

## Lynne McIntyre



Lynne has a Bachelor of Science in Agriculture from the University of Sydney, majoring in genetics, and a PhD from the Australian National University. Her doctoral studies focused on the development of molecular genetic and cytogenetic tools to investigate relationships between wheat and its relatives. After completing her doctorate, Lynne moved to the USA as an Assistant Professor in the School of Agriculture at the University of Missouri in Columbia, where she continued her work in molecular genetic approaches to crop improvement of wheat and rice.

Lynne joined CSIRO in 1990. After working briefly to investigate molecular biological approaches to improve the digestibility of tropical pastures, she returned to continue her focus on molecular genetic approaches to crop improvement. Lynne has led and continues to participate in research that focuses on understanding the genetic complexity and gene basis of significant traits that influence productivity under biotic and abiotic stress conditions in crops including sorghum, sugarcane, and more recently wheat and on developing genetic tools and knowledge to assist in crop improvement.

Lynne was a Program Leader of the "Tropical and sub-tropical plant biology" program in CSIRO Plant Industry between 2009 to 2014 and is now a Research Director of the "Breeding higher value food crops" program in the Agriculture and Food Business Unit. The goal of the program is "To increase the productivity and value of major Australian food and beverage crops to meet industry requirements through the application of modern plant genetics and phenomics and by optimising the interactions between genotype, environment and management". The program has more than 100 staff based in Adelaide, Brisbane (and Gatton), and Canberra and focusses on improving the productivity and profitability of wine grapes, horticultural crops, wheat, soybean and sugarcane. Recent key highlights from the program include:

- Delivery of elite wheat germplasm containing novel high performing dwarfing genes, and other traits, to all Australian wheat breeding companies.
- Grapevine rootstocks with resistance, quality and yield, released to industry. New wine variety release underway. "Peppery" characteristic of shiraz identified.
- Phenotyping capability for complex drought traits confirmed. Capability extended beyond cereals to grapes, sugarcane and cotton. Novel moderate throughput methodology for measuring root traits developed.

First SNP chip pilot project in sugarcane successful.