







Special Issue Reprint

# **Impacts of Agrochemicals**

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The widespread application of plant protection products worldwide is releasing various agrochemicals into the environment. In many countries, various persistent and bioaccumulative active ingredients have been banned; however, due to their physico-chemical properties, they are detectable in our environment. Overall, intensive agrochemical application results in several negative effects on the environment that cannot be ignored. Agrochemicals can enter the soil via spray drift during foliage treatment, wash-off from treated foliage, release from granulates, or from treated seeds in soil. They can enter water via drift during spraying, by runoff from treated areas, or by leaching through the soil. In some cases, agrochemicals can be directly applied onto water surfaces, e.g., for controlling mosquitoes. Water contamination mainly depends on the nature of chemicals (water solubility and hydrophobicity), soil properties, weather conditions, landscapes, and the distance from an application site to a water source. Rapid transport to groundwater may be caused by heavy rainfall shortly after the application of a pesticide to wet soils. Pollinators are also threatened by agrochemicals, and their importance in the whole ecosystem is crucial. Our Reprint aims to summarize the importance of ecotoxicological and environmental analysis studies, providing appropriate data for a complete risk assessment of agrochemicals.



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