

During winter, artificial lighting makes life brighter for you and your plants

COLUMBIA, Mo. - During a long bleak winter, the use of artificial light to grow indoor plants is one way to bring a little summer into your home.

With a little creativity, the lighting system for your plants can become an attractive decorative element, said David Trinklein, University of Missouri horticulturalist.

"The use of supplementary electric lighting is the easiest and least expensive way to not only provide enough light for plants that do not receive adequate natural light, but also to help chase away any of those wintertime blues," said Trinklein.

Plants primarily use red and blue wavelengths of light to make food and grow. Artificial light sources that provide those two colors are best for plant growth, he said.

Incandescent light bulbs are not particularly good. They create red wavelengths but are a poor source of blue rays. Such lights also produce too much heat and must be placed some distance from the plants, reducing the light intensity plants receive.

Fluorescent lamps provide one of the best artificial light sources for houseplants. They also are more efficient in energy use and last longer than incandescent light bulbs. Sodium-vapor and metal-halide lamps may be used but are considered too large and bulky for home use.

Many indoor gardeners use cool-white fluorescent tubes. Warm-white fluorescent tubes also seem fairly effective, Trinklein said. Cool-white tubes produce a small amount of red rays in addition to orange, yellow-green and blue rays. However, the red light produced usually is not enough for plants unless windows or other artificial lights produce added red rays.

A few incandescent bulbs in the growing area can furnish needed red rays. So-called 'plant lights' also are available as fluorescent lamps and provide ideal balance of red and blue rays of light, but the light appears purple to the human eye.

In most cases, plants receiving no outdoor light should be lit from 16 to 18 hours each day. If some natural light is received, 12 to 14 hours of lamplight may be adequate.

Most indoor light gardens use standard fluorescent fixtures that accommodate two to four 40-watt bulbs. These fixtures are placed horizontally about 12 inches over the plant canopy. Low light species such as African violet and tropical foliage plants thrive under these conditions, he said.