



## Colasse, innovator in LED lighting solutions

Colasse is a Belgian company founded in 2006. It designs and manufactures LED lighting frames. Much more than a simple equipment manufacturer, Colasse demonstrates great flexibility and supplies profitable, innovative and custom solutions, meeting the operational needs of its customers and environmental constraints. Colasse forms a real partnership with its customers and offers them complete solutions as their needs and as technology evolve.

Colasse is active in horticulture and the biological applications of light under the brand name **Vegeled™**. The company is also present in the lighting industry (e.g. harbour cranes, hospitals, hotels, etc.) and in the specialised retail business with its **Spotted™** brand. Established in the greater Liège region, the company has more than 650 customers worldwide, including mainly major companies and government research centres. The team includes engineers with complementary experience in industry and agronomy.



Innovative lighting solutions

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# LED solutions for horticultural applications



Innovative lighting solutions

## VEGELED™ HORTICULTURAL LED LIGHTING

Whether you are a fruit and vegetables producer, a research centre or other organisations active in horticulture, your lighting needs are very specific. Colasse has well understood this and developed Vegeled, a range of very efficient, horticultural lighting products based on LED technology. It is the fruit of long years of research and experimentation on the optimisation of horticultural LED illumination of plants cultivated in greenhouses and in the laboratory.

## THE BENEFITS OF VEGELED AT YOUR SERVICE



### Lighting adaptable for every application

Very large range of spectral combinations using custom LED matrices, multi-spectral LED panels and LED strips



### Flux and spectral stability over time

Service lives of 30,000 to 60,000 hours depending on the ambient temperature, with a very slow decrease in luminous flux, without notable change of the spectral combination



### Better luminous efficiency than discharge lamps

Efficiency 5 times higher than an HPI (mercury discharge) lamp, 3.5 times higher than a neon horticultural lamp and twice higher than an HPS (sodium discharge) lamp



### Control of the lighting rhythm

Possibility of modulating the luminous intensity (dimmer)



### Local manufacturing for total quality control

Design and assembly of the majority of products in Belgium, rigorous quality control of raw materials, manufacturing steps and final products



### Technician comfort taken into account

Equipment with monochromatic LEDs can be equipped with a detection radar which interrupts the coloured lighting when the technician is working in the room



### High protection indices for complex environments

Floodlights with an index of IP65 and strips up to IP68

## VEGELED PRODUCTS AND SERVICES

- **Vegeled LED Floodlights, Apollo series** (growing in greenhouses and complex environments)
- **Vegeled LED Floodlights, Pandora series** (growing in greenhouses and environmental chambers)
- **Vegeled LED lighting strips** (growing in environmental chambers)
- **Control systems** (0-10V, Dali, DMX, single interfaces with ARIA and GHK HERBRO)
- **Audit:** site visit to identify the needs and report with proposals for improvement
- **Custom projects:** design of complete systems of artificial lighting to favour the growth of plants and to maintain their vitality (relighting, production of custom kits, etc.)
- **Experimentation:** implementation of equipment and staff for lighting trials on plants



### IRD- RESEARCH INSTITUTE FOR DEVELOPMENT – MONTPELLIER

#### Relamping of growing chambers

The IRD performs applied research experiments, in particular on plants and mosquitoes for helping southern countries. The institute wished to improve its growing chamber lighting, which used ageing, energy intensive fluorescent tubes. Colasse performed a technical study to calculate the type and number of LED systems required for the relamping and supplied the IRD with samples.

Colasse equipped several growing chambers with Vegeled LED strips via a call for tender. Today, the IRD has reduced its energy consumption considerably and has a much more elaborate light spectrum available for its plants. Colasse also supplied measurement kits for a study in an insectarium and relamped greenhouses via a call for tender.



### INRA - NATIONAL INSTITUTE FOR RESEARCH IN AGRONOMY – MONTPELLIER

#### Construction of 3 new environmental chambers

In the framework of a European research contract concerning new studies to develop within the INRA, Molecular Biochemistry and Physiology of Plants (BPMP) research unit, it decided to build 3 new plant growing installations. They had to be both efficient and to have as little impact on the environment as possible via a significant reduction of electricity consumption.

After a meticulous analysis performed by Colasse of the photosynthetic lighting section of the specifications, INRA decided to install 13 LED Apollo floodlights with a red and white spectrum, in each of the 3 chambers. Colasse also supplied a control system allowing its client to adjust the intensity of the lighting. Thanks to this project, the BPMP unit has a new efficient tool for research on Lupins.



### ULG PLANT BIOLOGY DEPARTMENT- GEMBLOUX

#### Renovation of growing rooms, relamping of greenhouses and renovation of environmental chambers

Colasse has conducted various projects on the Gembloux site over the last few years:

- Renovation of old growing rooms: supply of growing shelves and LED strips, modification of electrical cabinets for lighting control
- Relamping of greenhouses: installation of floodlights with red and white spectra to replace discharge lamps subject to breakdowns and installation of a lighting intensity control system
- Renovation of an old, unused environmental chamber: study, supply and installation of LRD lighting fixtures and control system