The Institution of

Agricultural Engineers

Founded 1938 – Incorporated 1960

## The President’s Award

## Diogenes Antille

CEng CEnv MIAgrE

Dr Diogenes L. Antille, BSc MSc EngD CEng CEnv CPAg MIAgrE M.I.Soil Sci. AIA, is a Senior Research Scientist (Soil Physics) at CSIRO Agriculture and Food, Canberra (Australia), and a Team Leader (Resilient Soils). Diogenes obtained a BSc (Agricultural Engineering) from Universidad Nacional del Litoral (Argentina) followed by a MSc (Soil Management) from the National Soil Resources Institute at Cranfield University at Silsoe, and Engineering Doctorate from the School of Applied Science at Cranfield University (United Kingdom).

Diogenes has expertise in soil and water management/engineering, conservation agriculture, and soil nutrient and fertilizer management. He has over 20 years professional experience in research, commercial work and practical farm management and has worked in Australia and New Zealand, United Kingdom, Ireland, South America, and the South Pacific Islands. His current research

focuses on mitigation of soil compaction and controlled traffic farming, fertilizer use efficiency, mitigation of GHG emissions both from irrigated and rain-fed agriculture, and recycling of bio-resources to agricultural land. His work has demonstrated how innovative soil management and mechanization practices can result in significant reductions in GHG emissions from cropping and significant improvements in nitrogen use efficiency.

As part of the More Profit from Nitrogen Program funded by the Australian Government's Department of Agriculture, Diogenes established cross-industry (cotton, grains, sugarcane, dairy, horticulture) nitrogen use efficiency (NUE) indicators. These indicators can be applied to assess cross-sector productivity, profitability and environmental aspects of N fertilizer use, and for effective communication of NUE research findings and implications. Diogenes is expanding this initial work to be able to develop soil health indicators for Australian cotton-production systems.

Through collaborative work with The University of Southern Queensland's Centre for Agricultural Engineering (Prof Craig Baillie) and Iowa State University's Department of Agricultural and Biosystems Engineering (Dr Mehari Tekeste), Diogenes co-led a project funded by the US Cotton Incorporated (2019-2020) that investigated the role of novel tyre technology in mitigating soil compaction from cotton pickers

Diogenes holds Chartered Engineer (CEng) and Chartered Environmentalist (CEnv) qualifications through the U.K. Institution of Agricultural Engineers, BASIS®FACTS (Fertiliser Advisers Certification and Training Scheme), BASIS®NMP (Nutrient Management Planning) and BASIS® Soil and Water Management Qualifications, Certified Practising Agriculturist (CPAg) through the AG Institute Australia, and is a Professional Soil Scientist through the U.K. Institute of Professional Soil Scientists.

Diogenes served as Chair of the Soil-Plant-Machine Dynamics Committee of the American Society of Agricultural and Biological Engineers (ASABE), and in 2019 he was an ASABE Distinguished Lecturer (<https://doi.org/10.13031/913C0119>). Diogenes chairs the Controlled Traffic Farming Working Group of ISTRO (International Soil and Tillage Research Organization) and is a Member of the Executive Board of ACTFA (Australian Controlled Traffic Farming Association Inc.). Diogenes is Adjunct Senior Research Fellow (Conservation Agriculture and Soil Management) at the Centre for Agricultural Engineering (University of Southern Queensland), and served as Adjunct Senior Researcher (Agricultural Engineering) at the Tasmanian Institute of Agriculture (University of Tasmania).

Diogenes was a Visiting Scientist at Universidad de Buenos Aires and Universidad Nacional de Lujan (Argentina), and NEMPA (The Farm Mechanization Centre of the Universidade Estadual Paulista, Brazil). Between 2014 and 2021, he served as Associate Editor of Soil Use and Management, published on behalf of the British Society of Soil Science. As an external advisor, Diogenes collaborates on projects in the United Kingdom (Harper Adams University), India (Central Institute for Cotton Research), United States (Iowa State University), Fiji (University of the South Pacific), and Argentina (Universidad Nacional de Lujan and Universidad Nacional del Litoral).

Diogenes has published more than 60 journal articles, and several book chapters, conference proceedings and extension material.

Dio works with IAgrE as a member of the Advisory Council and is always available to assist when required.

His continuing work in worldwide agricultural engineering research makes him a very worthy recipient of the President’s Award