



A simple online software  
to design energy efficient greenhouses



Energy is a major expense in greenhouse productions (between 10% and 25%). Several solutions currently exist on the market to help reduce this energy bill. The dilemma is how to choose an optimal configuration adapted to external climate, inner climate and crop(s).



Hortinergy is the first online software that can simulate energy consumptions of an existing or planned greenhouse anywhere worldwide.

It is suitable for a diversity of clients, from growers to agricultural consultants or greenhouse equipment manufacturers. It takes less than 10 minutes to enter your parameters.

The library includes the major equipment available on the market: glass, plastic films, climate screens, etc. Equipment manufacturers can spotlight their branded products for select pre-set parameters to simplify the user experience.

Hortinergy is a decision-making tool to calculate the required dimensions of equipments and optimize the investment: users compare economical and technical scenarios with a simple online interface. A detailed report is sent for each scenario.

Hortinergy allows users to determine optimal configurations for energy savings, which can be up to 50% for renovations, and more than 70% for innovative greenhouse concepts.

In most cases existing software programs offer only qualitative analyses. While a few are quantitative in nature, they are either not suitable for daily use or they provide limited modeling options.



Hortinergy is a real scientific breakthrough with:

- Innovative algorithms that take into account greenhouse-specific parameters, such as: light transmission through transparent cover, external and inner climate, canopy evapotranspiration, and crop types.
- Dynamic calculations generated with GPS position anywhere worldwide.
- Most of the functions of a climate computer regulation: day/night climate, screens, vapor pressure deficit, etc.
- Models that simulate classic equipment (water tank, combined heat and power (CHP), etc.) as well as innovative equipment (semi-closed greenhouse, active ventilation).
- Outputs that include heating consumptions, dehumidification needs, photosynthetically active radiation (PAR) reaching canopy, etc. for hourly, monthly or annual periods.
- Results validated by research centers with measurement campaign in classic and semi-closed greenhouses in France and in the Netherlands.

Multiple add-ons will complete our software.