

C-LED and Biolchim innovate soilless agriculture with high-tech LED lights and nutrients

The partnership between C-LED and Biolchim allows increased output capacity by using LED lights to ensure optimal harvest quality and quantity.

IMOLA, 9 May 2018. LED technology is gaining more and more ground inside greenhouses. This is because it allows customisation of light spectra according to crop type and, at the same time, improves energy efficiency compared to traditional lighting systems.

Latest-generation greenhouses are designed to aid natural growth 365 days a year by using LED lights. Mainly used in autumn and winter, such light lengthens the photoperiod and provides plants with the energy needed to boost vertical growth, production and harvest quality.

C-LED, a Cefla Group company with extensive electronics know-how, has designed and developed a broad range of "growing" lamps. Built by an R&D team with years of experience in the sector, they are then tested together with several Italian and international universities, as well as industry professionals who assess their performance in the field. C-LED lamps can be used in a variety of settings. These include **greenhouses for growing fruit plants** (such as Solanaceae and Cucurbitaceae, small fruits, edible and aromatic leaf vegetables, micro-greens, ornamental plants) and various types of indoor farming facilities (i.e. those without natural light).

"Today, C-LED, which aims to develop ever-more advanced products", states **Alessandro Pasini**, President of C-LED and Cefla's Innovation Manager, "is helping agriculture make a huge leap forwards via the discoveries being made by its researchers together with its industrial partners. For example, we recently highlighted how energy-efficient LED lamps with highly specific light frequency spectra (photosynthetically active radiation - PAR) modify the normal capacity of plants to absorb nutrients dissolved in the growth substrate".

In fact, one of the main flaws and blemishes associated with use of LED lamps is an early deficiency of certain micro and macro-nutrients; this stems from the accelerated metabolism and consequently enhanced vegetative growth of the plant.

C-LED's partner in developing comprehensive lighting and nutrition solutions for plants in a variety of contexts (*greenhouse and indoor farming*) is the **Biolchim group** (based in Medicina, near Bologna), which leads the bio-stimulant market. Some time ago now, C-LED and Biolchim began a series of studies and tests in their experimental laboratories and greenhouses to develop the range of *crop-specific* bio-stimulants.

Working alongside C-LED, Biolchim is studying a new range of products, mainly for the latest generation of soilless growing facilities, designed to boost output capacity via the use of LED lights, while continuing to ensure excellent qualitative and quantitative yields.

"The main goal of the partnership established by Biolchim and C-LED", continues Antonio Di Nardo, Sales manager of the Medicina-based company, "is to provide soilless farmers with solutions that are ever-more specific and effective, allowing maximization of crop quality and yields. This cooperation is part of the wider 'WIN project' (Worldwide Innovation Network), launched by Biolchim in 2012: this is an international network of partnerships, designed to create innovation for the agricultural sector and structured according to co-creation principles. The quest for innovative raw materials and worldwide experimentation allow us to give agricultural entrepreneurs products of guaranteed safety and performance".

ABOUT US

C-LED is a Cefla company specialised in the design and production of personalised lighting solutions that respond to client requirements. C-LED principally addresses businesses that operate in retail and visual merchandising, interior design, public lighting, growing and industry. The company also develops systems governed by proximity sensors and environmental sensors for interactive communications (proximity marketing) and for efficient energy management of indoor spaces.

www.c-led.it

CEFLA is a multi-business Italian group, founded in 1932 in Imola (Bologna) where it has its head offices and several manufacturing facilities. The Group does business all over the world and has some thirty facilities (of which about half engage in manufacturing) in numerous countries. Cefla operates in four specific business areas: Cefla Plant Solutions (plant engineering in the civil, industrial and energy sectors), Cefla Shopfitting (shop equipment and personalised solutions for retail outlets); Cefla Finishing (machines and complete plants for coating and finishing); Cefla Medical Equipment (for the dental and medical sectors). Cefla's strength stems from its founding principles: strategic vision, long-term planning, investment in technology and innovation, equity-related and financial solidity.

www.cefla.com