

NEW GENERATION GREENHOUSE CONTROL SYSTEM



The project has been prepared for the following purposes and supported by the Department of Technology and Innovation Support Programs of the Scientific and Technological Research Council of Turkey

- Producing technology-containing and imported greenhouse control systems by domestic resources
- Extending high-technology greenhouses
- Implementing scientific cultivation techniques in a controlled manner
- Reducing usage of hormones and the like substances
- Facilitating organic agriculture practices
- Enhancing production efficiency
- Extending production over the whole year by achieving stable production
- Decreasing production costs
- Maintaining consistent production conditions to increase market capacity
- Reducing cropping periods and increasing product quality

Capabilities of the Solution

-> MEASUREMENT

System analysis the quantity (DLI) and spectral power distribution (SPD) of natural/artificial light applied in forced agriculture. System is also able to measure and monitor all necessary parameters like Co₂, temperature, moisture, Ph, Ec and photosynthesis rate etc.

-> Evaluation

The system evaluates the adequacies of all necessary parameters with known/preferred agricultural data. Real time conditions and evaluation results can be monitored from any location by using cloud services.

-> Simulation

The system is able to control all parameters including intensity and SPD characteristics of grow light in accordance with the selected growth scenario from agricultural databases.

The developed system has a very advanced measurement capability in terms of cultivation services. All impacts are being real-time measured and the impacts of environmental conditions on growing rate are being monitored on an instantaneous basis. The system can also be utilized for mobile greenhouse and plant factory practices.