

Home-Grounds-Garden

INDOOR PLANTS
Artificial Lighting

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Artificial Lighting for Decorative Plants

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Flowering and foliage plants have become increasingly used as decorative features in homes and public buildings. Indoor plants often do not have adequate natural light. Artificial illumination can be used to grow plants satisfactorily indoors.

Light requirements. Decorative plants often lose their attractive appearance because of insufficient light. The initial effect is lighter green foliage; new growth becomes leggy. Continued inadequate light results in leaf drop and lack of flowering.

Living plants can be used in any interior well illuminated by light. Artificial lighting fixtures can provide sufficient light for plant growth, but will not correct poor plant vigor caused by neglect of other cultural practices.

Kinds of lamps. Research indicates that incandescent or fluorescent lamps can be used to grow foliage plants without natural light. A combination of both types of light has proved to be superior to either source used alone.

Spotlights and floodlights have been found to be useful for lighting and accenting foliage plants, which require less light than the flowering plants such as African violets, gloxinias, and fiberous-rooted begonias. When plants are grown too close to the incandescent lamps, they are distorted by the heat rays. Because they are a cooler source of light, fluorescent lamps are used to provide the higher light intensities for the flowering plants.

Placement and intensity of light. The natural light available for plant growth varies from one situation to another. It is difficult to give exact recommendations for placement and duration of artificial light. Try various placements of the plants or the fixtures within the room. The intensities of the lamps also can be varied until the best combination has been found.

The amount of artificial light a plant should receive depends upon the kind of plant and the amount of natural light it receives. Because of lower light requirements, many foliage plants benefit by the light from reading lamps. Plants located within a few feet and receiving direct light from a 100-150-watt bulb use this as supplemental light during an average evening's exposure.

Lamps placed directly above the plants and at a distance of more than 4 feet provide sufficient light intensity, but do not cause any damage from heat. Lamps used for this purpose are the high-watt incandescent or the 150-watt PAR 38 projector.

When plants are grown without any natural light, it is necessary to provide long daily periods of artificial light. A typical installation for growing African violets requires two 40-watt fluorescent tubes and an industrial fixture. One standard cool white and one daylight tube placed 11 inches above the rim of the pots will provide minimum light necessary for flowering. At least 12 hours of light are required each day, but 18 hours of light result in more plant growth and flowering. Other flowering plants that can be grown with this installation are gloxinia, episcia, tuberous-rooted begonia, and everblooming begonia. A four-tube fixture (two tubes of each type) approximately doubles the light intensity and produces more desirable plants.

A number of foliage plants also grow well with only fluorescent

lighting. Those listed in the following section can be selected for this use.

Selection of plants. Some popular plants are listed according to light requirements. Plants for locations with little natural light should be selected from those known to have low-light requirements.

Indirect Bright Light

Bright-light locations are just beyond the reach of the sun's rays. When plants are in a lower-light area, supplementary artificial light is needed.

- Anthurium scherzeranum* - Flamingo flower
- Araucaria heterophylla* - Norfolk Island pine
- Asparagus densiflorus* 'Sprengeri' - Asparagus fern
- Brassaia actinophylla* (*Schefflera actinophylla*) - Australian umbrella tree
- Cattleya orchids* - Many species and hybrids
- Chlorophytum comosum* - Spider plant
- Clivia miniata* - Kaffir lily
- Cyperus alternifolius* - Umbrella plant
- Dracaena surculosa* (*D. godseffiana*) - Gold-dust dracaena
- Epipremnum aureum* 'Marble Queen' - Pothos
- Episcia cupreata* - Flame violet
- Fatsia japonica* - Japanese fatsia
- Fatshedera lizei* - Tree ivy
- Ficus benjamina* - Weeping fig
- Ficus elastica* 'Decora' - Rubber plant
- Ficus lyrata* (*F. pandurata*) - Fiddle-leaf fig
- Maranta leuconeura* var. *kerchoviana* - Prayer plant
- Neprolepis exaltata* 'Bostoniensis' - Boston fern
- Phalaenopsis* - Many species and hybrids - Moth orchid
- Philodendron* 'Florida'
- Philodendron hastatum* - Elephant ear
- Philodendron selloum*

Philodendron wendlandii
Pilea cadierei - Aluminum plant
Platynerium bifurcatum - Staghorn fern
Saintpaulia - African violet
Schefflera actinophylla - Australian umbrella tree
Schefflera arboricola - Dwarf schefflera
Tolmiea menziesii - Piggyback plant

Indirect Low Light

Low-light locations are 8 or more feet from windows, with only general illumination. All plants listed survive in indirect low light, but grow better with bright light or when provided with supplementary artificial light.

Aglaonema modestum - Chinese evergreen
Aglaonema pictum
Aspidistra elatior - Cast-iron plant

Asplenium nidus - Birdnest fern
Aucuba japonica 'Variegata' - Gold-dust aucuba
Begonia rex cultorum - Rex begonia
Caladium bicolor - Caladium
Ceropegia woodii - Rosary vine
Chamaedorea elegans - Parlor palm
Cissus antarctica - Kangaroo vine
Cissus rhombifolia - Grape ivy
Cyrtomium falcatum - Holly fern
Davallia fejeensis - Rabbit's-foot fern
Dieffenbachia amoena - Dumb cane
Dieffenbachia maculata (D. picta) - Dumb cane
Dracaena deremensis 'Warneckii' - Striped dracaena
Dracaena fragrans 'Massangeana' - Corn plant
Dracaena sanderana - Belgium evergreen
Epipremnum aureum 'Marble Queen'
Fittonia verschaffeltii - Mosaic plant
Howea forsterana - Sentry palm
Pandanus veitchii - Screw pine

Phalaenopsis hybrids - Moth orchid
Philodendron scandens (P. cordatum; P. oxycardium) - Heart-leaf philodendron
Pittosporum tobira - Pittosporum
Plectranthus nummularius - Swedish ivy
Podocarpus macrophyllus var. Maki - Sea teak
Polypodium aureum - Hare's-foot fern
Sansevieria trifasciata - Bowstring hemp
Sansevieria trifasciata 'Hahnii' - Birdnest hemp
Scindapsus pictus 'Argyraeus'
Senecio hybridus - Cineraria
Senecio mikanioides - German ivy
Sinningia speciosa - Gloxinia
Spathiphyllum floribundum - Snowflower
Spathiphyllum kochii
Syngonium podophyllum - Arrowhead plant
Tolmiea menziesii - Piggyback plant

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