Hortinergy

Climate analysis for
greenhouse project

OPTIMISE THE CLIMATE OF YOUR GREENHOUSE PROJECT

Check our website HORTINERGY.COM

contact@hortinergy.com

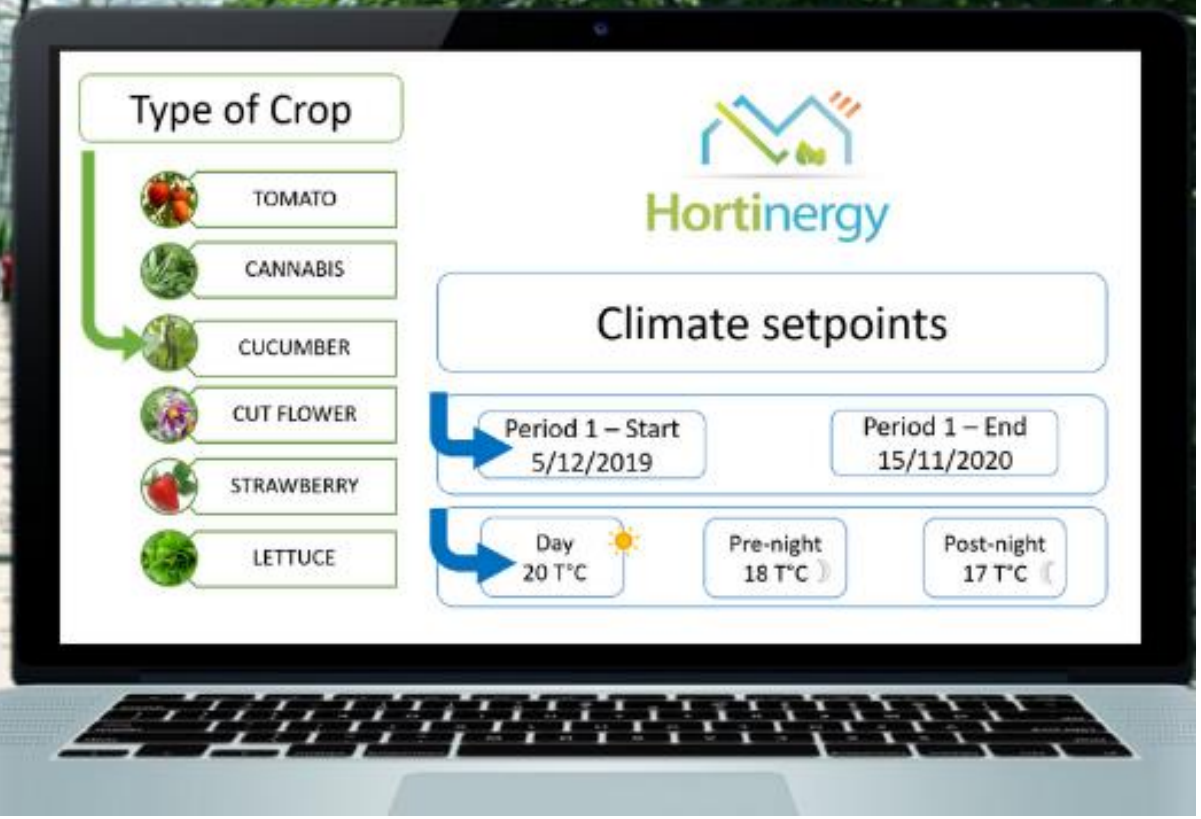
HORTINERGY : Climate modelling software

Compare climate sets

Optimise your climate

Increase profits

WWW.HORTINERGY.COM



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Climate analysis for
greenhouse project

Hortinergy – Climate modelling and analysis models and analyses the climate of a greenhouse anywhere worldwide to quantify and optimise both inputs and climate

This decision-making tool lets you:

- Model the climate inside the greenhouses anywhere worldwide
- Analyze the results according to your requirements
- Compare scenarios thanks to an online interface

Really useful for:

- preliminary construction project
- renovation
- new cultivation method

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Climate analysis for
greenhouse project

Brand new inputs related to climate control and plants:

- Shade and blackout climate screens can be regulated and modelled
- Ventilation, humidification, dehumidification:
  - Closed and semi-closed greenhouses
  - Pad and fan
  - Natural ventilation including insectproof net for vents
- Assimilation light (LED, HPS...)

Main output: climate inside the greenhouse on an hourly basis:

- Temperature
- Relative humidity / Humidity deficit
- Solar radiation and PAR including assimilation lighting
- CO_2 concentration

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Climate analysis for greenhouse project

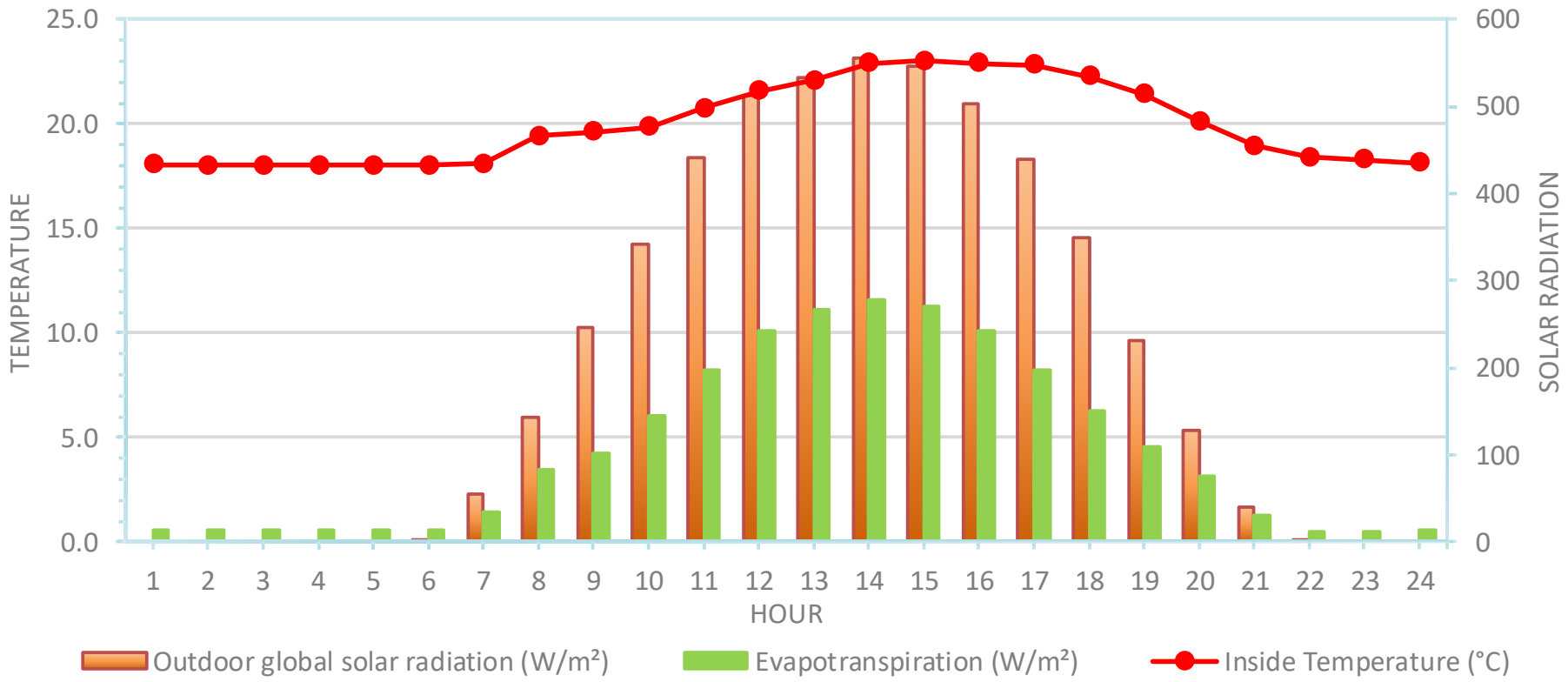
A comprehensive analysis based on hourly climate modelling:

- **PAR** reaching canopy and **assimilation light** required to reach DLI (Day Light Integral)
- Horizontal **temperature gradient** with pad & fan
- **Match light/temperature** during production cycle
- Estimation of **Greenhouse Gas Emitted** (g CO_2/m^2) …

Report and analysis

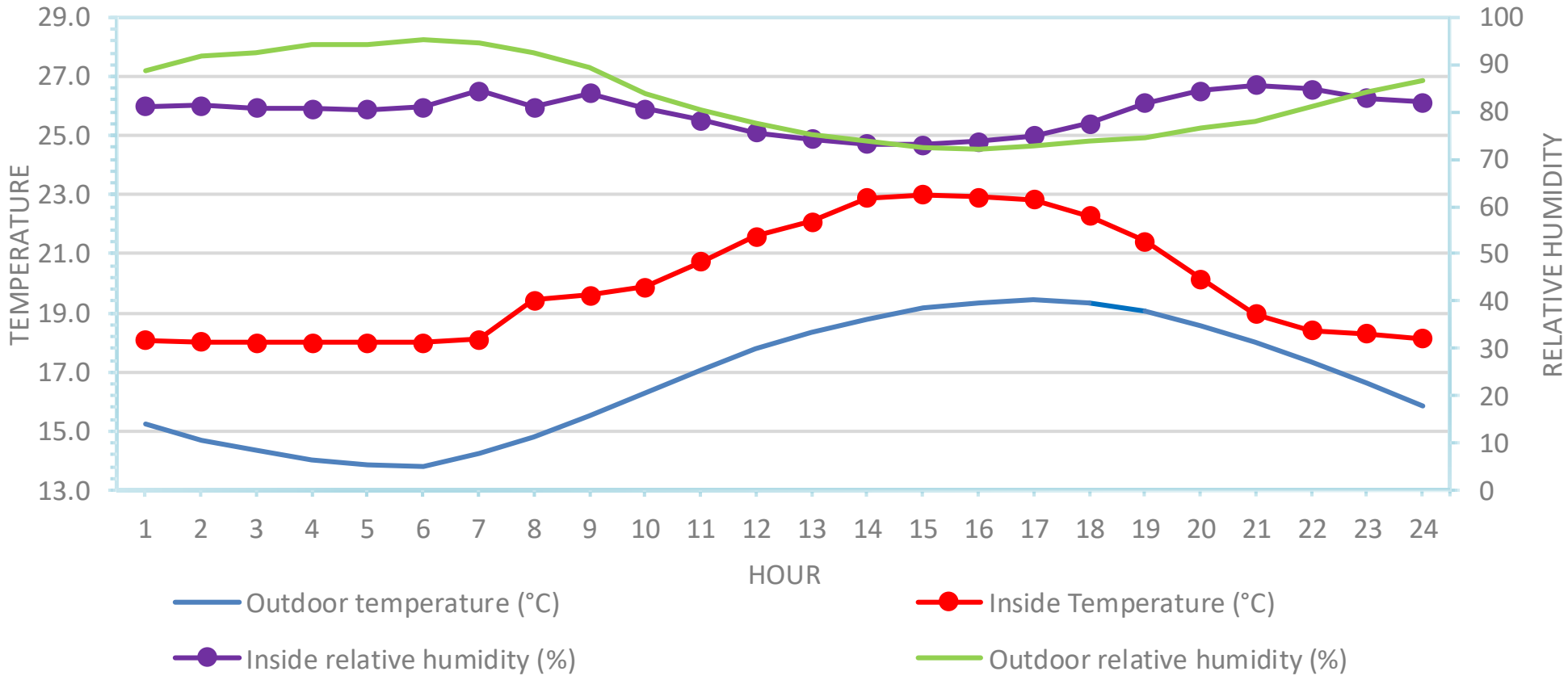
Indoor climate simulation (1/2)

Find detailed charts of the indoor climate for typical days for different months of the year



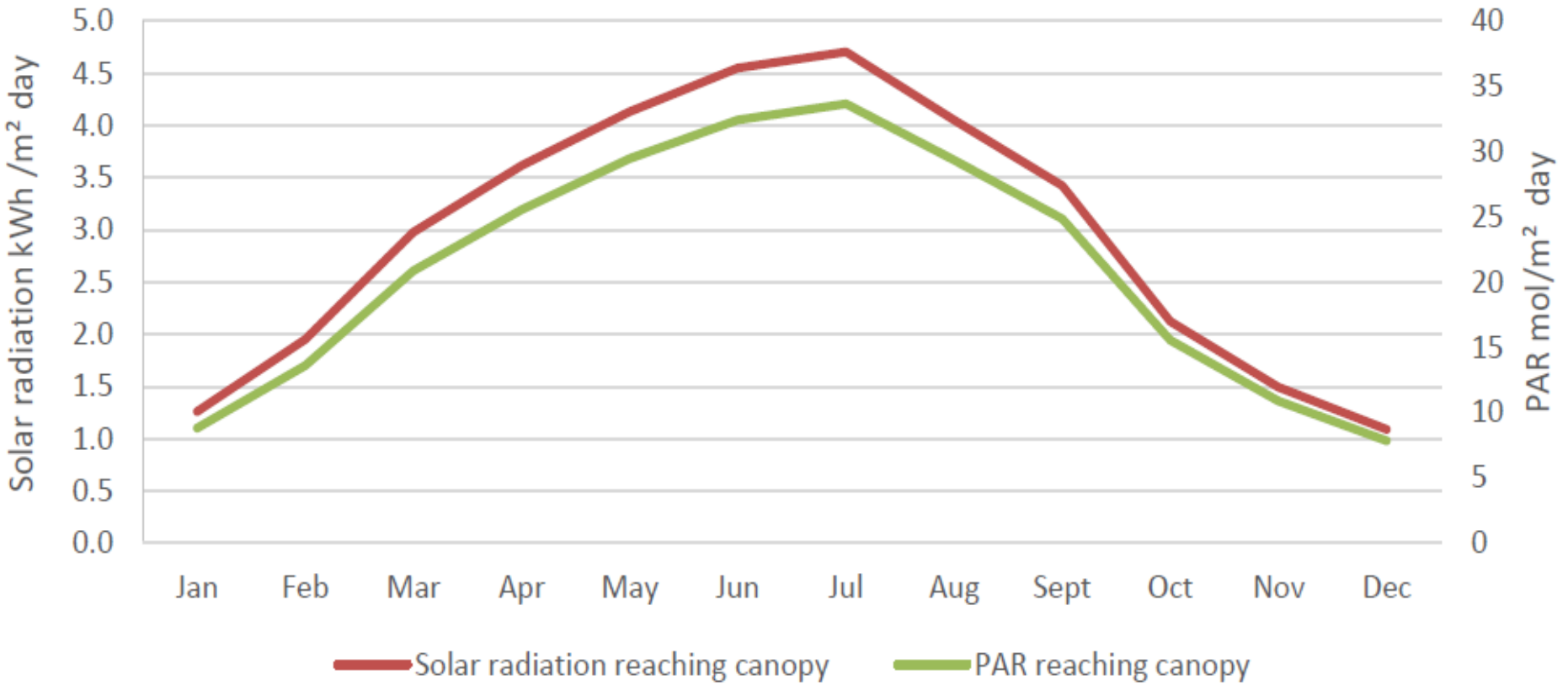
Indoor climate simulation (2/2)

Indoor climate for typical days: Temperature and relative humidity



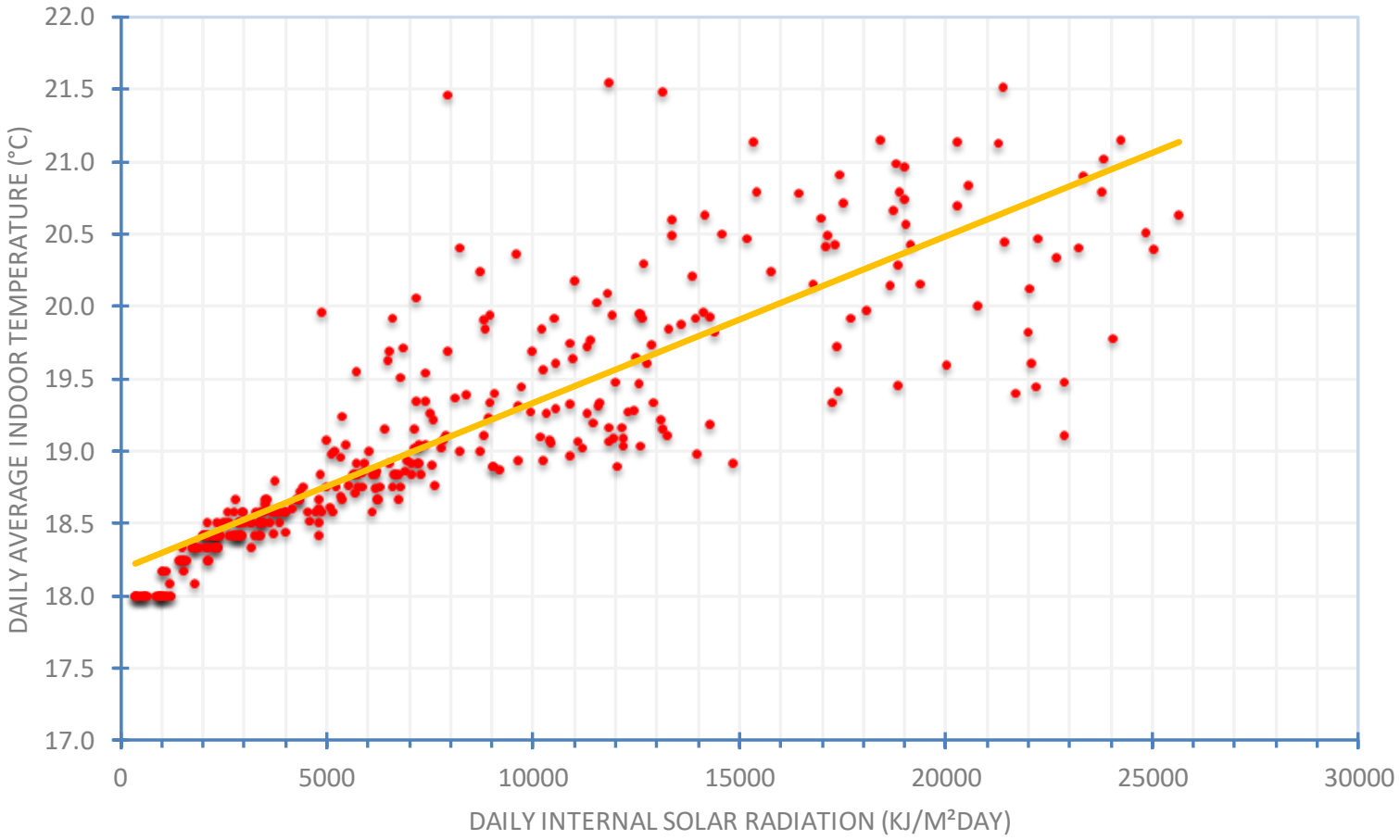
Light

Hortinergy calculates the solar radiation reaching the canopy into the greenhouse



Ratio temperature to radiation

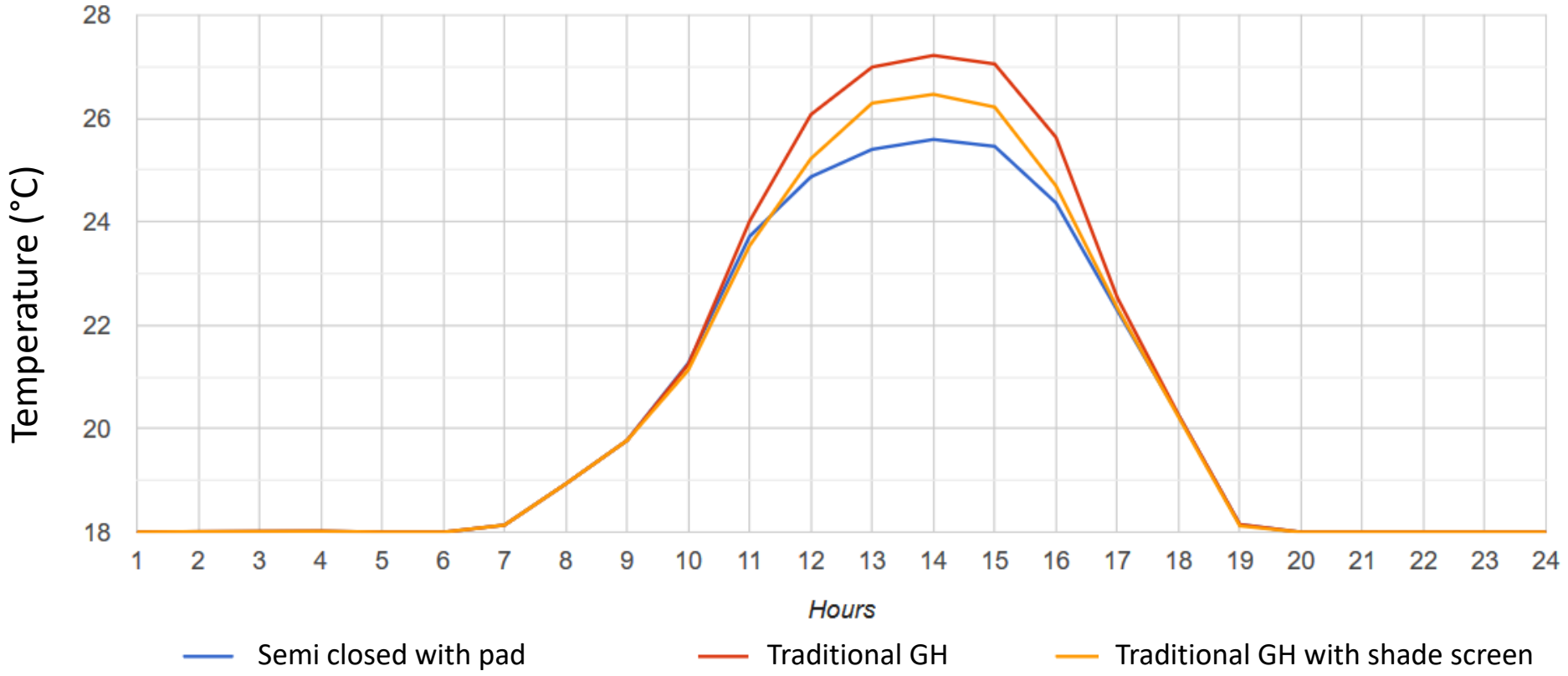
This ratio indicates the way plants grow and develop. It is the ratio between daily average temperature and daily solar radiation



Online comparison between scenarios (1/2)

Make the best decision by comparing online scenarios such as temperature, humidity, light..

Here is an example with temperatures comparison



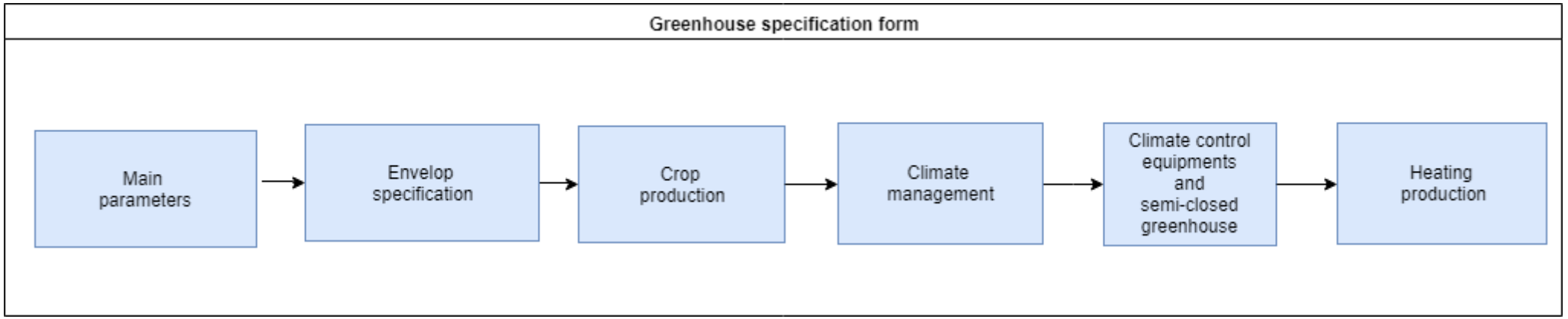
T°C setpoints: Heating: 18°C Cooling / vents opening: 25°C

Online comparison between scenarios (2/2)

Here is an example with PAR (Photosynthesis Active Radiation) reaching crop canopy

Input form

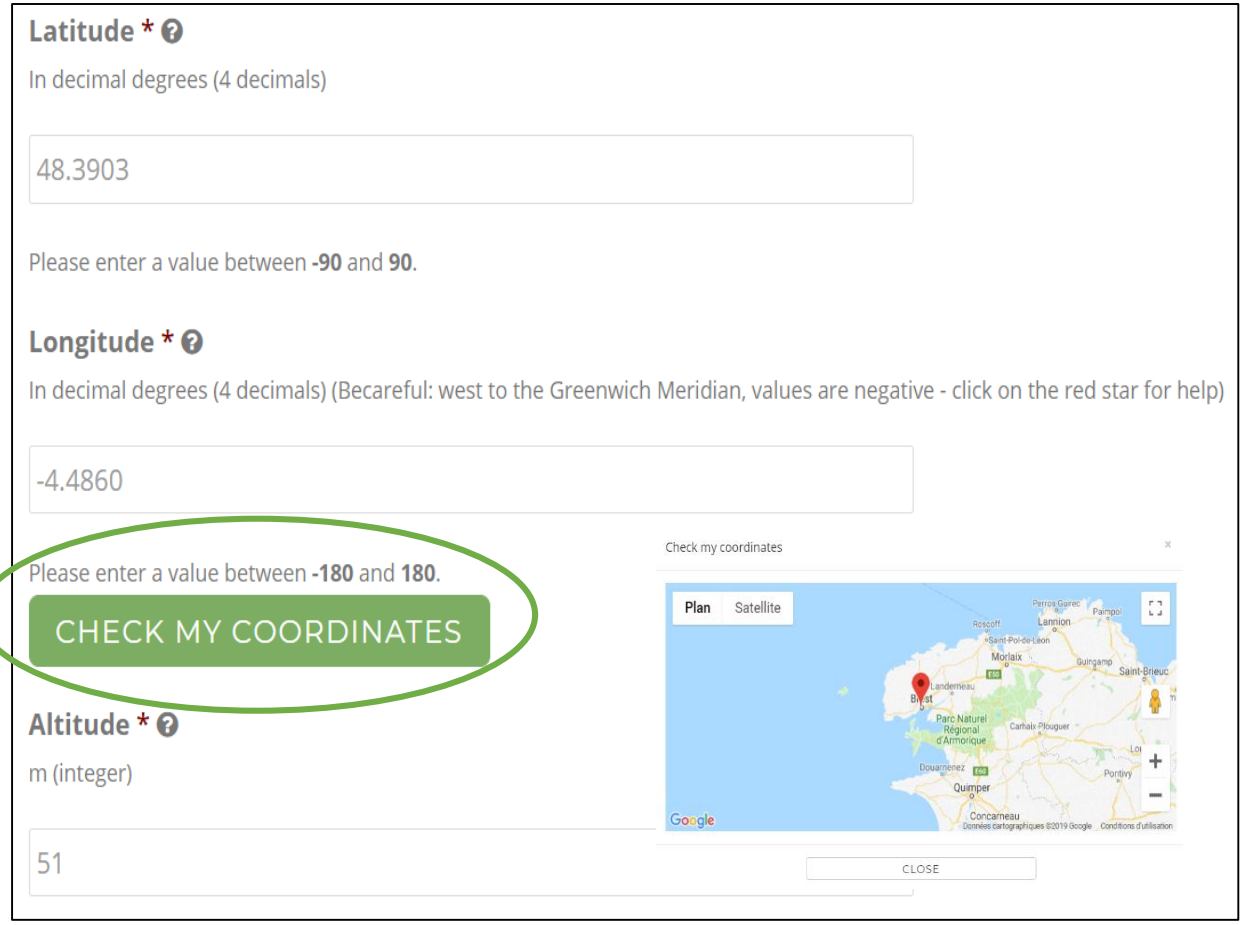
7 parts on the form



Only 20 minutes to fill out the form !

A project is the geographical coordinates of your greenhouse
Each variation you make on this project is **a scenario**

Location of your greenhouse



Type in the geographical coordinates of your greenhouse

Check easily the coordinates by clicking on the button « check my coordinates »

Characteristics of your greenhouse

Type of greenhouse shape * Type of greenhouse shape *

Venlo

Venlo
Large span saw tooth
Flat arch or dome shape
Gothic

Orientation *

(integer) Direction in degrees of the "north wall"

0

Please enter a value between **-180** and **180**.

Length *

In m (2 decimals)

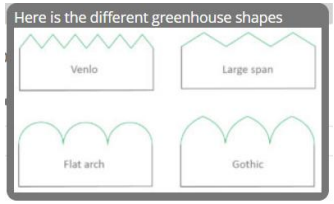
100

Please enter a value between **0.1** and **1000**.

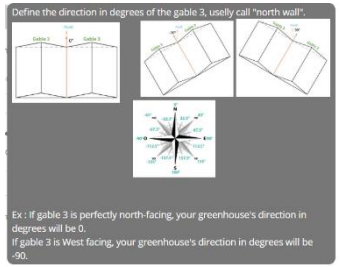
Span - chapel width *

In m (2 decimals) (gutter to gutter)

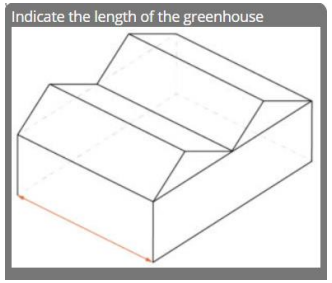
9.60



Enter the type of greenhouse



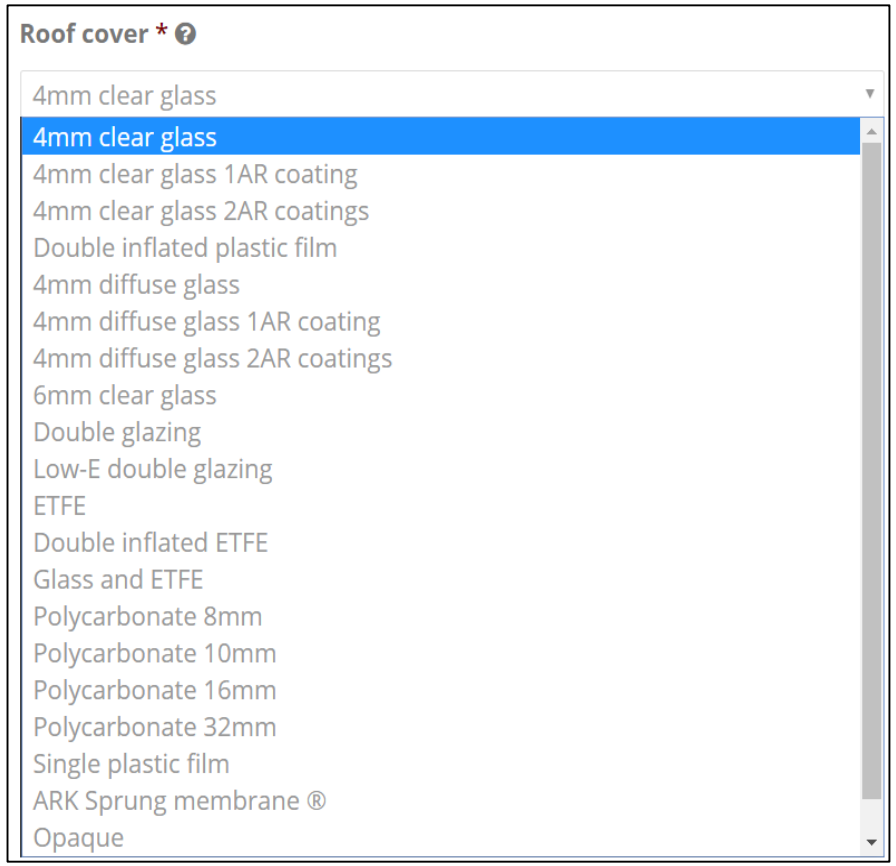
The orientation of the greenhouse



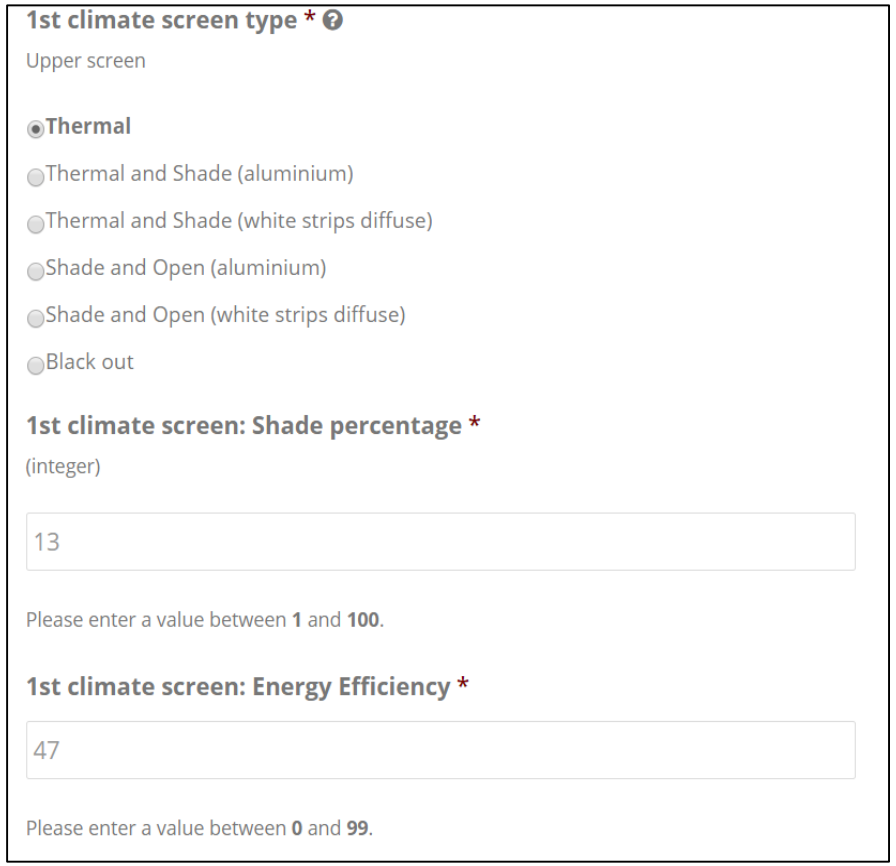
The length of the greenhouse

Cover and screen specification

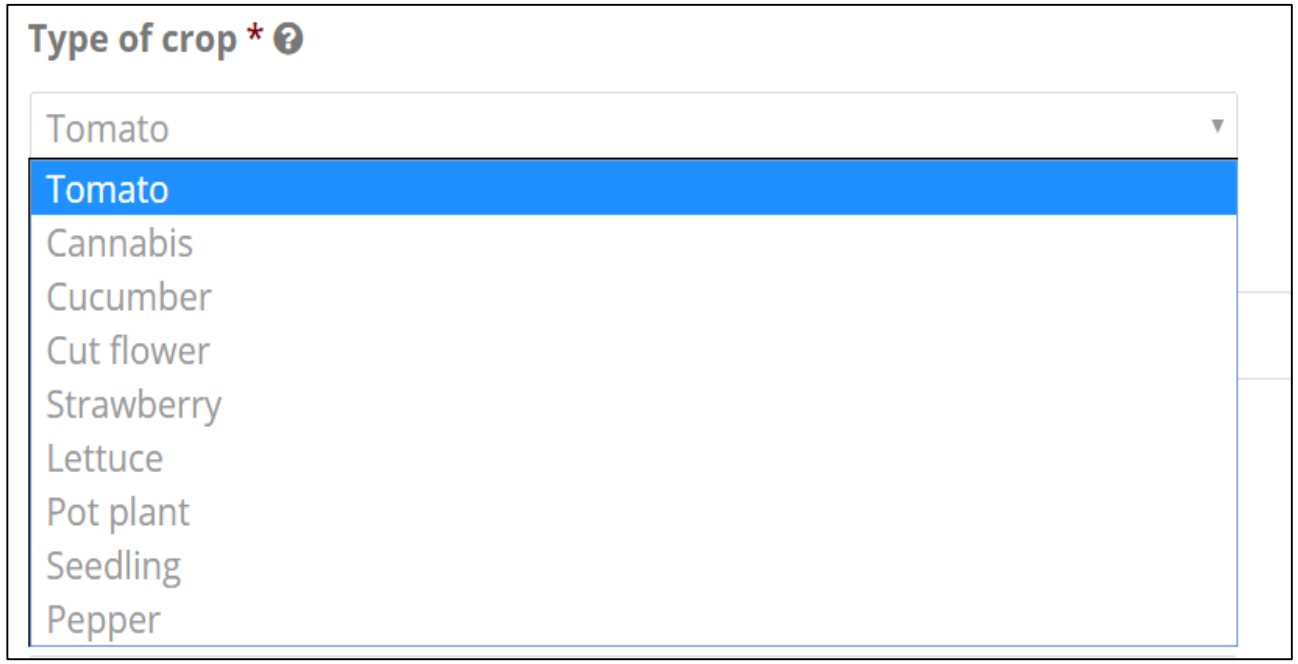
Find the perfect cover for your project in our large library



Choose your screen type from our list and set its characteristics



Your crop production



Quickly fill in your agricultural production from those listed

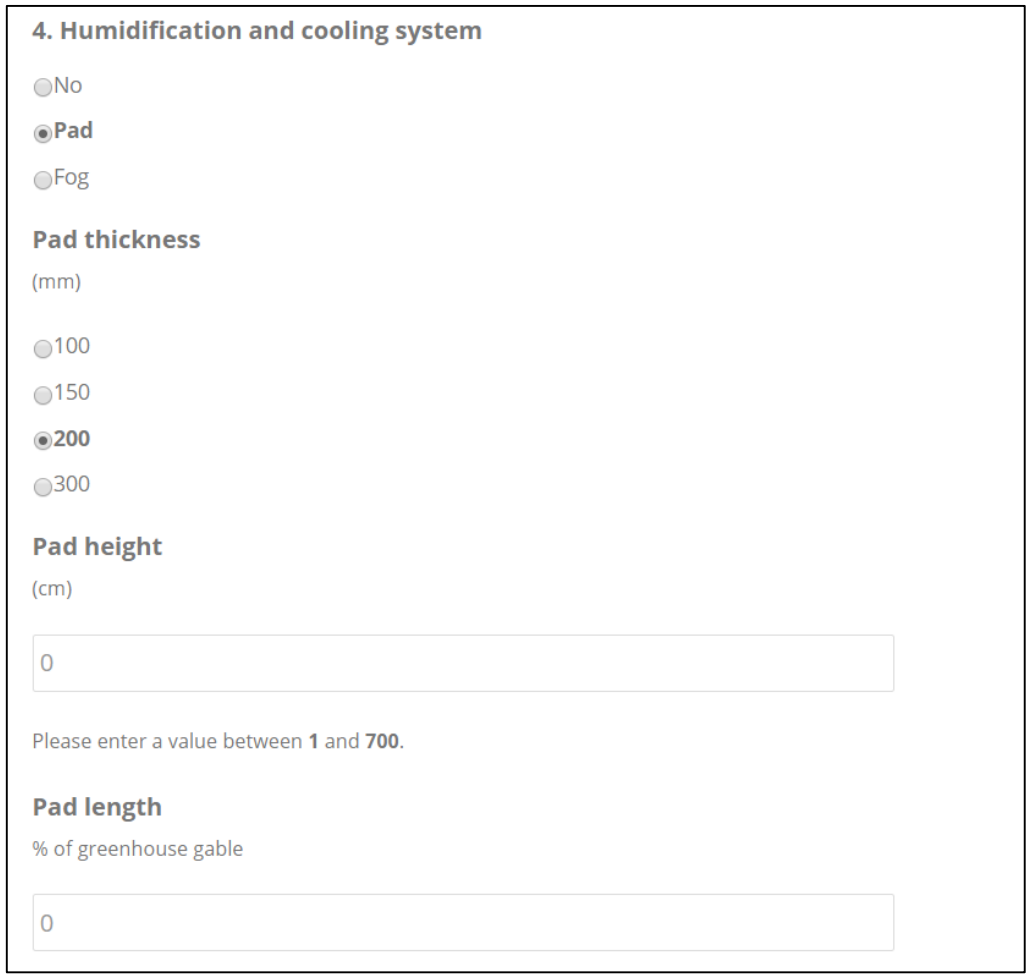
Others will be added soon !

Climate set points

Enter the same parameters as those of a climate computer such as:

- ✓ Heating temperature set points
- ✓ Cooling temperature set points
- ✓ Min / max relative humidity
- ✓ Min / max humidity deficit
- ✓ Min PAR and DLI for assimilation light

Semi-closed and cooling system



Hortinergy calculates :

- ✓ **Controlled ventilation**
- ✓ **Humidification needs**
- ✓ **Dehumidification needs**
- ✓ **Cooling needs**

Find more information on HORTINERGY.COM