



Press Release

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Philips GreenPower LEDs help Prime Delica to grow healthier and safer crops for 7-Eleven customers in Japan

- Prime Delica's new vertical farm facility in Sagami-hara ensures year-round supply of high-quality lettuce, spinach and coriander
- Prime Delica conducted research with Tamagawa University, CCS and Signify to determine the optimal light recipe to increase vitamin levels and nutritional value of lettuce
- The entire seeding-to-harvest process is automated and can produce up to 3,200 kg of lettuce daily

Eindhoven, Netherlands – [Signify](#) (Euronext: LIGHT), the world leader in lighting, helps Japanese food supplier Prime Delica to grow high-quality lettuce varieties, spinach and coriander all year round using the [Philips GreenPower LED production module](#) range and offer customers of 7-Eleven crops with higher vitamin levels and nutritional value.

Demand for quality

Prime Delica has been a longtime premium delicatessen supplier to 7-Eleven. To meet increasing demand for fresh, healthy and pesticide-free food, Prime Delica built a new large-scale vertical farm in the city of Sagami-hara in the Kanagawa prefecture, Japan.

"It's difficult to get a good quality and stable food supply from the open field due to the effect of climate change on crop growth," said Mr. Kazuki Furuya, President of 7-Eleven. "We believe the Sagami-hara vertical farm is a great step to guarantee safe and healthy food for our customers."

Backed by research

"We always aim for the best quality crops and want to guarantee customers a stable supply of healthy vegetables," said Masayoshi Saito, president of Prime Delica. "LED lighting makes it possible to steer the cultivation process by adjusting the color, duration and positioning of the lighting. After years of research with Tamagawa University, CCS and the plant specialists at Signify, we have found our recipe for growth with Philips GreenPower LED production modules, which allow us to fully control the growth cycle of our crops with the right lighting strategy."

High value crop

Prime Delica uses different light recipes at different growth stages for each of the crops, with a pre-harvest treatment to increase the vitamin C level to meet functional food requirements. Apart from the premium quality, crops coming from their vertical farm also have a much lower bacterial count and are grown using no pesticides, a big advantage for 7-Eleven.



“We do not use any pesticides because our crops grow in a closed environment, which also means there is no air contamination,” explained Mr. Saito. “Our crops can be delivered to 7-Eleven stores within 48 hours from harvest and are very fresh and full of vitamins. The cost price per crop is higher than in the open field. However, the overall costs of processing are vastly reduced in terms of logistics, checking and washing with very little waste. It’s a cost reduction mechanism if we consider the factory in total.”

Increased automation

Prime Delica has automated the entire process from seeding to harvest, minimizing manual operation time and improving the hygiene of the crops. Robots carry out logistical operations. A total lettuce growth cycle (frillice, red leaf and bimittuze varieties) from seeding to harvesting now only takes about 39 days, compared to 70 days in the open field. Production can even reach up to 3,200 kg of lettuce a day.

The new Sagamihara facility started operating in January 2019, and the company is looking to expand further in 2019 and 2020. Prime Delica is considering to grow other crops like strawberries in similar vertical farm facilities in the future.

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About Signify

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