

BUILDING SERVICES MANAGEMENT

MARCH 2003

SOLUTIONS FOR TODAY'S CLEANING & MAINTENANCE PROFESSIONAL

www.buildingservicesmgt.com

Bottom-Line Benefits of Interior Office Plants

With every building, the people that occupy them and the work that gets done in them is unique. Plants at Work, a national information campaign to inform professionals and the public about the numerous benefits of interior plants, has assembled new research indicating that adequate installation of interior plants can deliver bottom-line benefits and is a solid return on investment.



Plants in the workplace offer more than aesthetic value. In fact, studies have shown they help reduce stress, enhance employee attitudes, increase productivity and improve air quality.

Plants at Work is committed to communicating this message to facility and property managers, building owners and human resource executives across the country.

It says facility and property managers can see a return on investment

through the following:

1. Plants can improve tenant occupancy and retention by 17 percent, based on various case studies, including a scientific case study of the Opryland Hotel performed by Michael Evans, Former Associate Professor of Hotel, Restaurant and Institutional Management of Virginia Polytechnic Institute and State University.

2. Findings indicate that an adequate installation of interior plants in a modern, sealed office structure could save U.S. companies \$129 billion via contributions to improved indoor air alone, according to researchers William J. Fisk and Arthur H. Rosenfeld of the Lawrence and Berkeley National Laboratory (LBNL), Berkeley, CA.

They found that U.S. companies could save as much as \$58 billion annually by preventing sick building illnesses and an additional \$200 billion in worker performance improvements by creating offices with better indoor air.

The same study verified that 40 percent of all sick days are IAQ-related. The work of NASA scientist Dr. BC Wolverton and others has clearly indicated that interior plants reduce the responsible airborne molds in a sealed office environment by as much as 50 percent.

3. During recent studies, interior plants have enhanced worker productivity by 12 percent. Depending on the size of a company's labor force, an increase in productivity of this measure could translate into millions in revenue earnings.

It is widely known through the respected research of Dr. Roger S. Ulrich of Texas A&M University, Helen Russell, Surrey University, England and the recent studies conducted by Dr. Virginia Lohr of Washington State University that an adequate installation of plants can significantly lower workplace stress, decrease fatigue and enhance productivity.

Human assets have proven to be the most valuable and expensive asset of any business. In terms of cost per square foot, the human asset is ten times the building operating cost and nearly 100 times the energy cost.

4. Proper selection and placement of plant materials can lower heating and cooling costs by as much as 20 percent.



According to the International Society of Arboriculture, the net cooling effect of one young, healthy tree is equivalent to ten room-size air conditioners operating 20 hours a day.

According to the Associated Landscape Contractors of America, in addition to providing shade from solar radiation and cutting wind speed,



plants reduce air temperature through evaporation and transpiration.

The number of plants is dependent on many factors. In every room, different qualities of air can be found which are dependent on the location of the building, the quality of the outside air, the type and capacity of the ventilation system, the quantity of air let into the room, the air temperature and the relative air humidity, the type of control system, the capacity of the filter system, the service span of the system, the regular cleaning of the office and the detergents used, the office furniture and equipment, the bringing-in and distribution of harmful substances, the number of employees in the office, and the type of work.

Taking all of these factors into consideration, it is recommended to use as many plants as possible, in harmony with the given design, in order to

achieve the best possible improvement of the environmental conditions. It has been found that 15 to 20 plants are enough to clean the air in a 1,500 square-foot area.

Survey: Facility Managers Recognize Benefits of Interior Plants

Corporations and their facility managers are recognizing the effect interior plants can have on employee attitude and retention, according to a recently released study by the Associated Landscape Contractors of America.

The top three reasons cited by corporate and facility managers for using plants were color, employee attitude and retention, and “making an environmental statement.” Almost 50 percent of the facility managers questioned said that they use interior plants in 75 percent to 100 percent of their buildings.

The survey of 670 facility and corporate managers identified plants, artwork and sculpture as the key interior building enhancements that could influence higher occupancy and retention.

Other reasons cited were that plants are an accepted part of contemporary building interiors; they improve indoor air quality and promote the marketability of building space and retention of clients.

The benefits of plants improving indoor air quality (IAQ) as documented by NASA scientist Bill Wolverton is generally accepted by facility managers, according to the survey.

The study surveyed three major groups who influence the use of plants in the corporate environment: corporate management, facility managers and architects.