

Distinguished scientist

Jeff Ladd

Scientist

Born: June 15, 1931; Adelaide

Died: July 22, 2009; Adelaide

DR Jeff Ladd was a distinguished soil scientist and chief research scientist at CSIRO. As well as being an internationally renowned soil scientist, Jeff was a friend and mentor to CSIRO staff for more than 50 years; he retired in 1995 after 41 years and was honorary post-retirement fellow of 10 years.

Jeff was awarded the prestige Prescott Medal of Soil Science by the Australian Society of Soil Science in 1993 and honoured with a lifetime achievement medal presented to him at a conference in Spain in 1999.

His scientific work over the years represents a major contribution to world soil science and agriculture. Jeff's work provided principles, experimental evidence, methods of measurement and predictive models all of which underpin key elements in the development of ecologically sustainable production of cereals in Australia and overseas.

Jeff has an impressive publication record, which included being honoured with a "citation classic" in 2004 (top 10 most frequently cited publication in science literature).

Born in Adelaide in 1931, Jeff obtained his BSc (Hons) 1st Class in 1952 and MSc at the University of Adelaide in 1954. He was appointed to CSIRO Division of Soils as a research officer in 1954 to study biochemical processes in soils. His early work concerned



the oxidation of hydrocarbons in soils and its possible significance for oil exploration.

Jeff played football for the University of Adelaide and in the early 1950s for Sturt Football Club, kicking 30 goals one year. He married Margaret in 1956.

Jeff obtained his PhD at Sheffield University, UK, in 1959. He was a visiting scientist at University of California, Berkeley, U.S. in 1959-60 and Department of Soil Science, University of Saskatchewan, Canada, in 1971-72.

His studies of bacterial decomposition of the phenolic compounds that characterise humic substances in soils led to his recognition as a world leader in this field and being appointed senior principal research scientist in CSIRO Division of Soils in 1974. He was head of the Soil Biology Section 1987-89 and program manager of Soil Nitrogen and Organic Matter and chief research scientist in 1993.

Jeff examined the pivotal role of microbial biomass in the turnover of soil carbon and nitrogen. He built up a small team whose studies on carbon and nitrogen through the economically important wheat-soil system, earned him a well-deserved place among the world leaders in this field.

His data have been used internationally and to predict the influences of global warming on soil organic matter levels.

He also was a pioneer in establishing long-term patterns of decomposition and release of plant residue nitrogen in Australian soils. These studies were as comprehensive as any in the world and examined the influences of plant part and species, soil properties, climate and tillage on rates.

Jeff quantified under field conditions key processes of the complex nitrogen cycle.

He was a highly modest, motivated and innovative scientist who became an active member of Blackwood Amnesty International, writing letters on behalf of prisoners of conscience.

Jeff Ladd is survived by his wife, Margaret, sons Mike and Simon and four grandchildren.

Rob Fitzpatrick