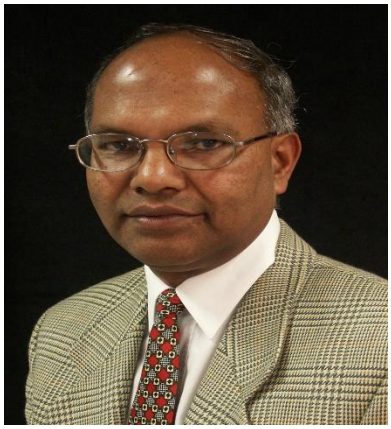
Griffith UNIVERSITY
Queensland, Australia
Australian Rivers Institute

ANROWM
Applied Network for Recycled Organics & Waste Management

Chen's Lab-EBRL
Environmental Biogeochemistry Research Lab

BLACK IS THE NEW GREEN: Biochar application modulates soil health



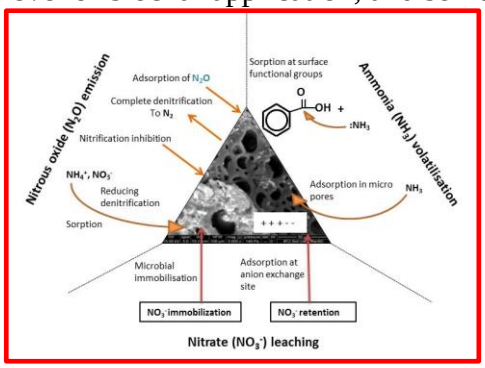
Prof Nanthi Bolan

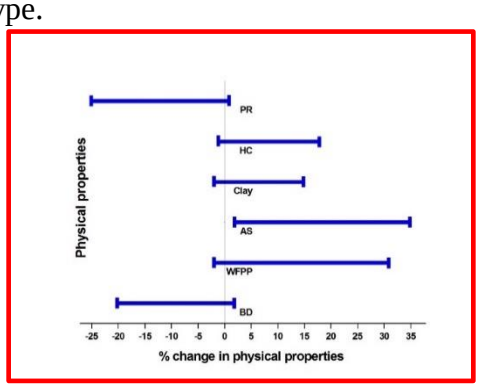
Leader for Program 3,
Soil CRC

University of Newcastle

Abstract

Soil health, as measured by the physical, chemical, and biological characteristics of soil, determines the yield potential of many crops and other ecosystem services. This presentation will review the literature on the influence of biochar application on soil physical, chemical, and biological fertility, and present the results of a meta-analysis of these data from publications. A treatment effect size estimator commonly employed in meta-analysis is the magnitude of an experimental treatment (i.e., with biochar application) mean, relative to the control treatment (i.e., without biochar application) mean. A typical effect size metric is the response ratio or the relative impact on a measured parameter (e.g., soil bulk density) following biochar application compared to that in control treatment. The meta-analysis indicated that biochar application modulates physical, chemical, and biological properties of soils, and the extent of biochar-induced changes depend on the nature and level of biochar application, and soil type.





Biography

Prof Professor Nanthi Bolan's teaching and research interests include agronomic value of manures, fertilisers and soil amendments, nutrient and carbon cycling, greenhouse gas emission, soil remediation, and waste management. Nanthi is a Fellow of American Soil Science Society, American Society of Agronomy and New Zealand Soil Science Society and was awarded the Communicator of the Year award by the New Zealand Institute of Agricultural Sciences. He has supervised more than 50 postgraduate students and was awarded the Massey University Research Medal for excellence in postgraduate students' supervision. He has published more than 350 book chapters and journal papers and is one of the Web of Science Globally Highly cited researchers for 2018 and 2019.

Venue: Nathan Campus, N34, 0.04

Time: Tuesday, 3 December 2019
02:15pm – 03:15pm

Contact Person:

Dr Maryam Esfandbod

Email: m.esfandbod@griffith.edu.au

Phone: 07 3735 7876