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Effects of Agricultural Chemicals–Pesticides on Insects and Soil Organisms

Guest Editors:

Dr. Xiaoming Xia

College of Plant Protection,
Shandong Agricultural University,
Tai'an, China

Dr. Youhui Gong

Institute of Plant Protection,
Chinese Academy of Agricultural
Sciences, Beijing 100193, China

Dr. Ting Li

Department of Biological
Sciences, Alabama State
University, Montgomery, AL
36104, USA

Deadline for manuscript
submissions:

closed (20 February 2024)

Message from the Guest Editors

Agricultural chemical compounds known as pesticides are widely used to combat diseases, pests, and weeds, in order to increase food production, yield foodstuff, and prevent food losses. Pesticides are designed to be toxic with various modes of action; besides being toxic to the target pest species they are intended to control, they are also harmful to non-target organisms. In addition to direct lethal effects, sublethal effects of pesticides on environmental organisms are also common after application in the field. Moreover, due to their long-term and extensive use, pesticide resistance has become one of the challenges of integrating pesticides into an existing integrated pest management (IPM) program. All these effects will substantially impact on the rational scientific use of pesticides in the field. Considering the enormous quantity of newer and a wide variety of modes of action of pesticides applied in agriculture, understanding the potential impacts of pesticides on target or non-target organisms, including pesticide resistance and its mechanisms, has become paramount in the IPM program.



mdpi.com/si/158190

Special Issue



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Editor-in-Chief

Dr. Demetrio Raldúa

Department Environmental
Chemistry, IDAEA-CSIC, Jordi
Girona 18, 08034 Barcelona,
Spain

Message from the Editor-in-Chief

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Contact Us

Toxics Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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