

This is a printer-friendly version of an article from Zip06.com.

Article Published February 15, 2018

Shedding Some Light on the Latest Grow Lights

Kathy Connolly

In my late-winter world, there's nothing like a sprout on the windowsill or a group of flowering houseplants. But anyone who experiments with indoor gardens quickly learns that a sunny sill is not enough. Lights are required—and not just any light.

If you haven't shopped for plant lights in five years, it may be time to revisit the topic. Things have changed.

“Lighting technology is evolving at light speed, and there are many different levels of advancement,” says Leslie Halleck, a horticultural lighting expert whose forthcoming book, *Gardening Under Lights: The Complete Guide for Indoor Growers*, will ship in July 2018.

Consumer and agricultural trends are driving these innovations. More of us are using houseplants to achieve cleaner indoor air as scientists continue to report success with removal of indoor air pollutants through plants. It's become popular to create quiet “breathing rooms” in both homes and offices, where plants are integral to the atmosphere. The boom in indoor farming also invites lighting innovations.

“Efficiency is improving for fluorescents, LEDs, and conventional high-intensity discharge lamps,” according to Halleck.

A lamp qualifies as efficient, she says, if it converts a high percentage of the energy it uses into plant-usable light rather than heat. (You may find this described with the acronym “PAR,” photosynthetically active radiation.)

Efficiency is not the only yardstick. Plants need different portions of the light spectrum. Needs vary by the type of plant, the time of year, and the plant's stage of maturity. Blue light, for instance, is directly related to chlorophyll production. Red light helps plants flower and produce fruit.

There's also variety in the need for light intensity, the amount of illumination per square foot. Plants that evolved in dry, sunny climates are likely to need very intense light, but plants that evolved in northern climes or tropical jungles may need less.

Indeed, plant lighting can be a complex topic and, sometimes, an expensive operation.

Enter the latest development in plant lighting: horticultural LEDs. These seem like a no-brainer for the home grower, given that standard LEDs save electricity, generate little or no excess heat, last a very long time, and contain no mercury.

While horticultural LEDs offer some benefits, however, they are not always the most efficient or effective when it comes to indoor growing.

“You must get to know the lighting needs of your crop, and consider the room light, to make the best and most efficient grow lighting choice,” says Halleck.

For instance, if your goal is to grow leafy houseplants or herbs, start seedlings, or harvest indoor salad greens, you could use multi-band LEDs, full spectrum LEDs, and high output T5 fluorescent bulbs. Tomatoes and some other fruiting plants, however, may require a much higher volume

of light than can be economically provided by LEDs, perhaps crossing them off the list.

Halleck notes that LEDs can be very useful in a room where there's already a lot of ambient light, such as a sunroom or greenhouse. They can also be useful for extending the duration of light exposure, especially when plants are at a stage where duration is more important than intensity.

As indoor growing gains more attention from hobbyists and professionals, "There are many manufacturers getting into the game," says Halleck. "It's an emerging market, and such products will need to improve the light quantity they deliver to assure good home-gardener success."

Light technology is not all that's changing. Some grow lights are getting a fashion makeover.

Soltech Solutions, headquartered in Bethlehem, Pennsylvania, offers stylish horticultural LED spot lamps. According to product developer Michael Planer, the company's American-made Aspect lights offer true full spectrum illumination from LEDs. To the human eye, it emits white light. To a plant, it provides a range of blue, red, yellow, and green light. Aspect lights are designed to light single specimen plants while also adding to room light.

Gardeners Supply Company, headquartered in Burlington, Vermont, offers the Coltura line of LED grow light furnishings. According to spokesperson Claudia Marshall, Gardeners Supply is offering LED alternatives for all its plant light fixtures for the first time in 2018.

Though the topic is a bit complex, horticultural lighting can make all the difference for your indoor plants. As winter moves towards spring, and seed packets beckon, now may be a good time to investigate the latest in plant lights.

Kathy Connolly is a landscape designer, garden writer, and speaker from Old Saybrook. View her speaking schedule or contact her at www.SpeakingofLandscapes.com.