

MODERNISATION OF THE CANBERRA PHYTOTRON: RECENT MAJOR MODIFICATIONS ALLOWING THE FACILITY TO OPERATE AS A PC2 (PLANTHOUSE) FACILITY FOR WORK WITH TRANSGENIC PLANTS

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The Canberra Phytotron was commissioned in 1962 and was Australia's first major controlled environment facility. A range of differing controlled environments are provided: these include 15 glasshouses, 50 reach-in artificially lit growth cabinets, 25 naturally lit photoperiod cabinets and 5 walk-in growth rooms.

Originally designed to cater for experimentation in the disciplines of plant physiology, agronomy and biochemistry, the recent advances in plant molecular biology and the development of genetically modified plants have significantly impacted upon the demands and operation of the Phytotron. Today over 80% of all plants grown within the facility are genetically modified.

To accommodate these changes in scientific direction, the Phytotron has recently undergone a \$A1.5 million upgrade, and now provides a modern environment that is better suited for experimentation with transgenic plants.

Many of the changes have been necessary to ensure that the Phytotron is fully compliant with the regulations set down by the Australian Office of the Gene Technology Regulator. To facilitate work with transgenic materials, other enhancements have included the provision of tissue culture manipulation facilities, clean laboratories and transgenic waste handling areas.