

VLADIMIR V. GOULI, JOSÉ A.P. MARCELINO, AND SVETLANA GOULI

# Microbial Pesticides

Biological Resources,  
Production and Application



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1st Edition

Biological Resources, Production and Application

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**Authors:** Vladimir Gouli Jose Marcelino Svetlana Gouli

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## **Description**

Microbial Pesticides: Biological Resources, Production and Application provides a concise and accessible introduction on the history of microbial pesticides, their impact on global ecology, human society and economies, as well as a thorough and tangible description of the state-of-the-art technologies available for the production, application, limitations and long-term viability of these bio-products. Information is listed per biological group (i.e., virus, bacteria, fungi, protozoa, microsporidia and microbial metabolites), and is supported by sound scientific data. The book is copiously illustrated, with original pictures clarifying the most common techniques and protocols utilized in microbiological biocontrol technology.

Finally, images of all biological active ingredients currently used in commercially produced formulations, as well as laboratory developed formulations, are illustrated and listed in detailed tables for prompt access.

## **Key Features**

Provides a concise and accessible introduction to the history of microbial pesticides and their impact on global ecology, human society and economies

Offers a thorough and tangible description of state-of-the-art technologies surrounding the production, application, limitations and long-term viability of bio-products

Reports current regulatory measures and protocols used to assess host range and collateral impact(s) of microbial formulations based on virus, bacteria, fungi, protozoa, microsporidia and microbial metabolites

Features lists by biological group (i.e., virus, bacteria, fungi, protozoa, microsporidia and microbial metabolites)

Links sound scientific data and concise, accessible language

### **Readership**

Active researchers in applied microbiology, biochemistry, medical chemistry, biocontrol, biotechnology, pharmacology, ecology. Specifically, the control of pests animal husbandry (laboratory animals), aquaculture and crop production, vectors and pathogens of human diseases, etc, are of primary relevance and impact

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## **Details**

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## About the Authors

Vladimir Gouli

Dr. Vladimir Gouli is a Doctor of Science and has more than 50 years experience in microbiology. He worked as the Director of the Department of Microbiological Control of Pests, and the scientific director of the Institute of Biological Method, in the former USSR prior to moving to the USA, where he has been a researcher in the Soil and Plant Department of the University of Vermont (USA) for the last 25 years. Currently, he is Emeritus Associate Professor of the University of Vermont. Dr. Gouli published 15 books in the field of Microbiology (in English, Russian, Romanian, Japanese, Chinese, and Ukrainian); as well as circa 250 scientific articles. Expertise include fundamental and applied aspects of invertebrate pathology and microbial pest control based on entomopathogenic and antagonistic microorganisms. Research focuses on the search, isolation, identification and assessment of key biological properties, mass-production, formulation and application of pathogens that regulate noxious-insect populations and suppress infectious plant diseases.

### Affiliations and Expertise

Department of Plant and Soil Science, University of Vermont College of Agriculture and Life Sciences, Burlington, VT, USA

Jose Marcelino

PhD from the University of Vermont in Entomology & Plant Pathology in 2007. Fifteen years post-graduate experience IPM and biodiversity conservation at the Univ. of Illinois, University of the Azores (Portugal), the University of Puerto Rico and the University of Florida. Integrated Pest Management of major economically impacting pests and pathogens. In addition, developed methodologies to determine anthropogenic impacts in biotic communities across pristine and agricultural ecosystems in insular ecosystems. Profiling *Apis mellifera* subspecies using novel geo-morphometrics and SNP genetic bioassay tools, coupled with Machine Learning, aiming for an accurate detection of origin, dissemination and establishment of *A. mellifera* subspecies. Results from these projects and research are reported in peer-review journals and/or being implemented nationally or internationally. 20 papers and 6 books.

### Affiliations and Expertise

CE3C, Department of Biology, University of the Azores, Ponta Delgada, Azores, Portugal

Svetlana Gouli

PhD from the All-Union Research Institute of Biological Plant Protection (IBPP) (USSR) in 1983; Senior Researcher in IBPP from 1983 to 2003 and microbial pesticide producer in Claveles Colombianos Co (Colombia) from 1993 to 1995. Dr. Svetlana Gouli has worked for the last 25 years in various positions from a technical specialist to a senior researcher at the

University of Vermont. She has published 4 books in microbiology in English, Russian and Georgian; She is the author and co-author of more than 100 scientific articles in the fields of microbiology and insect pathology; Scientific expertise in the microbiological regulation of harmful microorganisms to humans, and other organisms and biomes.

### **Affiliations and Expertise**

Department of Plant and Soil Science, University of Vermont College of Agriculture and Life Sciences, Burlington, VT, USA