

Review Form 3

Journal Name:	Asian Journal of Soil Science and Plant Nutrition
Manuscript Number:	Ms_AJSSPN_130634
Title of the Manuscript:	Evaluating the Impact of Gypsum Content on the Physical and Hydraulic Properties of Soils in Arid Regions , Review
Type of the Article	Review Article

PART 1: Comments

	Reviewer’s comment	Author’s Feedback(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript is highly relevant to the scientific community, especially in the fields of soil science and agricultural management. Addresses a critical issue in agricultural and soil management, focusing on the impact of gypsum content on soil's physical properties and water functions. By addressing both the positive and negative effects of gypsum, the study contributes to sustainable agricultural practices and offers practical guidance for improving soil productivity in areas with high gypsum content. It provides valuable insights into the impact of gypsum content on soil's physical properties and water behavior, which are critical for managing arid and semiarid regions. Its findings are essential for food security and land-use planning in gypsum-rich regions globally.	Thank you for your valuable comments.
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, "Effect of Soil Gypsum Content on the Physical Properties of Soil," is clear and appropriately reflects the manuscript's main focus. However, a more detailed titles, such as "Evaluating the Impact of Gypsum Content on the Physical and Hydraulic Properties of Soils in Arid Regions," “Evaluating the Impact of Gypsum Content on Soil Properties and Water Dynamics in Arid and Semi-Arid Regions”, "Impact of Gypsum Content on Soil Physical Properties and Water Dynamics in Arid Regions", might provide additional context and specificity. These revised titles captures the study's scope and geographical relevance, emphasizing its practical implications.	Thank you for your suggestion.

Review Form 3

<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract provides a general overview of the study but has several areas for improvement in clarity, structure, and content. While it addresses the main theme—how gypsum content impacts soil properties—it lacks specificity and misses certain key elements.</p> <p>The abstract feels scattered, with information about gypsum’s effects presented in a disorganized manner. Follow a structured format:</p> <ul style="list-style-type: none"><li>- Importance of gypsum soils.</li><li>- Investigate gypsum’s effect on soil properties.</li><li>- Include key findings with data points.</li><li>- State implications or future applications.</li></ul> <p>The abstract lacks information on how the study was conducted (e.g., sampling, analysis methods). Provide a concise description. Briefly state the study area or its global significance.</p> <p>The abstract does not provide quantitative results or critical thresholds, which are vital for a scientific summary. Include specific values, such as gypsum percentages that positively or negatively affect soil properties, bulk density, or moisture retention.</p> <p><b>I recommend that the authors take the comments into account and make edits.</b></p>	<p>Thank you for your suggestion. The abstract has been modified.</p>
<p>Is the manuscript scientifically, correct? Please write here.</p>	<p>The manuscript is scientifically correct in terms of its overall premise and findings. However, it needs enhancements in the following areas:</p> <p><b>1.More detailed and transparent methodology.</b></p> <p>The methodology section lacks sufficient detail about experimental design, such as: -</p> <p>Sample size and selection criteria.</p> <ul style="list-style-type: none"><li>- Soil sampling techniques.</li><li>- Equipment or conditions used for moisture retention and hydraulic conductivity tests.</li><li>- Provide a comprehensive methodology, ensuring experiments are reproducible. Include the locations of field studies and specifics about soil classification standards.</li></ul> <p><b>2. Inclusion of statistical validation.</b></p> <p>The manuscript does not explicitly describe statistical tools (e.g., ANOVA, regression models) used to analyze the data. Without this, the robustness of conclusions is unclear. Clearly detail statistical methods, including software or models used, significance thresholds (e.g., p-values), and R² values for correlations. This will substantiate claims like the "inverse relationship" mentioned in the results.</p> <p><b>3.Visual data presentation (tables and graphs).</b></p> <p>While the manuscript includes findings, it lacks clear visual representation (e.g., tables, graphs, or figures) of critical data such as gypsum content thresholds and their effects on soil properties.</p> <ul style="list-style-type: none"><li>- Add graphical data (e.g., a plot of gypsum content vs. bulk density) to enhance clarity and allow readers to easily interpret the trends.</li></ul> <p><b>4. Expanded discussion of mechanisms and broader geographical comparisons.</b></p> <p>The manuscript discusses gypsum soils in Iraq but does not compare findings to other regions globally. Broaden the discussion by contrasting results with studies from other arid regions, such as North Africa or Central Asia, to generalize findings.</p>	<p>This is considered a study in the form of a review article, not a research , and it is a results of a group of researchers</p> <p>Some tables have been added to the article</p> <p>The study included clarification of the physical soil characteristics, with emphasis on soil in Iraq</p>

Review Form 3

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	<p>The references are sufficient but could be improved by incorporating more recent studies to reflect advancements in the field, published in high-impact journals (e.g., post-2018). This will enhance the manuscript's scientific relevance and provide readers with up-to-date insights.</p> <p>Many of the citations are outdated, with several from the 1960s, 70s, and 80s. For example: - Older References:</p> <ul style="list-style-type: none"><li>- [1] Van Alphen, J.C. and Romero (1971).</li><li>- [5] Soil Survey Staff (1967).</li><li>- [13] Smith, R., and Robertson, V.C. (1962).</li></ul>	<p>This article included a collection of a research on the properties of gypsum soil. I apologize for not having recent research on these properties, especially with regard to Iraq.</p>
	<ul style="list-style-type: none"><li>- More Recent References:</li><li>- [24] Moret-Fernandez, D., and J. Herrero (2015). - [26] Mahdi, A.U.S. (2018).</li></ul> <p>The reliance on older references limits the manuscript's ability to incorporate recent advancements in gypsum soil research and management practices.</p>	
Is the language/English quality of the article suitable for scholarly communications?	<p>The manuscript is generally clear but requires proofreading to address typographical errors, grammatical inconsistencies, and awkward phrasing. Enhancing sentence structure and vocabulary will improve readability and ensure suitability for scholarly communication. Here are some ambiguities and language issues identified in the article, along with suggestions for improvement:</p> <p>Missing verb: "The rate of water column rise in an inverse relationship with the gypsum percentage." Correction: "The rate of water column rise has an inverse relationship with the gypsum percentage."</p> <p>Plural/singular mismatch, unclear phrase "are exit.": "Gypsum Soil are one of the natural soils that form large areas of the world and are exit in arid and semi-arid areas with low rainfall rates..." Correction: "Gypsum soils are natural soils that cover large areas worldwide, particularly in arid and semi-arid regions with low rainfall."</p> <p>Incorrect verb form, awkward phrasing: "It are around in the edge of the Tigris and Euphrates rivers of Iraq..." Correction: "They are found along the edges of the Tigris and Euphrates rivers in Iraq." Repetition, wordiness: "An increase in the soil gypsum is accompanied by a decrease in the organic matter and clay percentage followed by a decrease in the percentage of available water." Correction: "An increase in soil gypsum content reduces organic matter, clay percentage, and available water."</p> <p>Overuse of passive voice, lack of clarity about the study: "This was reinforced by the results of [18] in his study of gypsum soil location in Nineveh Governorate, where he showed..." Correction: "The study by [18] in Nineveh Governorate supported this finding, demonstrating that..."</p> <p>Several sentences are unnecessarily long, reducing clarity. These can be split into shorter, more focused sentences.</p> <p>Phrases like "further research, study, and investigation" repeat the same idea. Use simpler terms like "further research."</p> <p>Words like "cralcium" (calcium) and "soriptivity" (sorptivity) need correction.</p>	<p>Most errors have been corrected as much as possible</p>
Optional/General comments	<p>There don't appear to be ethical issues within the manuscript provided.</p> <p>There are no explicit competing interest issues mentioned in the manuscript.</p>	

[Review Form 3](#)

**PART 2:**

	<b>Reviewer’s comment</b>	<b>Author’s comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	