



Heliospectra Awarded Research Grant for Continued Development of Patented Bio-Feedback System

(GOTHENBURG, Sweden, 22 April, 2021, at 15:00 CEST)– Heliospectra AB , a world leader in intelligent lighting technology for greenhouse and controlled plant growth environments, is pleased to announce that they have been awarded a research grant from Vinnova, the Swedish Innovation Authority, for the innovation project "Production control and light optimization in greenhouses". The project will be the final step to productizing the company's patented biofeedback sensor for a launch in 2022. The value of the grant is SEK 1,750,000.

Vinnova, Sweden's innovation authority, works to promote sustainable growth and societal benefits by improving the conditions for innovation and by financing needs-based research projects. The organization has approved [Heliospectra's](#) latest innovation project "Production Control and Light Optimization in Greenhouses". After 12 years of research, this project will be the final piece in productizing the Heliospectra's biofeedback sensor later this year, and to be formally launched in 2022.

Heliospectra, together with researchers at Chalmers University of Technology, will develop and productize methods for reading and gathering information about the status of plants based on chlorophyll fluorescence measurements at the foliage level. The information gathered will then be used to control production and optimize the climate in commercial greenhouses and indoor growth facilities, while detecting growth problems at the earliest stage possible.

"Analysis of chlorophyll fluorescence to study the status of plants is nothing new in plant science. There are established methods and ongoing research in the field. The challenge lies in developing methods that can be applied in commercial environments such as greenhouse and indoor cultivation facilities. Here we have a solution underway", says Torsten Wik, Professor in Automatic Control at Chalmers University of Technology.

The ability to have full control over production, optimize the growth environment and detect quality disturbances results in waste reduction and energy savings for growers. According to the United Nations Food and Agriculture Organization (FAO), one third of all food produced in the world for human consumption never reach the consumers' table. This not only means missed opportunities for the economy and food security but also a waste of natural resources. At the same time, the energy savings potential is large as greenhouse lamps internationally accounts for a considerable amount of the total energy consumption.

"The biofeedback system we are developing will take light automation and our way of understanding and communicating with crops to a new level. This innovative technology will allow growers to follow and control growth rate, to optimize light intensity level and lamp use, as well as to identify problems in the cultivation at an early stage", Daniel Båkestad, Research Manager, Heliospectra AB.

The project aims to develop two new product modules that will be fully integrated with Heliospectra's newly launched [helioCORE](#) 2.0, the next generation of light control system. The two new modules will include: Growth Tracking Control (GTC) focusing on production control and Optimal Light Control (OLC) enabling light intensity optimization and light stress detection.

Ali Ahmadian, CEO of Heliospectra AB, comments: "With the launch of helioCORE™ 2.0 we have a solution in place that not only pushes the boundaries for what light automation is today but a stable platform to encompass our future innovation projects and the realization of our bio-feedback patent. If

these results are as promising as we expect, we assess that we are now ready for product development and will start beta testing the first two modules in Q4 of 2021”.

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Heliospectra AB was founded in 2006 in Sweden by plant scientists and biologists with one vision – to make crop production more intelligent and resource-efficient. Today, with customers across six continents, Heliospectra is the global leader in innovative horticulture lighting technology, custom light control systems and specialized services for greenhouse and controlled plant growth environments. Designed by growers for growers, Heliospectra builds customized LED lighting strategies and controls to automate production schedules, forecast yields and monitor crop health and performance with real-time data and response, to deliver the light plants love and the consistent results growers need.

For more information, please visit <https://www.heliospectra.com>.