LED Light Bulbs are an Economical and Green Alternative to Other Grow Lights

LED light bulbs last longer, are very energy efficient, and produce beautiful light. The list as to why you should switch to LEDs goes on. But now, even indoor plant growers have a reason to switch.

A Purdue University study by Professor Carry Mitchel and doctorial student Celina Gomez shows that using LED lights instead of the conventional HPS lights (high pressure sodium) for growing tomatoes could give the same yields of fruit from the plants while using 25% of the energy the HPS lights use.

“It makes it really hard for the greenhouse industry to grow tomatoes well in the offseason. We’re trying to change that and make it affordable,” Mitchell said.

LEDs produce much less heat than HPS lights. This means that LED bulbs can be very close to the plant ,which offers certain benefits, “The leaves are photosynthesizing on the lower parts of the plants, and that may be helping with the plant’s energy,” Gómez said. “We’re getting the high intensity of the LEDs close to the plants because they’re not hot like a high-pressure sodium lamp. If you put one of those close to the plants, you’d scorch it.”

Mitchell states that the goal of their research is to bring down the prices of tomatoes to the point where local growers can compete with the cost of tomatoes that are shipped from faraway places. And they are as much a fan of very fresh healthy produce as we are. Cary Mitchell, a professor of horticulture, says, “The average tomato is shipped about

1,500 miles from warmer climates where they’re grown to cooler climates that cannot produce the fruit cost-effectively in the winter. That journey is costly, however, because tomatoes are picked green and ripen during shipping, decreasing quality and flavor. The lengthy shipping distance also adds to the industry’s carbon footprint.”