remover						•
Office correction fluid						•
Paints	•	•	•		•	
Paper towels	•					
Particleboard or chipboard	•	•	•		•	
Photocopiers		•	•	•		
Pre-printed paper forms						•
Stains and varnishes	•	•	•		•	
Upholstery	•					
Wall coverings		•	•		•	

<sup>1</sup>Substances emitted by people through normal biological processes such as respiration.

Source: B.C. Wolverton, PhD; How To Grow Fresh Air; Penguin, 1997; used with permission.

**Sources:**

Photo: <http://atransplantedgardener.wordpress.com>

Research article: Kent D. Kobayashi, Andrew J. Kaufman, John Grifis, and James McConnell, "Using Houseplants To Clean Indoor Air," Dec. 2007 Department of Tropical Plant and Soil Sciences, University of Guam. <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/of-39.pdf>