SOIL BIOLOGY AND BIOCHEMISTRY

DESCRIPTION

AIMS

Soil Biology & Biochemistry publishes original, scientifically challenging research articles of international significance that describe and explain biological processes occurring in soil. These include the possible applications of such knowledge to issues of soil and environmental quality - insofar as such studies inform our understanding of the role of soil biology and biochemistry in mediating soil functions, agricultural sustainability and ecosystem services. The ecology and biochemical processes of soil organisms, their effects on the environment and their interactions with plants are major topics. The applications of new molecular, microscopic and analytical techniques to understanding and explaining population and community dynamics is of great interest. The journal also publishes state-of-the-art reviews of contemporary research that present significant and novel hypotheses, as well as comments and arguments about specific and often controversial aspects of life in the soil.

SCOPE

The scope of Soil Biology & Biochemistry publishes scientific research articles of international significance which describe and explain fundamental biological and biochemical features and processes occurring in soil systems.

The emphasis is on original research which substantively advances or directs our understanding of the mechanistic basis of how soils function. Articles may involve applications of basic knowledge to applied issues if they provide distinct insight into the role of soil biology and biochemistry in regulating soil functions. Some examples of major topics include: The ecology of all soil organisms (including viruses) How soil biology interacts with soil physical and chemical properties and processes to regulate belowground functions Relationships and functional interactions between soil biota and plants The effects of soil organisms on ecosystem dynamics across spatial and temporal scales SBB also emphasizes the application of molecular, microscopic, and analytical techniques and modelling approaches to understand, explain and visualise soil functioning. Technique-focused papers must involve a particularly high degree of novelty or significance.

In addition, the journal publishes state-of-the-art reviews that consider contemporary research and synthesise knowledge to provide enhanced understanding of biotic roles in soil system functioning.

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AUDIENCE

Soil biologists, biochemists, plant scientists, agricultural scientists, environmental scientists, earth scientists, botanists, ecologists and entomologists.

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INTRODUCTION

This journal is a forum for research on soil organisms, their biochemical activities and their influence on the soil environment and plant growth. It publishes original work on quantitative, analytical and experimental aspects of such research. Soil biology and soil biochemistry cover many scientific disciplines but a single journal brings together the results and views of research workers working in a wide variety of research areas. The scope of this journal is wide and embraces accounts of original research on the biology, ecology and biochemical activities of all forms of life that exist in the soil environment. Some of the subjects which have proved to be prominent are the biological transformations of plant nutrients in soil, nitrogen fixation and denitrification, soil-borne phases of plant parasites, the ecological control of soil-borne pathogens, the influence of pesticides on soil organisms, the biochemistry of pesticide and pollution decomposition in soil, microbial aspects of soil pollution, the composition of soil populations, modelling of biological processes in soil systems, the biochemical activities of soil organisms, soil enzymes and the interactions of soil organisms with plants and the effects of tillage on soil organisms and soil biochemistry. Sequence data Papers dealing with amino acid sequences of proteins or with nucleotide sequences must carry a statement that the data have been deposited with an appropriate data bank, e.g., the European Molecular Biology Laboratory (EMBL) or GenBank Data Libraries. The data base accession number must be given at the end of the Materials and Methods section of the manuscript under the separate heading 'Accession numbers'. For example: Coordinates and structure factors have been deposited in the Protein Data Bank with accession number 2XYZ. Lengthy nucleotide sequences will be published only if, in the judgement of the Editorial Board, these results are of general interest and importance.

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