**Effects of Pesticide on the Environment and Human Health**

The topic that I have chosen is ‘the effects of pesticide on the environment and human health’. The effects of pesticide are drastic because they affect non-target species of plants and animals. They interfere with the biodiversity, food web, both in terrestrial and aquatic ecosystems. According to Budzinski and Couderchet (2018), pesticides are able to volatilize in a matter of few days after application. This volatilization leads to evaporation into the air which exposes non-target organisms to harm. The overall effect of herbicides has led to a reduction of certain plant and aquatic animal species while threatening the existence of rare species. They have caused contamination of water, soil, and air to toxic levels that threaten the life of non-target species, which includes humans.

**Articles for the Research**

The current articles that this research will use to study the effects of pesticide on the environment and human health include:

Budzinski, H., & Couderchet, M. (2018). Environmental and human health issues related to pesticides: From usage and environmental fate to impact. *Environmental Science and Pollution Research, 25*(15), 14277–14279. doi: 10.1007/s11356-018-1738-3

Cimino, A. M., Boyles, A. L., Thayer, K. A., & Perry, M. J. (2016). Effects of neonicotinoid pesticide exposure on human health: A systematic review. *Environmental Health Perspectives, 125*(2). doi: 10.1289/ehp515

Pereira, L. C., de Souza, A. O., Bernardes, M. F. F., Pazin, M., Tasso, M. J., Pereira, P. H., & Dorta, D. J. (2015). A perspective on the potential risks of emerging contaminants to human and environmental health. *Environmental Science and Pollution Research, 22*(18), 13800-13823. doi: 10.1007/s11356-015-4896-6

**Scientific Value of the Sources Selected**

In order to support my arguments, the sources selected must be credible. All the selected sources were peer-reviewed, which means that they were assessed by other experts in the field of environmental and human health effects of pesticides. Even though one of the articles by Cimino, Boyles, Thayer, and Perry (2017), was published online, the publisher utilized peer review to provide credibility of the evidence.

Secondly, the authority that has published the articles, as well as the credentials of the publishers, are of high authority as they are affiliated with higher learning institutions. For instance, the article by Pereira et al. (2015), have been published by authors that are affiliated with three different universities. The article by Cimino et al. (2015) is also credible because it is of high authority as it is affiliated with George Washington University.

Thirdly, the sources are recent as they were published within the last three years. The oldest source was published in 2015, while the current source was published in 2018. These timelines mean that the sources are not outdated and therefore contain the most current scientific information.

**Key Points from the Articles**

From the article by Budzinski and Couderchet (2018), I drew the following points:

* Chlordecone contamination of marine ecosystem occurs in a gradient of coastal mangrove to coral reefs at a distance of about 3 kilometers (seventh paragraph)
* Due to the concentration of organochlorine insecticides in groundwater causes public health problems (Eighth paragraph)

From the article by Cimino et al. (2017), the following points were drawn:

* In the introduction section, I learned that neonics are persistent in the environment because they exist in soil, dust, wetland, groundwater as well as non-target plants and vertebrate.
* Also, in the introduction section, neonics was linked to adverse effects in vertebrate and invertebrate species.
* In the conclusion section, I learn that acute neonic exposure is not very high as there were low rates identified. The study proved that acute cases could have been as a result of other secondary causes.

From the last article by Pereira et al. (2015), the following points were deduced:

* In the abstract section, it was reported that pesticides exert neurotoxic and mutagenic effects which negatively impact on the environment.
* In the introduction section, the environmental toxicity of pollutants depends on the chemical composition of the pollutant, characteristic of the target part of the environment that receives the pollutant, physical property of the target compound and type of the biological target.

**References**

Budzinski, H., & Couderchet, M. (2018). Environmental and human health issues related to pesticides: From usage and environmental fate to impact. *Environmental Science and Pollution Research, 25*(15), 14277–14279. doi:10.1007/s11356-018-1738-3

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