



adapt2change

Adapt agricultural production to climate change and limited water supply **1/11/2013** Vol. no 13

The first cultivation period is under way

The establishment of the hydroponic system in Larisa and Zygi during September 2013 paved the way for the initiation of the 1st cultivation period in Larisa and Zygi, following a series of successful tests which took place last summer (starting on June 2013). The systems have been delivered and are fully operational. During November, tomato and eggplant plantlets will be transplanted inside the prototype greenhouses (their early-stage-cultivation from seeds has begun during September, in order to accelerate the process). Photographs of the installed hydroponic systems are presented below:



The computer of the automated hydroponic system established in Larissa

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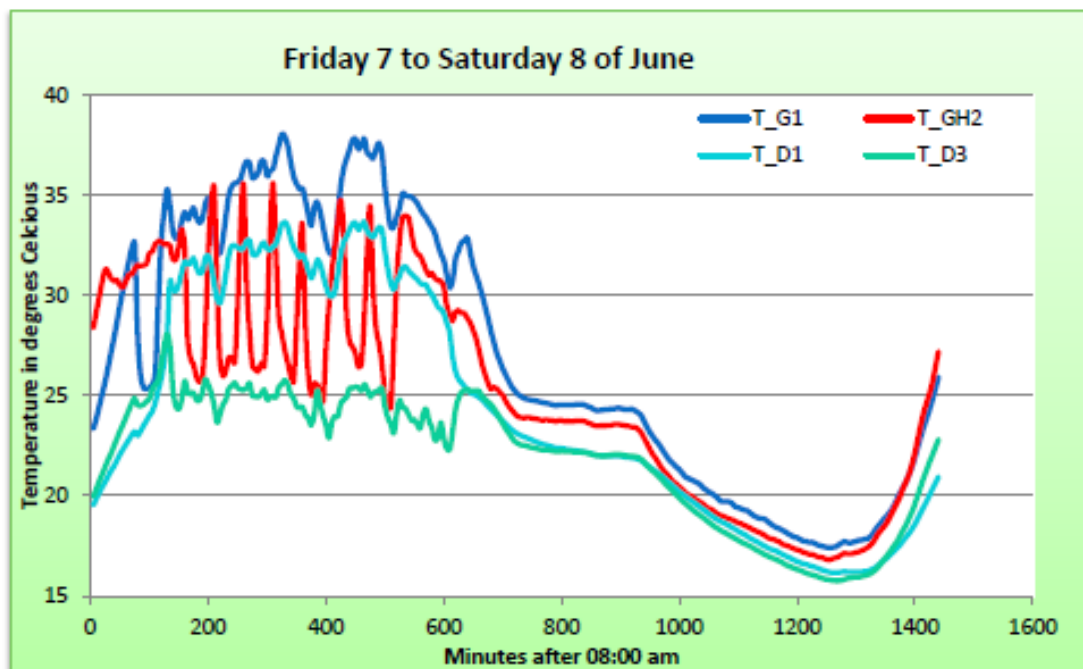
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Testing of the Greenhouse Operation

Recording of Environmental Parameters, Electrical Energy and Dehumidification Water Quantity

Air temperature and relative humidity sensors (5 X CS215, 1 X HMP45C, Campbell scientific) were installed inside both greenhouses, outside greenhouses and inside the airduct (prior, in between and after two heat exchangers). Moreover, one barometric pressure sensor was installed (CS105, Campbell scientific). All measurements were recorded every ten seconds and average values were calculated each five minutes period (using the micrologger CR23X from Campbell scientific, Figure 2.1). Electrical consumption was estimated from the main electricity meter. Dehumidification water quantity was found with direct measurement from water tank. The following graph depicts the operation of the prototype and conventional greenhouse when the emergency cooling and the second on automatic cooling.



Organization of the intermediate Steering Committee Meeting

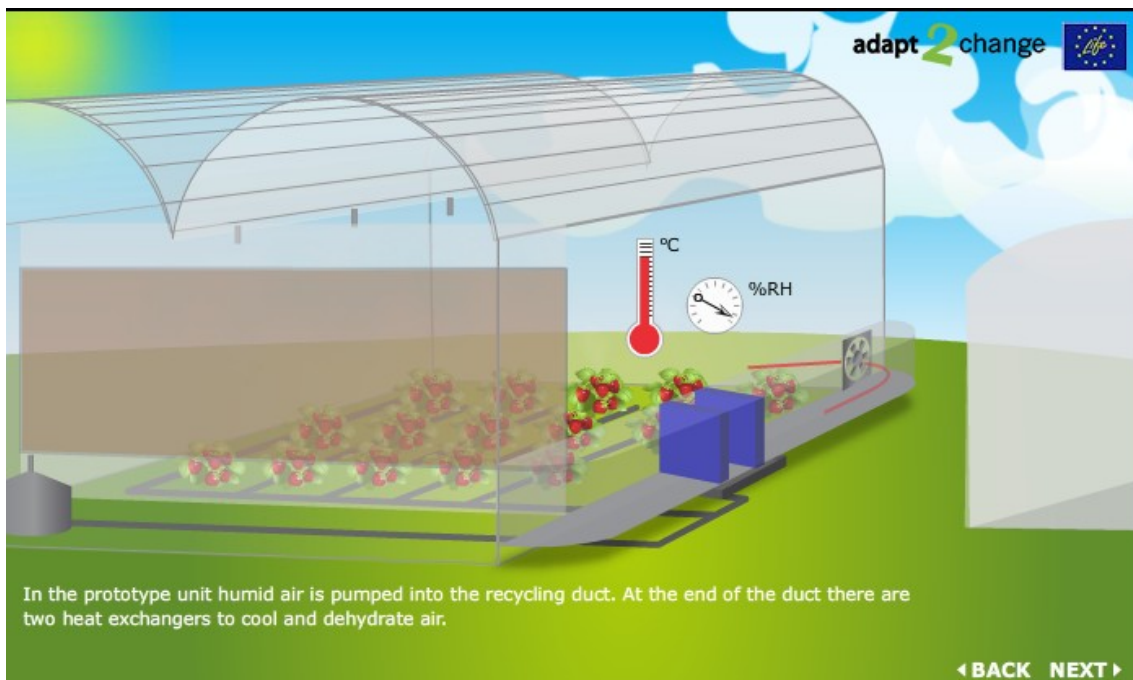
After the installation of the hydroponic systems in Larisa and Zygi, the prototype greenhouses are ready to host the first cultivation period and begin generating results. The partnership is scheduling the intermediate Steering Committee meeting during November 2013 in order to organize its preparations for the submission of the mid term report framed with the payment request.

The prototype Greenhouses: How they work

The official adapt2change website hosts an application that shows analytically the operations that take place at the prototype greenhouses during the winter and summer season. The application provides a step by step analysis of the procedures that contribute to the saving of water and energy consumption.

Moreover, the application is framed by a questionnaire that aims at optimizing the application and evaluating the visitors view about the demonstrated innovative features of the installed greenhouses.

Indicative picture of the summer operation.



The questionnaire

On a scale of 1-5, with 1 being the least favorable and 5 being the most favorable...

- | | 1 | 2 | 3 | 4 | 5 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. Are the presented issues relevant to your professional activity? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. In your region are there any water/energy related issues? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Can the proposed system be applied to your region? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Did the presentations add to your understanding of the topic? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. How would you rate the content of the presentation? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Compared to other water/energy systems, how would you rank this one? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

[Submit Answers](#)

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Project Budget 2.576.548€ - 50% EC Contribution