



cropPAL2

Creating Ongoing, Mutually Beneficial Collaboration Between Biological Scientists and Librarians

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cropPAL2



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compendium of crop Proteins with Annotated Locations

ANDS High Value Collections Project, Jan 2016-Jun 2017

Collaboration between:

- ARC Centre of Excellence in Plant Energy Biology
- ANDS
- UWA Library (Library Engagement, Research Publication and Data Services)

cropPAL2

cropPAL1: wheat, barley, rice, maize

- Protein data generated over 10 years by >300 institutions
- Links to global plant catalogues, eg EnsemblPlants
- Protein subcellular locations and protein interactions

cropPAL2 adds: banana, canola, grapevine, potato, sorghum, soybean, tomato



Library involvement

First time the UWA Library has been a formal partner in a research project:

- Fits strategic values of both the Library¹ and UWA as a whole²
- Broad impact

Library contributions:

- Library Engagement: Searching and retrieving scholarly literature, search strategies, bibliographic database tools
- Research Publication and Data Services: Metadata, research data management

1. UWA Library Strategic Directions 2015-2020: http://www.library.uwa.edu.au/data/assets/pdf_file/0003/2778114/University-Library-Strategic-Directions-2015-2020.pdf

2. UWA 2020 Vision, Strategic Plan: 2014-2020: http://www.web.uwa.edu.au/data/assets/pdf_file/0010/2538343/114085-VICCHA-StrategicPlan-v3.pdf

Benefits for Library Engagement



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Embedded in a research team for 18 months, gained insights into how research projects are conducted:

- Balancing research with other tasks, eg reporting, meetings, conferences, writing papers
- How computational biologists search for and manage information
- Co-authorship and citations

Better understanding of how researchers work and better assistance for other researchers

More Library champions!



Benefits for Research Publication & Data Services

Metadata and research data management

cropPAL scientists as senior user group for Library data repository platform migration project

- Problems faced by researchers: minting DOIs, versioning and updating
- Improving cropPAL metadata to increase discoverability
- Research data management of cropPAL1 and 2 data and other projects by Plant Energy Biology

Benefits for the Researchers

Literature searching

Improved efficiency of the cropPAL data collation process:

- Formulating and executing complex search strategies
- Optimised use of section searching in EuropePMC³ (europepmc.org)

Research data management

cropPAL dataset used as a test dataset for a Library project to migrate to a new data management platform:

Develop new approaches to data maintenance and accountability

Outcome: application of findings as the dataset developed

Ongoing collaboration



Building commercial software

- Plant Energy Biology, Library and Office of Research Enterprise
- Identifying data in scientific studies at high precision (machine learning)
- Automating data capture and linkage
- Build on both iterations of cropPAL and the related SUBA projects (SUBcellular protein localisations for the model crop, *Arabidopsis*)

Impact of the cropPAL and SUBA databases

- Citations/secondary citations, altmetrics, network and geographical analysis, website statistics





“the value of a tight collaboration between the local institutional library services and lab-based scientists”

Kylie Black

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