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Comments on: 'Glyphosate and its toxicology: A scientometric review', *Sci. Total Environ.*, (2020) 733: 139359



Keywords:

Bibliometric
Searching keywords
SCI-EXPANDED
Front page
Glyphosate
Toxicology

Recently a paper in *Science of the Total Environment* entitled 'Glyphosate and its toxicology: A scientometric review' (Ghisi et al., 2020) was published. The authors mentioned in Section 2.1. Data search and processing that "The data was obtained from the Web of Science (WoS) Core Collection database".

The Web of Science Core Collection includes

Web of Science Core Collection: Citation Indexes

1. Science Citation Index Expanded (SCI-Expanded) – 1900-present.
2. Social Sciences Citation Index (SSCI) – 1900-present.
3. Arts & Humanities Citation Index (A&HCI) – 1975-present.
4. Conference Proceedings Citation Index - Science (CPCI-S) – 1990-present.
5. Conference Proceedings Citation Index - Social Sciences & Humanities (CPCI-SSH) – 1990-present.
6. Book Citation Index- Science (BKCI-S) – 2005-present.
7. Book Citation Index- Social Sciences & Humanities (BKCI-SSH) – 2005-present.

8. Emerging Sources Citation Index (ESCI) – 2015-present.

Web of Science Core Collection: Chemical Indexes

1. Current Chemical Reactions (CCR-EXPANDED).
2. Index Chemicus (IC).

It is unsuitable to use all of these different levels of databases. For example, ESCI complements the highly selective indexes by providing earlier visibility for sources under evaluation as part of the rigorous journal selection process of SCI-EXPANDED, SSCI, and A&HCI (Somoza-Fernández et al., 2018; Ho, 2019a).

In the same section, the authors mentioned that "The strategy used during the search was TS (Topic Search) = Glyphosate. A total of 10,509 results were found between 1975 and 2019." The authors used glyphosate as search keywords for 'Glyphosate and its toxicology: A scientometric review'. Lots of publications related to glyphosate but nothing about its toxicology. These publications cannot be included in the study. Using the same strategy in the original paper (Ghisi et al., 2020), resulted in 11,341 documents which were 832 (7.9% of 10,509) documents different from 10,509 documents.

Similarly, the authors mentioned in Section 3.1.1. Characteristics of publication results and impact that "we obtained 9798 publications after excluding the 2019 results". A total of 10,381 documents were searched out by the same method in which 583 documents (6.0% of

9798 documents) different from 9798 documents in the original paper (Ghisi et al., 2020).

Finally, the Web of Science Core Collection is designed for researchers to find published literature, not for bibliometric research (Ho, 2019b, 2020a). In order to improve the bibliometric studies using the Web of Science Core Collection, 'front page' (including title, abstract, and author keywords) as a filter was first proposed in 2012 (Fu et al., 2012). A total of 451 documents including 399 in the categories of environmental sciences, 165 in toxicology, and 84 in ecology from 1975 to 2019 were irrelevant to 'glyphosate'. These documents do not include search keyword 'glyphosate' in their 'front page' are inappropriate to be included in this study.

The authors published 'Glyphosate and its toxicology: A scientometric review' (Ghisi et al., 2020) in the *Science of the Total Environment* using inappropriate search keywords, databases, and methods. This may lead to misleading readers of the journal (Chuang and Ho, 2012; Ho, 2020b). Research is a way to the truth, so innovation is very important for finding new things or new understandings to get close to the truth (Ho, 2019a, 2020c). It is not helpful for researchers to repeat the same problem again and again without improving their research (Ho, 2019a). Discussing the problems in publishing papers is part of the research. This can improve research to get closer to the facts. It has been pointed out that authors are responsible for using accurate methods in publications, and reviewers are responsible for pointing out errors (Ho, 2020b, 2020c). Finally, readers can also point out such problems in published articles.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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