



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

PRIMARY INDUSTRIES SCIENCE AND RESEARCH

Research Operations

The Research Operations branch of the Science and Research Division manages research infrastructure across the State as well as biometric services, diagnostic laboratories and scientific collections. The Branch also oversees animal ethics committees and Centre Directors.

NSW DPI research is concentrated at Centres of Excellence strategically located across the State and linked with the industries and communities that co-invest with their research and development. The Research Operations branch manages this physical infrastructure to ensure DPI provides excellence in service delivery.

Centre Directors

Centre Directors coordinate DPI operations to ensure effective, efficient and sustainable use of resources. The Centres they oversee are located at

Alstonville, Bathurst, Condobolin, Cowra, Cronulla, Dareton, Deniliquin, Glen Innes, Gosford, Grafton, Menangle, Narrabri, Narrandera, Orange, Port Stephens, Richmond, Tamworth, Temora, Tocal, Trangie, Wakool, Wagga Wagga, West Pennant Hills, Wollongbar and Yanco.

DPI is committed to a major reinvestment program at these Centres under the Towards 2020 Initiative. The reinvestment is being funded from the sale of underutilised and inappropriate assets. Modern facilities and equipment, together with a critical mass of good scientists, will help to ensure cutting-edge science for the profitable agricultural, fisheries, forestry and mining industries that are essential for the well-being of regional and metropolitan NSW.

Diagnostic and Analytical Services

The role of Diagnostic and Analytical Services (DAS) is to provide quality assured laboratory testing services in the fields of veterinary pathology, analytical chemistry and plant health.

Clients of DAS are both internal and external. Internal clients include research projects and animal and plant health surveillance programs. External clients include Commonwealth and State Government agencies, local government, rural producers, veterinary practitioners and the private sector.

DAS is also responsible for implementing and maintaining quality management systems and associated certification/accreditation of the department's laboratories and equipment maintenance in research laboratories.

Key research infrastructure

DAS has service laboratory facilities at Wollongbar, Tamworth, Menangle, Wagga Wagga and Orange. These laboratories are equipped with facilities for organic and inorganic analytical chemistry, including trace analysis for environmental and pesticide residues, plant pathology, entomology and veterinary pathology (including the disciplines of serology, histology, parasitology, genetics, bacteriology and anatomical pathology). All the DAS service laboratories are accredited by the National Association of Testing Authorities, NATA.

Biometric Services

The Biometrics unit provides a statistical consulting and training service to research staff of NSW DPI. The unit also undertakes applied statistical research motivated by problems of relevance to NSW DPI or arising from collaborative projects from NSW DPI staff and industry. The Branch plays an important training role in the provision of both basic and specialised courses in statistics, research methodology and the use of statistical packages. Its role is to underpin the research portfolio of NSW DPI with the provision of high quality advice to ensure validity and efficiency for the research effort and expenditure.

Key research collaborations

The Biometrics unit has established several strategic alliances to enhance its research and development delivery, through external student supervision, collaborative projects or commercial agreements. It has links with the University of Queensland, Queensland Department of Primary Industries, University of

Wollongong, University of Sydney, Australian National University, CSIRO Plant Industry, Victorian Department of Primary Industries, BiometricsSA, University of Adelaide, Beef Cooperative Research Centre (CRC), CRC for Viticulture, Bureau of Sugar Experimental Stations, West Australian Department of Agriculture, Rothamsted Research and other organisations.

Scientific Collections

The Scientific Collections Unit has capabilities in the areas of:

- **Taxonomic research**
 - Taxonomic expertise in agricultural insects, fungi, mites and plant pathogenic bacteria;
 - Understanding of Australian biodiversity, particularly in groups of agricultural importance;
 - Use of DNA for bar-coding pest species of insects, mites, fungi and bacteria.
- **Diagnostic research**
 - PCR-based identification of fruit fly larvae and noctuid caterpillars;
 - Molecular based diagnostics for agricultural pests, both domestic and exotic;
 - Development of electronic diagnostic tools delivered via the internet;
 - Polyphasic identification of the citrus canker pathogen.
- **Biosecurity**
 - Management of data on distribution, host range, pest status and diagnostics for agricultural pests and diseases;
 - Electronic database networking for biosecurity.

Key research collaborations

Plant Biosecurity CRC; University of Sydney; Charles Sturt; Macquarie; La Trobe and Curtin Universities; University of Guelph; CSIRO; Australian Department of Agriculture, Fisheries and Forestry; Chinese Academy of Sciences; South African Sugarcane Research Institute; The Natural History Museum, London; USDA Systematic Entomology Lab, University of Maryland; New Zealand Arthropod Collection; Landcare Research, Auckland; and the Victorian Plant Research Institute.

Animal Ethics Committees

Operating under the Animal Research Act, Animal Ethics Committees are located at Orange, Menangle, Port Stephens and West Pennant Hills to assess and monitor all research involving animals.

Key contact

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For more information on NSW DPI Science and Research, see <http://www.dpi.nsw.gov.au/research>