

# Review of: "Ameliorating the Impact of Climate Variability on Pesticide Dynamics and Efficacy"

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This review addresses the very important issue of the impact of climate change on the effectiveness of pesticides in agricultural practices. The introduction is too broad and includes relevant references to a background on climate change, i.e. institutional documents and recent studies on the subject which should be included in a subsequent separate paragraph. The new paragraph should start from "Climate change has a significant impact on agricultural production and on agricultural insect pests".

It is therefore recommended to limit the introduction to the previous period ending with "in order to employ appropriate mitigation strategies to overcome these effects (IPCC, 2021)". It is also advisable to conclude the introduction with a reference to the paragraphs that follow, with a very brief summary of the contents, to make reading easier. Paragraphs 1.2 and 1.3 follow with a detailed examination of pesticides and the factors that influence their effectiveness. The authors therefore summarize in paragraphs 2.1 and 3.1 the main impacts of climate change on the ecosystem and highlight some ways in which these factors influence the effectiveness of pesticides, citing various empirical research.

The work seems to follow a widespread literature review protocol research for conducting scoping studies, see in this regard the one proposed by Arksey and O'Malley, (2005) and Daudt *et al.*, (2013), which includes several steps. These are (1) identifying the research question; (2) identifying relevant studies; (3) study selection; (4) charting the data; (5) collating, summarizing, and reporting the results; (6) a summary and lessons learned.

However, the methodology used to select the studies (search keys, time frame of the literature) is not clear. Nevertheless, the studies are functional to paragraphs 1.3, 2.1 and 3.1 and give originality to the review. Step (5) can be traced back to paragraph 4.1 of the review, where the authors highlight the need to mitigate the impact of climate change on the effectiveness of pesticides, detailing some ways with the relevant bibliographical references. In the conclusions, the work highlights the importance of pesticide regulation, national strategies and policies, investments in research and development and the provision of public incentives to support sustainable agriculture and also provides useful elements for the debate on the topic. Overall, the review takes on a popular slant, also in consideration of the evocative photographs included the source of which should be cited, and is supported by the scientific rigor of the references cited. It is advisable to shorten some sentences and revise the text, eliminating repetitions and typos.

