



Allelochemicals: Effects on Seed Germination and Plant Growth

Guest Editors:

**Prof. Dr. Natividad Chaves
Lobón**

Department of Plant Biology,
Ecology and Earth Sciences,
Faculty of Science, University of
Extremadura, 06006 Badajoz,
Spain

**Prof. Dr. Juan Carlos Alías
Gallego**

Universidad de Extremadura,
Badajoz, Spain

Prof. Dr. Sara Rodrigo

Department of Agronomy and
Forest Environment Engineering,
University of Extremadura.
Avenida Adolfo Suárez s/n, 06007
Badajoz, Spain

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Message from the Guest Editors

Allelopathy is concerned with the effects of chemical compounds produced by plants or microorganisms on the growth, development and distribution of other plants and microorganisms in natural communities or agricultural systems. Researchers have found allelopathic plants that are now used as cover crops, and allelochemicals which may lead to new herbicides. Plant-derived allelochemicals thus offer an environmentally friendly alternative to agrochemicals in sustainable agriculture, and the synthesis of novel agrochemicals based on allelochemicals has attracted a great deal of attention from scientists engaged in agronomic research. On the other hand, soil-borne fungal diseases pose serious constraints on agro-productivity. Biological control is a non-hazardous strategy to control plant pathogens and improve crop productivity, and in the soil there are microorganisms (fungi, plant-growth-promoting rhizobacteria, etc.) that can act as biological control agents. These microorganisms are able to produce allelochemicals that confer positive effects on plants.





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Editor-in-Chief

Prof. Dr. Leslie A. Weston

Gulbali Centre for Agriculture,
Water and Environment
Research, Charles Sturt
University, Wagga Wagga, NSW
2678, Australia

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Agronomy Editorial Office
MDPI, Grosspeteranlage 5
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