

Portable phenotyping equipment

The APPN-ANU node provides access to portable phenotyping equipment, enabling users to collect high quality physiological and spectral data in controlled environments and field settings across Australia. This infrastructure supports plant, ecosystem and conservation research by offering reliable and flexible tools for measuring key plant traits across diverse environments



Portable phenotyping equipment

Portable phenotyping equipment at the APPN-ANU node supports high quality physiological, spectral, fluorescence and thermal data collection

Portable Photosynthesis Gas-Exchange Systems

Enable measurements of leaf-level photosynthetic CO₂ assimilation, transpiration and stomatal conductance

- LI-6400XT portable gas exchange systems
- LI-6800 portable gas exchange and fluorometry system (*integrated chlorophyll fluorescence capability*)



Li-600 Porometer/ Fluorometer

For measurements of stomatal conductance and chlorophyll fluorescence. Suitable for high-throughput screening.



Thermal Cameras

High resolution thermal imaging with a temperature range of -40 to 650°C (accuracy $\pm 2^\circ\text{C}$) and image resolution of 640 x 480 pixels.

- FLIR T640 (portable, touch-screen display)
- FLIR A600 (fixed, laptop interface required)

Field Spectroradiometers

Collect high resolution spectral reflectance data (from 350-2500nm) at leaf and canopy scales. All available with leaf clip attachment and backpack for field operation.

- ASD FieldSpec 3
- ASD FieldSpec 4
- SVC HR-1024i

(Accessories available on request: integrating sphere, WEDI and Spectralon reference panel)



Chlorophyll fluorescence systems

Assessment of chlorophyll content, PSII efficiency, stress responses, and photosynthetic dynamics.

- CCM-300 chlorophyll content meter
- WALZ Junior PAM chlorophyll fluorometers
- WALZ PAM-2500
- WALZ Monitoring (MONI) PAM



Other equipment

- IR temperature gun
- Spectra Pen

Access and Support

Equipment is available to ANU internal and external users.

ANU users can book via ResourceBooker:

<https://resourcebooker-rsb.anu.edu.au/app/booking-types>.

External users may email appn@anu.edu.au to request equipment. Please use this email to obtain quotes for rental rates.

The APPN-ANU node provides support and user training through equipment induction sessions, facilitated workshops and the creation of quick-start guides and standard operating procedures.

