Colasse

CASE STUDY

Horticulture · Vegeled

Growth chambers & research greenhouses



Colasse relights the IRD growth chambers, saving 45 % on energy

−45 %	6	105	112 200
energy consumption in the growth chambers	growth chambers fitted with Vegeled LED rails	250 W LED floodlights installed in the greenhouses	Wh saved every day in the greenhouses

Starting point

The **Institut de Recherche pour le Développement (IRD)** is a multidisciplinary French organisation working in partnership with Mediterranean and intertropical countries. In Montpellier, the IRD conducts experiments – on plants, mosquitoes and retroviruses, among others – for applied research, with the aim of contributing to the social, economic and cultural development of countries in the Global South.

Research is carried out in greenhouses and growth chambers: closed environments built from cold-room panels, in which the climate is entirely artificial. Ventilation, heating, humidifiers, dehumidifiers and light sources allow researchers to recreate the climatic conditions their experiments require.

The challenge

The IRD needed to relight its growth chambers:

- replace ageing, energy-hungry fluorescent battens with ferromagnetic ballasts;
- find a durable lighting solution compliant with the new safety standards;
- obtain a light spectrum suited to plants;
- reduce energy consumption;
- be able to vary the light intensity.

The solution

Colasse carried out a **technical study** to calculate the type and number of LED fixtures required, then supplied samples of LED battens. The IRD ran successful growth trials before launching a call for tenders, which Colasse won.

Six growth chambers were fitted with **Vegeled LED rails** and **dimmable power supply kits**.



The results

- A **more sophisticated light spectrum** for the plants.
- **A sharp drop in energy consumption**: three growth chambers used to consume 161,280 Wh/day with 216 fluorescent battens and 6 × 400 W floodlights. With Vegeled LED battens, the same chambers now consume only 87,120 Wh/day, **a saving of about 45 %**.
- **Dimmable lighting** thanks to the Vegeled power supply kits.

Other projects at the IRD

Following further calls for tenders, Colasse also delivered:

- the manufacture and supply of **custom kits for a mosquito study** in an insectary;
- the **relighting of greenhouses** for supplementary lighting alongside daylight: 105 LED floodlights of 250 W replaced 89 sodium floodlights of 400 W, **saving 112,200 Wh per day**.

The Institut de Recherche pour le Développement (IRD)

- French public scientific and technological institution (EPST).
- Head office in Marseille and regional delegations, including the Occitanie delegation, which manages the Montpellier centre among others.
- About 500 people at the Montpellier site (figures at the time of the project).

Colasse

Understanding your challenges is already securing your project.
Let's talk.

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