

**WESTERN SYDNEY  
UNIVERSITY**



Hawkesbury Institute  
for the Environment

# Controlled Environment Greenhouses and Insectary

SCIENTIFIC FACILITIES



# Controlled Environment Greenhouses and Insectary

The Institute's greenhouse facilities were recently updated to implement the best in controlled climate technology, including full temperature, CO<sub>2</sub> and light control.

Researchers are conducting experiments to assess the effect of elevated CO<sub>2</sub> on eucalypts, cotton and other plant species. These experiments assess the effects of modified climate conditions on insect, plant and soil dynamics and predict the outcomes from higher temperatures, increased water use and changes in insect pest populations.



Our greenhouses offer a range of climatically-controlled environments for experimentation and manipulation of growing conditions around plants, trees and crops.

These greenhouses are built to the best of modern standards and are used throughout the year to impose conditions of additional heat, lighting extensions, carbon dioxide regimes and drought conditions. They are also used to investigate the interactions between microbes, insects, plants and the atmosphere within an enclosed setting.

Researchers and collaborators at the Institute have access to greenhouse growing space and the climate-controlled growth chambers to support experimental research and precision-controlled plant production.

“Three state-of-the-art glasshouses offer access to precision-controlled growing facilities...”

## KEY RESEARCH PROJECTS

Cotton adapting to a more variable climate



Eucalypt-herbivore interactions under elevated CO<sub>2</sub>



Behaviours of root herbivores in agricultural crops



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