



Thijs and Arie van den Berg



# Case study

# Van den Berg Roses

Location  
Philips Lighting

Delfgauw, the Netherlands  
Philips LED GreenPower interlighting

**PHILIPS**  
sense and simplicity



“The results of the pilot are encouraging. That’s why we are working together with Philips to explore the possibility of applying this light recipe on a larger scale.”



## Background

Van den Berg Roses is a true family business that has been growing plants since the early 1900s. At the end of the 1980s Van den Berg installed lighting above the roses to enable production to continue throughout the winter. Van den Berg Roses Nederland has now expanded into a company that cultivates an area of 120,000 m<sup>2</sup>.

If a company has a long history, this generally means it is constantly looking ahead. In January 2004 Van den Berg started cultivating roses in Naivasha, Kenya. The nursery there covers sixty hectares. The roses Van den Berg produces in Naivasha are all sent to the Netherlands and sold at auction. Since May 2007 Van den Berg Roses has also been active in Kunming in China. Van den Berg grows roses here for the rapidly expanding Asian market.

## Challenge

Despite the company’s long tradition of cultivating in the Netherlands, at Van den Berg Roses they also like to push the boundaries – not just in a geographical sense but also in terms of their own knowledge and expertise. That is

why the company is very interested in Philips’ expertise in the field of LED lighting. The question to which Thijs van den Berg wanted to find an answer was whether interlighting could be used to increase production in an efficient way without having to compromise on the high standard of quality that Van den Berg Roses sets for its roses. Back in 2009 Van den Berg commenced a pilot using LEDs under the plants, which was then changed in May 2010 to a pilot using LEDs installed between the plants. The hope and expectation was that the extra light would lead to a significant rise in the production of high-quality Avalanche roses.

## Solution

Van den Berg started the pilot by combining the LED interlighting with SON-T lighting. And the figures say it all. From December 2010 to July 2011 Van den Berg Roses harvested no less than 23 per cent more roses. The number of stems increased and the total weight of roses produced also rose by 17 per cent. The lamps are

# Pleasantly surprised by 23% increase in production



## Fast Facts

### Grower

Van den Berg Roses, Thijs van den Berg

### Sector

Ornamental plant cultivation

### Plant

rose (Avalanche)

### Location

Delfgauw, the Netherlands

### Solution

Philips LED GreenPower interlighting

switched together, so in the winter they are on day and night. Normally photosynthesis becomes less efficient when more light is applied, but that was not the case in this pilot because the interlighting is positioned half way up the plant and this is where you find the leaves that can deliver the greatest increase in production: they are not yet too old, and they barely receive any light from above. Lower down the plant the efficiency falls again because the leaves there are too old. As it turns out, at higher light levels the combination of SON-T and interlighting gives rise to as much as a 30 per cent increase in production. These excellent results are reason enough for Thijs Van den Berg to investigate whether he can incorporate the interlighting into his business. "The figures are so convincing that I believe in this," says Van den Berg. "That's why I am working with Philips to explore the possibility of applying this light recipe on a larger scale."

## Benefits

Increased production levels and a better of quality of roses is in itself an amazing result, but working together

with Philips offers a lot more than just a product and a result. During the pilot Philips Lighting worked together with Plant Dynamics, Gavita, Productschap Tuinbouw and LTO. The willingness of all of these specialist parties to share their knowledge and expertise has benefitted the growers' business and enabled all of the parties involved to make faster progress. Sharing knowledge with the common aim of achieving more effective production makes working together with Philips a true partnership.

"The combination of interlighting and SON-T can increase production by as much as 30 per cent."

Philips also offers operational financing via Philips Lighting Capital. This enables entrepreneurs in horticulture to take advantage of state-of-the-art innovative solutions based on LED lighting without having to make hefty investments in advance.



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