

Australian Plant Phenomics Facility (APPF)

The APPF is a national facility, available to all Australian plant scientists, offering access to infrastructure that is not available at this scale or breadth in the public sectors anywhere else in the world.

The APPF was established in April 2008 under the Commonwealth Government's National Collaborative Research Infrastructure Strategy (NCRIS).

Key facts

- States: SA, ACT
- Lead institute: The University of Adelaide
- Project status: In progress
- Australian Government contribution:
 - \$15.24 million from the National Collaborative Research Infrastructure Strategy program
 - \$10 million under the Super Science Initiative
 - \$3.3 million for the Australian Plant Phenomics Facility under the Collaborative Research Infrastructure Scheme
 - \$3.44 million from the National Collaborative Research Infrastructure Strategy 2013 program
- Funding partners include the host institutions and the governments of SA and ACT.

Project deliverables

The APPF has two nodes, the Plant Accelerator in Adelaide and the High Resolution Plant Phenomics Centre (HRPPC) in Canberra.

The Plant Accelerator consists of high technology glasshouses which will house over 1km of conveyor systems. The conveyor systems will automatically deliver plants to state-of-the-art imaging, robotic and computing equipment. This will allow continuous measurements of the physical attributes (the phenotype) of plants automatically and non-destructively.

The HRPPC is currently developing new technologies to improve phenomics measurements. These technologies will then be applied for the high throughput screening in the Plant Accelerator. The HRPPC will also verify these technologies and use them in the field.

The aims of the APPF are:

- enhanced phenotyping capability through improved infrastructure
- addressing the impacts of climate change on crops in controlled environments and in the field
- provision of access for Australian plant researchers and breeders to a world leading facility that provides a pipeline for the development of new plant lines from single plant pot-based studies to specialised field investigations

- development of bioinformatics infrastructure to utilise the data generated in the facility
- establishment of infrastructure in the form of data streams that is freely available to the plant research community.

Access

Researchers are able to access APPF at a low cost and on the basis of merit. For more details, visit the [APPF website](#).

Participating organisations

- The University of Adelaide (lead agency)
- CSIRO Plant Industry
- The Australian National University
- South Australian State Government
- ACT Government
- Australian Centre for Plant Functional Genomics