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A richly fertile mind

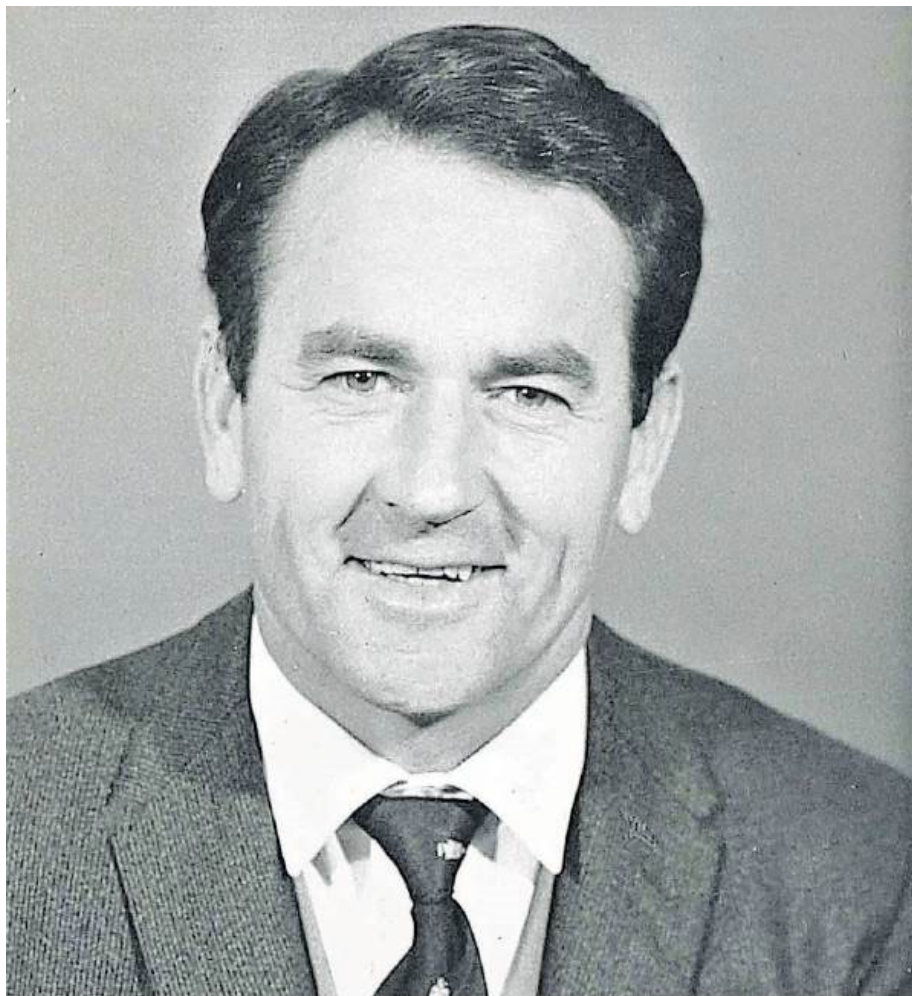
Obituary

James Patrick Quirk

Soil scientist

Born: Sydney, 1924

Died: Perth, aged 97



Professor James (Jim) Quirk's scientific work represents a major contribution to world soil science, plant nutrition and agriculture. He specialised in fundamental and applied science of the surface and colloid chemistry of soils, clay minerals and oxides, particularly in relation to soil structure and plant nutrient availability.

Writing after his retirement in the European Journal of Soil Science in 2013, Emeritus Professor Quirk reflected how gratifying it was that his lifelong research into salinity and water absorption in soils, behaviour of clay and phosphate absorption by wheat had, if anything, become even more relevant.

"In a world where demand for food is increasing, greater agricultural productivity is essential. Coupled with this is the impact of climate change and the pressing imperative to use marginal water resources. I like to think that to this day our work has assisted with these emerging and key challenges by providing strategies for correct management of scarce water especially in areas where salinity is a long-term limiting factor to crop production."

Jim Quirk was born in Sydney in 1924. One of seven children, he attended Christian Brothers Lewisham.

A graduate (with first class honours) from the University of Sydney in agricultural chemistry, he had a distinguished and multifaceted career as a soil scientist, research manager and university administrator.

After graduation, Jim worked at the CSIRO in Adelaide. It was there that he met and married Helen in 1950.

They travelled to England, where he took his PhD. In 1955, he and Dr RK Schofield challenged existing orthodoxy when they published a paper based on his dissertation, "The effect of electrolyte concentration on soil". This pioneering paper resulted in significant changes in irrigation practice in soils with high salinity.

In 1963, the family moved to Perth, where Jim was appointed foundation professor and head of the department of soil science and plant nutrition at The University of Western Australia.

In 1974, Jim and Helen returned to Adelaide, where he became director of the Waite Institute at the University of Adelaide, retiring to Perth in 1989. As director of the renowned Waite Agricultural Research Institute, Jim negotiated with the South Australian government to transfer of the whole of its agricultural research activities to co-locate with University of Adelaide research and teaching endeavours at the Waite Institute campus. This transfer resulted in the investment of \$460 million to fund a significant building program to enhance the research facilities.

In addition to Jim's scientific research, he made a sustained contribution as an academic leader. He served in the governing bodies of several universities, providing advice based upon his own experience in the securing and management of significant funding. He was a governor of the University of Notre Dame Australia, a member of the council of Edith Cowan University, and sat on the professorial board of The University of Western Australia.

Jim also gave readily of his expertise to the Australian government. For a decade, he was the Australian universities' representative on the Commonwealth Wheat Industry Research Council and served for a similar period on the Council of the Australian Wine Research Institute. He also served as a member of scientific missions to India, Mexico and China. He reviewed Australia's total research effort in agriculture and veterinary science for the prime minister's Science and Technology Council; and chaired a committee for the minister for resources and energy that reviewed Australia's water research, policies and funding.

Internationally, he was a consultant on many occasions, most notably as a member of the United Nations two-man team in 1975 which examined the effect of the Aswan Dam on soil fertility and water management in the Nile Valley.

Jim's achievements resulted in numerous accolades. In 1967, the degree of doctor of science was conferred by the University of London and in the same year he was appointed Commonwealth Visiting Professor at the University of Oxford. Subsequently, Jim received the honorary degree of doctor of agricultural science from the University of Louvain, Belgium, as well as honorary doctorates from the University of Melbourne, the University of Sydney and The University of Western Australia.

Jim was also awarded the Farrer Memorial Medal for contribution to the Australian Wheat Industry and the Mueller Medal for contribution to the natural sciences. His recognition also includes election to membership of the French Academy of Agriculture, a body restricted to some 50 of the most eminent international agricultural scientists. He was also elected as fellow to the American Society of Agronomy, Australian Institute of Agricultural Science, Australian & New Zealand Association for the Advancement of Science and Royal Australian Chemical Institute.

In 1983, Jim was appointed an Officer of the Order of Australia for services to agriculture and agricultural research.

Jim continued into his early 80s to mentor colleagues and supervise postgraduate students.

According to colleague Professor Rob Fitzpatrick: "Jim was a motivated and innovative scientist and leader and was never afraid to challenge current thinking. Although his main field of research would appear to be fairly specialised, he ensured that his work was effectively applied to general areas of critical importance. His contribution is an excellent example of the way a first-class scientist perceives the versatility and great generality of scientific knowledge, and of his determination to see his knowledge applied widely and effectively."

Jim passed away peacefully in Perth on February 12. He is survived by son Chris and daughter Margaret, daughter-in-law Sherry, grandchildren Eleanor, Charles, Tom, Jack and Anna and great-grandchildren Amelia, Chloe, Angus, Madeleine, Isobel and Lachlan.

Margaret Quirk MLA, Professor Rob Fitzpatrick & Emeritus Professor Lynette Abbott