PHILIPS

Horticulture
LED Solutions

Case study
Neurather Gärtner

Neurath, Germany

GreenPower LED interlighting

Growing summer-tasting tomatoes all year round

Delicious, locally grown tomatoes for our retail customers

We've opened a new product segment of delicious, locally grown tomatoes for our retail customers"

Wilhelm Baum, Co-owner

Background

Neurather Gärtner is the brainchild of four visionary entrepreneurs who are leading authorities in the German vegetable growing industry. Wilhelm Baum, Dirk Driessen, Carsten Knodt and Matthias Draek established the company in 2011, starting with 11 ha of greenhouses without grow lights. Today it has 16 ha of greenhouses, and about 7.5 ha have grow lights, making it the largest facility for growing tomatoes in the Nordrhein-Westfalen region of Germany. Sustainability and productivity are key drivers. The greenhouses are heated with waste energy from a large power plant located just a few hundred meters away. The electricity used for grow lights is purchased as green electricity, to enable a CO_2 neutral production. About 7,000 tons of tomatoes grown on high wires are produced a year. Their buyers include some of the leading supermarket chains in the country. All sales are handled via Landgard, the german growers cooperation. The facilities are equipped with an automated climate control system, automated harvest carts, and a sophisticated production management system which digitally logs and tracks all activities.

The challenge

In 2015, the entrepreneurs began exploring ways to grow tomatoes year-round so they could offer a local for local product in the winter months to their retail customers. By installing grow lights in 2.5 ha of their greenhouses, they could serve the retailer demand. "Making the business case was a challenge," says Wilhelm Baum, co-owner. "Electricity costs in Germany are about three times higher than the Benelux countries, making a grow light system extremely expensive. Germany has the lowest food prices in Europe, so investment costs cannot be offset by raising the cost price." Only a small segment of consumers of approximately 8% is willing and able to pay a somewhat higher price for a regional and sustainable production, which makes the market for a higher priced product limited. The co-owners discussed various options with Philips Lighting, and advisors from their horticulture department calculated a business case for the 2.5 ha installation. These calculations provided input for intensive discussions with the company's retail customers to make this strategic decision. The goal was to expand the growing season across the entire year and strengthen customer loyalty by offering a unique local for local product for their region.

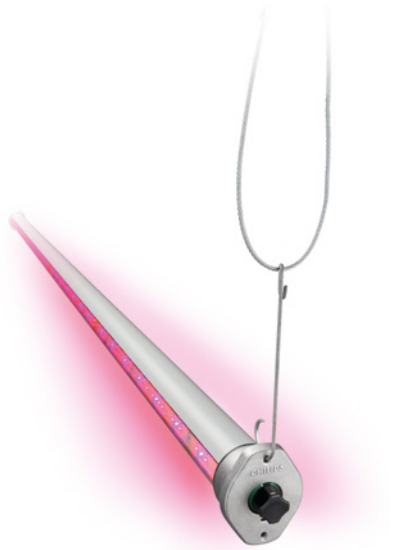
The solution

In 2015, Neurather Gartner became the first German nursery to implement grow lights in 2.5 ha of their nursery. They worked with Philips Lighting's partners, CODEMA - B-E De Lier and Agrolux, to install the system, which combines Philips SON-T HPS toplighting with Philips GreenPower LED interlighting. Baum: "We are very happy with the support we received during this project. A plant specialist from Philips Lighting helped us select the suitable lighting product and light recipe based on the varieties of tomatoes we grow. BE de Lier/Codema and Agrolux were very competent and answered all of the questions we had." Based on the results achieved in the initial installation, the company installed a similar hybrid grow light system in an additional 5 ha greenhouse in October 2017. Thanks to these lighting installations, fresh, summer-tasting Mini Cherry, Mini Cocktail, Mini Date tomatoes are now found year-round on German supermarket shelves in Nordrhein-Westfalen.

Benefits

The first crops were planted in the new 5 ha greenhouse in fall 2017 for the December harvest. "We have already harvested the first tomatoes and they have a better color and taste than those grown without grow lights," says Wilhelm Baum. "That means we can offer summer quality tomatoes to our customers in the dark months of the year as a locally grown product which is very appealing for certain consumers who are concerned about food safety and food miles." The first tomatoes were harvested just eight weeks after planting which is about four weeks faster than normal. At the same time, the LED grow lights extend the growing season by four weeks to increase the overall yield per square meter.
"We are very happy with our collaboration with Philips Lighting which is a leader in this field. Our ambition is to become the leading provider of local for local products and they are helping us achieve our goal," says Baum.

> "Philips Lighting helped us make a realistic business case and **select the best light recipes for our crops**"



Philips GreenPower LED interlighting

Facts

Horticulturalist/grower
Neurather Gärtner

Segment
Vegetables

Crop
Tomatoes

Location
Neurath, Germany

Solution
GreenPower LED interlighting

Philips LED Horti Partner
Agrolux
CODEMA - B-E De Lier

Results
Year-round growing season, higher yield per square meter. Fresh, tasty tomatoes in the winter months for regional consumers

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