

HORTI-FACTS

LEDS HELP BOTANY LANE GREENHOUSE GET
A HEAD START ON SPRING FLOWER SALES



Mitch McDonald, owner, Botany Lane Greenhouse

CASE FILE FACTS

COMPANY	Botany Lane Greenhouse
LOCATION	Denver, Colo.
CROPS	Production of annuals, perennials, herbs, vegetables and tropical plants.
TECHNOLOGY	Philips GreenPower LED Flowering Lamps

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Background

Botany Lane Greenhouse was started in Colorado in 2004. Since then, the company has expanded to three production facilities: two in Colorado (Denver and Lafayette) and a third location in McAllen, Texas. The company has a total of 800,000 square feet of greenhouses along with several acres of outdoor production.

Finished annuals, perennials, herbs, vegetables and tropical plants make up 85 percent of Botany Lane's sales. These plants are sold primarily to independent garden centers along with some grocery stores and landscapers.

"At our Texas facility we grow tropical plants including hibiscus, bougainvillea and mandevilla," said owner Mitch McDonald. "We primarily ship them north, but we do have some sales in Texas. Most of the Texas plants are sold directly to retailers with some going through brokers. We also use brokers to sell young starter plants."

Challenge

Botany Lane Greenhouse sells primarily to independent garden centers, landscapers and grocery stores in Colorado. The company was looking for a way to be able to meet the demand from its customers for early spring flowers, primarily petunias.



Solution

McDonald traveled to Ruibal's Plants of Texas in Dallas to see how Matt Ruibal was using Philips GreenPower LED Flowering Lamps to flower petunias for early retail sales. Ruibal found the deep red/white Philips GreenPower LED flowering lamps were the most effective. Dream series petunias that Ruibal provided supplemental light from the LED lamps flowered 10 to 14 days earlier regardless of the variety.

"I saw the flowering lamps being used at Ruibal's in Texas," McDonald said. "That showed me the potential of using the lamps. We installed several of the lamps for spring 2015 production."

"One of the great benefits of flowering petunias earlier under the LED flowering lamps is that the plants are not as leggy," said Mitch McDonald. "Wave petunias have a growth habit like an octopus. Getting the plants to flower sooner means all those branches are shorter."



Benefits

McDonald installed Philips GreenPower LED Flowering Lamps primarily targeting his petunia crop. “We had very good results with Waves and other petunias,” he said. “The plants definitely flowered sooner and had a more compact growth habit. In terms of petunias, they are real easy to time. Two weeks is what we generally saw in regards to earlier flowering with petunias.”

The petunias were lit with LED supplemental lighting for 8 hours daily.

Although petunias were the primary plants targeted for the LED light treatment, McDonald also did tests with perennials. Perennial species that were provided with supplemental LED light included lupine, columbine, poppy, leucanthemum, phlox, lobelia, myosotis, veronica and verbena.

“Perennials were more variable in regards to the results,” McDonald said. “It was more difficult to measure the response times. We tried the lamps on wide variety of plants. In general everything was positive in regards to response to the lamps.”

McDonald said for 2016 he plans to focus the use of the LEDs on the crops he’s growing for early spring sales.

“We can have plants flowering earlier, but we still have to wait for spring,” he said. “We don’t have enough greenhouse space so we have to move the plants outside. The weather in Colorado is very variable and so the plants are on their own once they’re moved outdoors. We either want to sell these plants early or be able to put them outside because they are cold tolerant.”

McDonald is also interested in seeing what effect the LED lamps can have on herbs.

“We have started to grow herbs year round,” he said. “I want to get more growth on the plants to get them to market-size sooner. I don’t know if the light wavelengths of the LED flowering lamps we used for the petunias are going to give us the results we want. I need to talk to the researchers about the use of the lamps on herbs. We may want to try a different lamp with different wavelengths.”

“The big issue on the herbs is we are taking a plant that we are growing for garden sales and now consumers want to grow these same plants indoors. These plants need to be grown differently to maximize their indoor shelf life. People don’t understand that the plants have to be grown differently when they are used indoors.”

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