

Professor Freeman J Cook

Qualifications

Freeman J Cook graduated in 1974 with a Bachelor of Science degree in Chemistry and mathematics. This was followed by a post graduate Diploma in Agricultural Science in 1977 from Massey University. He returned to Massey University on a State Services Grant and graduated with a Master of Philosophy in 1981. In 2003 he graduated with a PhD from the University of Technology Sydney.

In 2005 he was appointed an Adjunct Associate Professor in the School of Land and Food at The University of Queensland which was ungraded to Honorary Professor in 2010 School of Food and Agriculture and has been reappointed to this position on a bi-annual basis. This position is awarded by the University based on his professional standing in his field of research of soil physics.

In 2018 he was appointed Adjunct Associate Professor at Griffith University in the Australian Rivers Institute and has been reappointed bi-annually. This appointment is in recognition of his contribution to the field of hydrology and water quality research.

Professor Cook has published over 350 journal papers, conference papers, manuals and reports and his work has been cited 5237 times by other researchers. He has been an Associate Editor for Soil Research since 2010 and prior to that was a member of the advisory committee from 2004.

Relevant Work History

Following completion of his Diploma in Agricultural Science Professor Cook joined DSIR Soil Bureau in the soil physics section. He measured the hydraulic properties of soils of the Heretaunga Plains and used this data in his Master's Thesis where he modelled the water flow under irrigation in these soils. He spent a total of 16 years working for DSIR and prior to leaving was the head of the soil water processes group. He worked on many aspects of soil physical processes. This included work on land treatment of wastewater and he was a member of the Land Treatment Collective and wrote the soil physics section of the guidelines (Cook, 1990a,b,c; Fenton *et al.* 1990).

In 1987 he was awarded a one year visiting scientist position in CSIRO Irrigation and Freshwater Research. This subsequently resulted in Professor Cook's appointment to the Centre for Environmental Mechanics in 1991 as a research scientist. He worked for CSIRO for 21 years and rose to the position of Senior Principal Research Scientist before resigning in 2011 to form his consulting company. During that time, he was the co-developer of the FILTER land treatment method for soils with poor drainage (Jayawardane *et al.*, 1997; Cook *et al.*, 1998). He was the project leader for investigation of the effects of wastewater irrigation on the playing fields at the Royal Military College at Duntroon and Southwell Park.

Professor Cook was elected Chairman of the International Working Group on Acid Sulfate Soils in 1998 at the IUSS conference in Montpellier. He was instrumental in getting this working group functioning again and in organising the 5th International Acid Sulfate Soils Conference.

He was a core member of the Complex Systems Group in CSIRO leading the research on coupling biophysics, social and economic aspects of regional development. In 2008 he was appointed the research leader for Catchments and Climates group in the eWater Cooperative Research Centre and was instrument in the development of solute and sediment transport components of the SOURCE catchment model.

Since forming his own consulting company Professor Cook has worked on many projects associated with the physics of water and solute transport in natural environments. Since returning to New Zealand in 2017 he has semi-retired but was involved in initially reviewing the modelling of the Te

Anau land treatment wastewater project. This resulted in Professor Cook being contracted to model water and solutes for the Te Anau project by Southland District Council (Cook, 2019). He is currently working with Waikato Watercare via NexGen Water on land treatment of wastewater for Raglan and Te Kauwhata townships.

Due to his expertise, Professor Cook was contracted to assess the wastewater application for the Springhill development (Cook, 2021a) in relation to Hawke's Bay Regional Resource Management Plan (HBRRMP, 2015). This resulted after discussions with the response by Mr Wayne Hodson of Stantec to a report on loading and cumulative effects (Cook, 2021b). The Central Hawke's Bay District Council employed Pattle Delamore and Partners to report on the cumulative effects (Boam, 2021) and Professor Cook wrote a response to this report (2021c).

References

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