

Land pioneer who helped us to grow

Reginald James French
Agricultural research leader
Born: April 22, 1925; Cleve
Died: June 9, 2010; Adelaide

REG French's legacy as an innovative researcher and research director during a distinguished career with the SA Department of Agriculture continues to impact on farming, rural communities and industries. He was also highly respected by the Australian agricultural research community.

As principal soil research officer, chief soils officer and later chief of the land use division, he progressively provided new and strategic insights into sustainable and profitable management of agricultural systems and land resources. As officer-in-charge of the Northfield Research Laboratories, he oversaw the successful development of the important agricultural research centre.

Reg was educated at Mannum and Port Pirie Primary schools, then at Prince Alfred College. He gained a Diploma of Agriculture with honours from Roseworthy College in 1944, winning the Gold Medal (dux) and six other awards. He captained the college cricket team and played football and tennis. He was awarded his bachelor degree in Agricultural Science in 1948 and master's degree in 1967 from the University of Adelaide.

In 1948, Reg joined the SA Department of Agriculture as a soil conservation officer initially stationed in the Mid North and then at Cleve, where he accumulated critical knowledge on soils, their properties, constraints and management needs, enabling him to publish the first soil map of Eyre Peninsula with associated land-management systems.

He co-authored the first publication describing the soils and farming systems of the Northern and Yorke Peninsula agricultural regions, publications circulated widely to farmers.

Reg began his research career in 1957 comparing the benefits of long-term and short-term fallow systems used for cropping cereals. His findings from 25 experiments clarified how these fallow systems stored soil moisture to increase wheat yields.

These studies stimulated his interest in how crops used stored soil moisture and rainfall to produce grain.

Working with departmental colleague Jeff Schultz, he developed the landmark concept for estimating *Crop Water Use Efficiency*. This concept, now known as the French-Schultz Model across Australia, was rapidly adopted by farmers and rural industries.

The concept linked growing season rainfall to a potential grain yield. If the potential yield, defined by seasonal rainfall and soil evaporation, was not achieved, then yield-limiting constraints needed to be identified and corrected through monitoring crop and soil health.

Reg initiated major research and extension programs to identify the nutritional needs of soils for crop and pasture production.

Soil tests for predicting nutrient status were calibrated and subsequently incorporated into commercial soil-testing services. Nutrient removal in grain crops and pastures was also measured so that nutrients could be adequately replenished.

He initiated a series of long-term field experiments to demonstrate to farmers how different soil management practices and rotations affected soil health and productivity.

In 1980, Reg co-authored a major review of SA wheat yield trends from 1896 to 1964, and suggested new directions for sustaining or improving yields. He co-authored an international review on the benefits from growing annual legume pastures in rotation with crops and promoted these benefits



throughout his career. Reg was made a Fellow of the Australian Institute of Agricultural Science in 1980, was awarded the C.M. Donald Medal by the Australian Agronomy Society in 1987, the Award of Merit from the Roseworthy Old Collegians Association in 1988 and the Prescott Medal by the Australian Soil Science Society in 1994.

He represented SA on the National Soil Conservation Council for 10 years.

Reg retired in 1990 but continued a watching brief on developments in modern farming systems, sharing his knowledge and insights with farmers and researchers. He is survived by his wife, Llyween, whom he married in 1963, his children Andrew, John and Jane and nine grandchildren.

Andrew French, John French,
James Hall and Doug Reuter