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Greenhouses to Reduce CO₂ on roofS

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**LES JARDINS
DE GALLY** 

NEWS FROM
GALLY AND THE
UPCOMING
PRODUCTION
SEASON



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The production is about to start in Gally's pilot. A good moment to talk about enhancements in their system. Three main points were highlighted after the first year of production.

HEAT MANAGEMENT AND VENTILATION

Some days of heatwave occurred in August, in the middle of the harvesting period. Unfortunately, it appeared that the greenhouse wasn't well equipped to tackle this issue, the ventilation relying on the wind passing through the doors and windows. Consequently, part of the plants burned, and the production was severely impacted.

Learning the lesson, Gally will install a cooling system in two steps. The first step is the installation of a fogger, allowing to use the wind power to create an adiabatic cooling system. Being relatively easy to install, it will be implemented for this year's production period. The second step will require more time and effort and its set up is planned next low season, after the production finishes and Gally's other activities calm down as well. This step concerns the installation of a forced ventilation system in the East wall, where there is no opening. The combination of the forced ventilation and the fogger will form an enhanced adiabatic cooling system, improving the resilience of the whole production system but not only. As the air will be cooler inside the greenhouse, less heat will be transferred into the support building, ensuring a more comfortable temperature there. This system will also maintain a certain humidity, but the water needs may increase a little since the water won't be collected after the air passes through.



CROPS AND PRODUCTION SYSTEM

Last year, the production window was very narrow as the greenhouse's construction fell behind schedule, being operational in May only, and the production wasn't meant to be pursued through the autumn and winter. So Gally had a window going from May to September to grow as many tomatoes as possible and collect as many data as they could. As a result, they had to find the production system, install it and find crops to plant in the shortest possible time. They used the gutters from their own reuse they expected to install but were lacking additional square meters of production system.



Thus, they set garden plots with substrate in the remaining areas, taking advantage of the high load capacity of the roof. Gally will maintain this production system this year, the biggest change being that the production will start as expected this time! Thus, Gally is already preparing their young plants of tomato and eggplant mainly.

WATER COLLECTION

Gally's agricultural activities being at their peak during the launch of the greenhouse's production, actions needed to be prioritized in order to produce tomatoes in the best conditions while having very few time to do it.

Consequently, the water recuperation system wasn't fully operational last year. This is being fixed as we speak, and this year not only will they reduce the water use, but they will also be able to evaluate more precisely the residual fertilizer concentration in the waste water, understanding the need of their crops and adapting the pumping system.

We can't wait to see the crops in place and this year's harvest !



@LE BUREAU D'ETUDES DE GALLY :
TECHNICIAN INSTALLING THE WATER COLLECTION SYSTEM

PARTNERS



Do not hesitate to visit GROOF website : www.groof.eu

Discover GROOF Guidelines : <https://www.urbanfarming-greenhouse.eu/>

This is a summary of GROOF's experience in designing and building an energy efficient rooftop greenhouse.

