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Greenhouse allows a change of atmosphere for plant researchers

A new world-class greenhouse facility to be built at the University of Western Sydney's Hawkesbury Campus will equip the Australian horticulture industry with the technology required to meet the increasing constraints in water and energy supplies.

Credit: University of Western Sydney

While the initial focus will be on tomatoes, later research will look at other crops such as capsicum, eggplant, lettuce, strawberry and cut-flowers.

‘The greenhouse research facility will enable unprecedented control of temperature, humidity, CO2 and light to deliver higher productivity while lowering energy and water inputs,’ says David Moore, Horticulture Australia Limited R&D General Manager.

Given that the nearest known equivalent greenhouse research facility is located in The Netherlands, with the Wageningen Wageningen University Research Greenhouse Horticulture Research Institute, the new facility fills a significant research and education gap in Australian horticulture.

Professor Bill Bellotti, the Vincent Fairfax Chair in Sustainable Agriculture and Rural Development at the University of Western Sydney (UWS) says the high-tech greenhouse facility fits perfectly with the University’s new focus on peri-urban horticulture.

‘Greenhouse crop production is expanding in Australia to meet the increased demand for fresh food that can be delivered quickly to markets. The new facilities at UWS will help growers tap into the latest research and practices to make their operations more efficient,’ says Professor Bellotti.

‘The project will combine the world-class plant science expertise at UWS with cutting-edge greenhouse technology

from Wageningen University in the Netherlands.'

A special feature of the greenhouse will be the provision for interchangeable greenhouse covering materials, allowing manipulation of plant growth and energy balance. Completely closed greenhouse systems will facilitate research into the effects of high humidity and CO2 on plant growth, water and energy use.

Construction of the greenhouse, which is part of a $3.5 million joint initiative between the UWS and Horticulture Australia Limited, will commence in December with the first plantings scheduled for September 2015.

Source: University of Western Sydney