

Review of: "[Review Article] Excessive Aluminum in Soil"

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Potential competing interests: No potential competing interests to declare.

The title of the manuscript, "Excessive Aluminum in Soil: Review Paper," is well-formulated and corresponds to the content within. The author has addressed the most significant issues related to aluminum toxicity in the environment. The article should be of interest to all countries in temperate climates where problems with aluminum toxicity occur.

Chapter Effects of Aluminum Accumulation in Soil

1. „According to Barcelo and Poschenrieder” - Please add year of publication

Chapter Environmental Impacts of High Soil Aluminum Levels

1. The Authors should specify the soil pH threshold at which the activation of exchangeable aluminum in the soil occurs.
2. The authors should provide, following the last sentence in the chapter, information on how aluminum negatively affects human health.

Chapter Health Risks Associated with Aluminum Exposure

1. In my opinion, at the end of this chapter, the Authors should add the information that a typical plant absorbing large amounts of aluminum is tea.

Chapter Assessment Methods for Soil Aluminum Concentration

1. „There is ongoing research to develop more efficient and reliable techniques for measuring soluble aluminum in soil”.
The Authors should explain the novelty of these methods and how they are more efficient compared to traditional ones.

Chapter Aluminum Toxicity in Plants and Ecosystems

1. The Authors should provide information on the threshold of exchangeable aluminum content in the soil at which the first toxicity threshold is reached. At this threshold, sensitive plants such as barley and wheat exhibit a significant decrease in yield or fail to yield altogether. Additionally, they should mention at what aluminum content in the soil the toxic effect occurs for all cultivated plants. Under such conditions, even rye, the most resistant crop to aluminum, ultimately yields zero crops.

Chapter Recent Advances in Managing Excessive Aluminum in Soil

1. „Nanoparticles have shown potential for efficient removal of aluminum from soil” It is not clear. In my opinion, the author should expand this paragraph and specify which elemental nanoparticles exhibit the ability to remove excess toxic aluminum from the soil. In its current form, this paragraph is unclear.

General

The author should state at the beginning of the assessed manuscript that the issue of aluminum toxicity concerns soils in temperate climates. In tropical climates, such problems do not occur.

References should be listed alphabetically