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Benefits and Risks of Biochar Use for Soil Ecosystem Services in Agronomic Applications

Guest Editors:

Dr. Evan A.N. Marks

CT BETA Department, University of Vic—University of Central Catalonia, Carrer de la Laura 13, 08500 Vic, Catalonia, Spain

evan.marks@uvic.cat

Dr. Xavier Domene

CREAF, E08193 Bellaterra (Cerdanyola del Vallès), Catalonia, Spain
Department of Animal and Plant Biology and Ecology, Universitat Autònoma de Barcelona, E08193 Bellaterra (Cerdanyola del Vallès), Catalonia, Spain

x.domene@creaf.uab.cat

Deadline for manuscript submissions:
30 June 2021

Message from the Guest Editors

This Special Issue is especially interested in contributions that address biochar effects on more than one soil ecosystem service of contemporary importance to society, such as the following: crop yield, nutrient dynamics, effects on soil biodiversity and their soil functions; dynamics of greenhouse gas emissions from soil; interaction with and dynamics of pesticides and emerging contaminants; soil carbon sequestration applications; and water filtering and storage. Due to the large diversity of carbonaceous materials that can be applied as biochar, and the high importance of their chemical and physical properties for determining effects on soil-mediated ecosystem services in cropping systems, papers should make an effort to include a thorough characterization of the soils and biochar products considered, preferably following IBI or EBC standards, so that the effects can be properly contrasted with other studies, and authors should address the previous literature in this regard.



50397

Special Issue



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Prof. Dr. Peter Langridge

School of Agriculture, Food and
Wine, University of Adelaide,
Urrbrae SA 5064, Australia

Message from the Editor-in-Chief

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Contact Us

Agronomy
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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Agronomy Special Issue, "Benefits and Risks of Biochar Use for Soil Ecosystem Services in Agronomic Applications"

About the Guest Editors



Xavier Domene obtained his PhD in Biology in the Autonomous University of Barcelona (UAB), centered on the use of soil bioassays for the quality assessment of organic wastes routinely used as agricultural amendment. Later, he has contributed to several studies dealing with the risk assessment of chemicals, pesticides and wastes in agricultural soils. Since 2008 he works as assistant professor and then as lecturer in the Ecology Unit of the UAB and as researcher at CREAM. His current interests are soil ecotoxicology in lab and field conditions, soil biology, soil function protection, carbon sequestration in soil, and the benefits and risk of biochar as soil amendment.



Evan A.N. Marks is a Researcher at BETA Technological Center (University of Vic, Spain), where he leads the Soil and Nutrient Management Area. As a soil ecologist, he works at the interface of soil quality, environmental technology and agriculture. His research has addressed the agricultural utility of biomass wastes and organic fertilizers, nutrient recycling from a soil quality perspective, and agri-environment schemes. His current research topics include valorization of agricultural wastes as biochar, upcycling of manure into improved fertilizing products, and nutrient management planning on a territorial scale.