



Direct and Indirect Effects of Agricultural Pesticides on Insects

Guest Editors:

Prof. Dr. John D. Stark

Ecotoxicology Program,
Department of Entomology,
Washington State University,
Research and Extension Center,
Puyallup, WA, 98371, USA

starkj@wsu.edu

Prof. Dr. John E. Banks

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

jebanks@csumb.edu

Deadline for manuscript
submissions:

closed (30 June 2021)

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.

