



The effect of biochar in soil enzyme activities: Latest advances and future directions

Jorge Paz-Ferreiro (1), Ana Méndez (2), and Gabriel Gascó (1)

(1) Departamento de Edafología, ETSI Agrónomos, Universidad Politécnica de Madrid, Madrid, Spain (gabriel.gasco@upm.es), (2) Departamento de Ingeniería de Materiales, E.T.S.I. Minas, Universidad Politécnica de Madrid, Madrid, Spain

In the last years there has been an increasing interest in biochar research. Soil biological and biochemical properties have a preeminent role driving nutrient cycling and can be considered as indicators of soil quality. The information on the effects of biochar addition in soil biological activities is still scarce, although an influential number of articles have appeared lately.

The aim of this work is to provide an overview of those articles dealing with the biological impact of biochar addition to soil. Studies conducted in soils in different countries differing in forming factors and fertility status are presented. The focus of this work is on how biochar interacts with soil fauna, on changes in soil biological and biochemical properties following heavy metal immobilization after biochar addition and on how these changes are important in relation to global change. Priority areas where research is needed are identified.