

## Special Issue

# Direct and Indirect Effects of Agricultural Pesticides on Insects

### Message from the Guest Editors

Insecticides are used to control pests of crops worldwide and have been instrumental in providing a safe and abundant food supply in many nations. However, insecticides have been shown to have negative effects on non-target organisms; these include both direct and indirect effects. Direct effects happen when non-target species are directly exposed to the insecticide. This may occur through sprays impacting the body of an organism, inhalation of droplets or aerosols, as an organism moves over and picks up insecticide applied to treat surfaces, or through ingestion of treated food. Direct toxic effects include acute and chronic mortality, negative effects on reproduction, reductions in weight gain, reduced longevity, increased time to first reproduction, and behavioral changes. Insecticides may also have indirect effects on certain species. Indirect effects are effects on resources, such as food and habitat, that have a negative effect on a species that has not been directly exposed. The goal of this Special Issue is to publish a series of papers by experts on the direct and indirect effects of insecticides to various non-target organisms.

---

### Guest Editors

Prof. Dr. John D. Stark

School of the Environment, Washington State University, Puyallup, WA, USA

Prof. Dr. John E. Banks

Undergraduate Research Opportunities Center, California State University, Monterey Bay, 100 Campus Center, Seaside, CA 93955, USA

---

### Deadline for manuscript submissions

closed (30 June 2021)



## Toxics

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/67597](https://mdpi.com/si/67597)

*Toxics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[toxics@mdpi.com](mailto:toxics@mdpi.com)

[mdpi.com/journal/  
toxics](https://mdpi.com/journal/toxics)





# Toxics

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/journal/  
toxics](https://mdpi.com/journal/toxics)



## About the Journal

### Message from the Editor-in-Chief

*Toxics* (ISSN 2305-6304) is an international, peer-reviewed, open access journal which provides an advanced forum for studies related to all aspects of toxic chemicals and materials. We aim to publish high quality work that furthers our understanding of the exposure, effects, and risks of chemicals and materials in humans and the natural environment as well as approaches to assess and/or manage the toxicological and ecotoxicological risks of chemicals and materials. Please consider publishing in *Toxics* when preparing your next paper.

---

### Editor-in-Chief

Dr. Demetrio Raldúa  
Department Environmental Chemistry, IDAEA-CSIC, Jordi Girona 18,  
08034 Barcelona, Spain

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, CAPlus / SciFinder, AGRIS, and other databases.

#### Journal Rank:

JCR - Q1 (Toxicology) / CiteScore - Q1 (Chemical Health and Safety)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the second half of 2025).