



PHILIPS

Horticulture
LED Solutions

Case study
Florensis

Naivasha, Kenya



Philips GreenPower LED flowering lamp 2.0

No flowering
for motherplants and
high energy savings

“100% LED gives us control to prevent blooming and reduce our eco impact”



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This takes our operations to the next level with over **93% reduction in energy usage and prevention of early flowering**”

Eddy Verbeek, General Manager Florensis



Background

Founded 76 years ago, Florensis supplies professional growers in Europe, Asia, and North America with young bedding plants propagated from both seed and cuttings. The company's head office and primary production site are located in The Netherlands. Its three sites outside The Netherlands – in Kenya, Ethiopia and Portugal – play a major role in the production of unrooted cuttings. Today, Florensis Kenya's modern production facilities cover 14 hectares and are used to produce cuttings for the farm's range of bedding plants, including Pelargoniums, Impatiens, Phlox, Poinsettia, and Chrysanthemum mother stock. As part of their intensive sustainability program, Florensis Kenya started using version 1.0 of Philips GreenPower LED flowering lamps in combination with incandescent lighting in 2010. This significantly improved the quality of cuttings and rooting rates, and reduced energy costs by 80%. Since then they have been working with Philips Lighting and Philips LED Horti partner UFO Supplies to explore the possibility of moving to a 100% LED system.

The challenge

Incandescent lights use a high amount of electricity, 150 Watts per bulb, compared to 17 Watts of the Philips GreenPower LED flowering lamp 1.0, and they are strongly affected by fluctuations in the power supply, which occur frequently in Kenya. These energy fluctuations also greatly reduce the lifespan of incandescent bulbs so they have to be replaced more frequently. The advantage of the incandescent lights is that many different varieties of crops respond well to the light spectrum they produce. Florensis Kenya and UFO Supplies carried out several trials with different LED lighting systems to find one that could be installed in the existing lighting infrastructure and would be less sensitive to energy fluctuations, while providing an optimal lighting spectrum for all of the company's cuttings and rootings.

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Our customers appreciate the improved quality thanks to the prevention of early flowering. **We feel good about further reducing our environmental impact with these energy savings.”**

The solution

The partners found the answer in the next generation of Philips GreenPower LED flowering lamp 2.0. UFO Supplies replaced the current incandescent with this new flowering lamp. It produces a higher output than its predecessor to further drive down electricity usage. This solution was developed as part of the ongoing long-term relationship between researchers at Philips Lighting, staff from UFO Supplies, and growers at Florensis Kenya. There was intensive communication between the parties and field visits to monitor the progress in Kenya. Eddy Verbeek, General Manager of Florensis says, “The advantage of working with Philips Lighting and UFO Supplies is the high level of knowledge and experience they have in defining the right lighting spectrum for different crops. Our entire agronomy department benefited from that.”

Benefits

The existing 150 Watt incandescent bulbs were replaced with the 11 Watt Philips GreenPower LED flowering lamps 2.0 for a 93% reduction in energy usage. This is significant for Florensis Kenya because energy costs are very high here, at around 17 Euro cents per kW. Since the GreenPower lamps have regular fittings, there was no need to change anything in the lighting set-up. The entire system is electronically controlled, making it far less sensitive to voltage fluctuations, so it has a longer lifetime and performs more consistently.

“I didn’t know how much difference it would make to move to 100% LED, but thanks to using the flowering lamp we have seen an improvement in preventing early flowering,” says Eddy Verbeek, General Manager of Florensis. “We have gained more control over our entire lighting system and further reduced our impact on the environment. For us, LED just keeps opening new opportunities to improve.”



Facts

Horticulturalist/grower

Florensis Kenya Ltd

Segment

Floriculture

Crop

Rooted cuttings of bedding plants, Pelargoniums, Poinsettias, and Chrysanthemum mother stock

Location

Naivasha, Kenya

Solution

Philips GreenPower LED flowering lamp 2.0

Philips LED Horti Partner

UFO Supplies BV

Results

No flower induction, more uniform cuttings, higher success rate of rootings, and further energy savings



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