

# Tomatoes with extra vitamin C via LED lamps

May 9 2013

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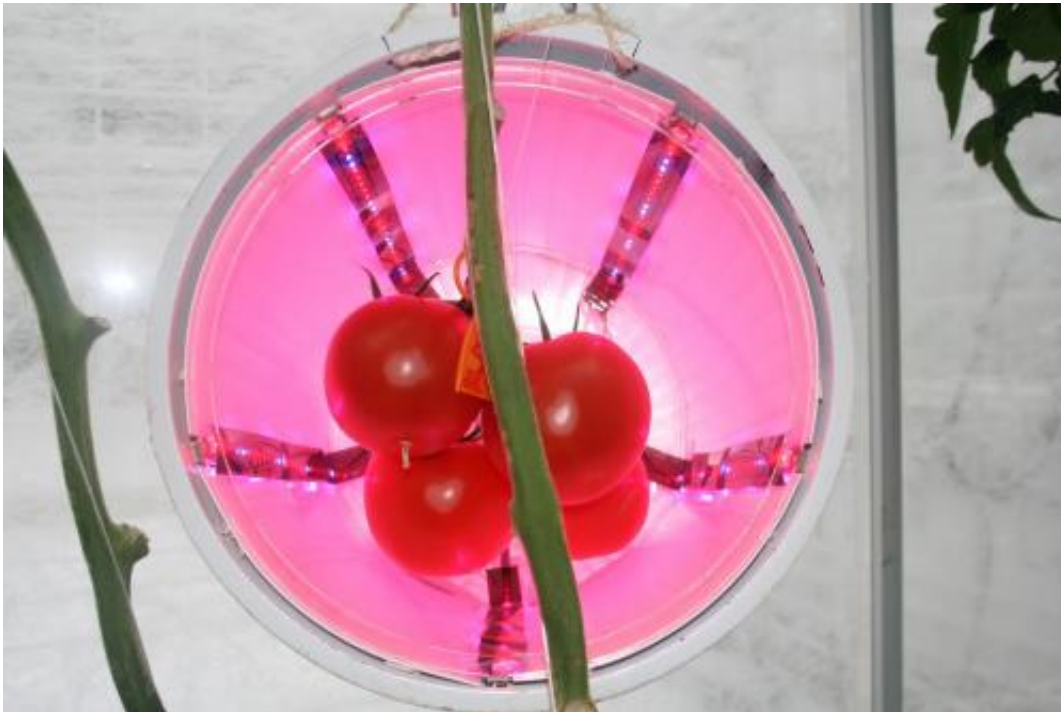
(Phys.org) —Tomatoes can contain more vitamin C if they are exposed to extra light from LED lamps while growing on the plant. This has been proven by research by Wageningen UR Greenhouse Horticulture in collaboration with Philips. The partnership will be continued in a joint facility for research into the application of LED lamps in horticulture (IDC LED), which will be opened in Bleiswijk (NL) on 16 May.

Wageningen UR studied several [tomato varieties](#) and various intensities of light. In their work, the scientists used special LED modules that were suspended between the plants around the tomato clusters. These tomatoes normally hang in the shade as they grow beneath the leaves, a little below the top of the plant. The LEDs therefore exposed the tomatoes to a little extra 'sunlight'.

In the tomato variety that showed the strongest reaction, the tomatoes receiving extra light from the LEDs contained up to twice as much vitamin C as the tomatoes not exposed to the [LEDs](#). The doubling of the vitamin C level was achieved with an extra dose of light similar to a quarter of the natural [light intensity](#) on a sunny day.



Wageningen UR Greenhouse [Horticulture](#) performed its research within the framework of the project Gezond uit de Kas (Health from the Greenhouse), financed by the Dutch Ministry of Economic Affairs. In its research, Wageningen UR Greenhouse Horticulture collaborated with Philips, which is active in the field of LED lamp innovations in horticulture.



Research started this year in cooperation with companies from across the horticulture chain is studying how the [nutritional value](#) and flavour of tomatoes and other vegetables and fruit can benefit from the use of LED lamps. A study into the preferences of consumers is used to determine the focus of the research.

On 16 May, Wageningen UR Greenhouse Horticulture and Philips will open a joint facility for research into the use of LED lamps in [greenhouse](#) horticulture in Bleiswijk. Called the Innovation and Demonstration Centre for LED applications in horticulture (IDC LED), it will be open to the public on the afternoon of 16 May.

Provided by Wageningen University

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