



PHILIPS

Horticulture
LED Solutions

Case study
Iwasaki Bros., Inc.

Hillsboro, Oregon



Philips GreenPower LED toplighting

With a desire to **lead**
the market, Iwasaki
Bros., Inc. turns to
LED technology



Kathleen Baughman, Operations Manager

“

...we can get **an extra cycle of plants through a greenhouse** and that's **very exciting, very profitable.**”

Jim Iwasaki, Owner and General Manager



Background

Continuing the tradition of a business started in 1916 by his grandfather, current owner and general manager of Iwasaki Bros., Inc., Jim Iwasaki, is always seeking ways to improve his business and as he says, “dominate his category.” Located just west of Portland, Oregon, Iwasaki runs the business with the help of his two daughters; Theresa is Sales Manager and Julie is the Human Resources Manager.

With a focus on providing customers with the highest quality of plant product, Iwasaki Bros., Inc. has grown to be one of the largest wholesale growers of bedding plants, perennials, herbs and hanging baskets in the northwest United States. The business consists of a total growing area of 19 acres. Over 100 greenhouses—a mix of glass and poly—are used to grow a variety of annuals including Gerbera Daisy, Calibrachoa, Petunia, Alyssum, Heliotrope, hanging baskets, vegetables, herbs, a selection of perennials and unrooted cuttings, and seed plug trays.

The challenge

Iwasaki Bros., Inc., is situated in the Tualatin Valley of Oregon where the local climate is influenced by its proximity to the Pacific Ocean. The area is known for its cloudy and rainy climate, especially from November through March and April, which can be problematic for Iwasaki's spring growing and prime sales season.

According to published climate maps, area outdoor light levels in late winter/early spring are quite low, which means inside the greenhouses, measured natural light levels are well short of what is needed to stimulate optimal and speedy growth.

Like many other growers, Iwasaki has relied on HPS to provide the supplemental light needed for the growth of many of their light-loving crops. However, HPS fixtures consume considerable energy and the costs to operate the HPS lights cut into company profits when compared to LED, which is why Iwasaki began exploring LEDs as a lighting alternative.

The solution

In the fall of 2016, Iwasaki decided it was time to begin transitioning from energy-consuming HPS fixtures to highly-efficient LEDs. As Jim Iwasaki admitted, the HPS lights require a “lot of power and a lot of dollars” to keep the lights running for the length of time needed to have plants ready to sell in April.

With the support of Fred C. Gloeckner, a Philips Horti Partner, and a team from Philips Lighting, Iwasaki decided to proceed with a LED demonstration and installation of more than 500 Philips LED toplights in a spectrum of Deep Red/Blue Medium Blue (DR/B MB). The total growing area in which the LEDs are installed covers just over 27,000 square feet or 2/3 of an acre.

The LED modules were installed over three growing areas: unrooted cuttings, seed trays, and finishing.

“

With the LEDs, “the plants are coming in **much more compact and that’s making the transplant supervisor very happy.**”

Kathleen Baughman, Operations Manager

Benefits

Kathleen Baughman, Iwasaki’s Operations Manager, noted improvements in each of the three LED-lit areas.

- Faster rooting by 5-7 days
- Roots grew faster than the tops
- Reduced pre-transplant and post-transplant losses
- Finish crops ready for market 1-3 weeks faster

In side-by-side comparison of Petunia baskets, the Petunias grown under LEDs were ready for sale weeks faster than the Petunias grown under present lighting conditions.

“There has been a night and day difference in these plants from when we didn’t have the LEDs to this year”, said Baughman. “You can see just how much happier the plants are.”

When asked about the bottom-line difference of making the switch to LEDs, Jim Iwasaki commented, “We’ve shortened our crop cycle by up to three weeks, which means we can get an extra cycle of plants through a greenhouse and that’s very exciting, very profitable.”



LED



HPS



Facts

Grower

Iwasaki Bros., Inc.

Location

Hillsboro, Oregon USA

Sector

Floriculture / Ornamental

Crop

Bedding plants, potted plants, and herbs

Solution

Philips GreenPower LED toplighting

Philips LED Horti Partner

Fred C. Gloeckner

Results

- 5-7 days faster rooting of URC
- Finish crops ready for market 1-3 weeks faster
- Reduced crop loss



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