Philippines launches first fully automated greenhouse fostering Smart Agriculture

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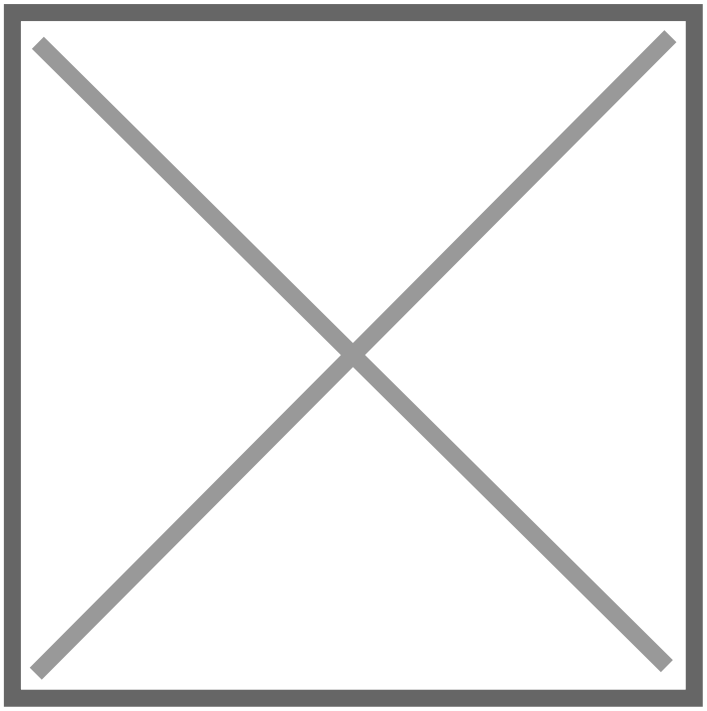

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The Philippine's Department of Science and Technology (DOST 4-A) in Calabarzon has launched a fully automated greenhouse technology with PHP3 million funding support by the Small Enterprise Technology Upgrading Program (SETUP) of DOST CALABARZON through PSTO-Quezon.

The automated greenhouse system provides automatic dosing of nutrient solution and automatic climate sensing for the detection of temperature and lighting, ensuring appropriate and timely irrigation and fertigation management, thereby maintaining a consistent growing environment for the optimum crop growth and quality.

Speaking about the impact of DOST SETUP project, Emelita P. Bagsit, Regional Director of DOST CALABARZON, highlighted that the â??Adoption of Automated Greenhouse System for the Production of Japanese Musk Melon and Other High-Value Melon Varieties of Bukidamara Agri Farm amounting to PHP3 million will facilitate product quality improvement through automatic dosing of nutrient solution and automatic climate sensing, 169% increase in production capacity per production cycle, 15-20% savings of nutrition solutions run off, and 20% savings from production and labor cost".

The greenhouse system adopts a recirculating system for its nutrient solution delivery to the crops. Automated drip irrigation system delivers nutrient solution slowly and directly to the plant root. This will save approx 15 to 20 percent of nutrient solution run-off which will return to the reservoir to be fed to the crops again. The quantity of irrigation, the nutrient concentration, and the proportion of fertigation are adjusted depending on the crop growth stage, the season, and the evapotranspiration rate of the crop to yield high-value melon varieties.

Bukidamara Agri Farm is conducting seminars and training to encourage other farmers in Calabarzon to adopt smart agriculture. The new automated greenhouse will also conduct programs to improve the micro, small and medium enterprises' productivity, and competitiveness by providing them a loan payable in three years.

In particular, the agency is supporting smart agriculture to boost production of high-end melon varieties such as the Japanese musk melon, Yellow Canary, Persian, Piel de Sapo (Spanish), Israeli, and Galia varieties. Automated greenhouse system will be dedicated mostly for Japanese melon while existing rain shelters and greenhouse systems will be dedicated for other melon varieties