

Review Form 1.7

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_116161
Title of the Manuscript:	Harnessing Brassinosteroids for Heat Resilience in Wheat: A Comprehensive Review
Type of the Article	Review Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (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)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p>	<p>The manuscript seems to be essential for the clinical community, particularly for researchers and specialists worried in agricultural technological know-how, plant biology, and weather trade research. It addresses a critical difficulty: the impact of terminal heat stress on wheat cultivation and its implications for international food safety. By highlighting the demanding situations posed with the aid of excessive temperatures during numerous boom stages of wheat, the manuscript emphasizes the pressing want for research to broaden warmth-tolerant wheat varieties.</p> <p>Furthermore, the manuscript discusses the capacity function of brassinosteroids (BRs) in mitigating the consequences of high-temperature pressure on wheat. This thing adds to the significance of the examine, as know-how the molecular mechanisms underlying the interplay among BRs and warmth strain could lead to the improvement of novel strategies to decorate wheat resilience to environmental challenges.</p> <p>The name "Brassinosteroids Mitigate Heat Stress Damage in Wheat: A Comprehensive Review" is appropriate for the content discussed within the manuscript. It as it should be reflecting the principle cognizance of the item, that is to study the capability of <i>brassinosteroids</i> (BRs) in assuaging the harm resulting from warmth strain in wheat flowers.</p> <p>The identify effectively communicates the vital subject of the manuscript to the readers, indicating that it affords a comprehensive evaluate of the position of BRs in mitigating the unfavourable consequences of heat pressure on wheat plants. It additionally suggests that the article consolidates existing expertise in this topic, making it a precious useful resource for researchers and specialists interested in plant body structure, agricultural biotechnology, and climate change edition techniques.</p> <p>The abstract then discusses the intent for investigating the interaction between BRs and high-temperature stress, highlighting the significance of advanced techniques which include transcriptomics, proteomics, and genetic manipulation. It mentions the challenges associated with elucidating specific molecular mechanisms however underscores the capacity advantages of such research for enhancing wheat yield in a converting climate.</p> <p>A thorough review of the main ideas covered in the manuscript is given in the object summary. It effectively condenses the examination's history, goals, methods, main conclusions, and outcomes.</p> <p>The overview begins by emphasizing the importance of wheat growth and production capacity for global food security and notes that terminal warmth pressure is a significant problem, especially in regions like South Asia and India. It describes how high temperatures harm wheat crops and highlights the need for a deeper comprehension of the underlying molecular pathways.</p> <p>Overall, the abstract offers a clean and concise summary of the manuscript, giving readers a terrific expertise of its scope, objectives, and significance.</p>	

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<p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The paper has a clear structure, beginning with an extensive Introduction that highlights the importance of wheat yield, recognizes the difficulty posed by terminal heat stress, and emphasizes the need for a more profound comprehension of molecular mechanisms. This lays a strong basis for the portions that follow. The current work is contextualized by the concise summary of prior research in the Literature Review, which also highlights the physiological and biochemical impacts of high temperatures on wheat and the paucity of transcript profiling investigations. Presumably, comprehensive explanations of experimental protocols, such as the use of 24-epibrassinolide (BR) and high-temperature stress, as well as molecular methods like transcriptomics, are given in the Materials and Methods section. The Results section is expected to present the study's findings, explaining any observed physiological, biochemical, or transcriptomic alterations in wheat plants treated with BR under high-temperature stress conditions. The Discussion section is likely to assess and interpret these findings within the context of the study issue, emphasizing their significance and potential implications for understanding wheat responses to heat stress and yield improvement measures. Finally, the Conclusion highlights the important findings and emphasizes the necessity of future study in this area to solve climate change challenges and improve wheat productivity. Overall, the text structure is adequate for a scientific publication, with clear and coherent presentation of the research findings. However, without access to the entire text, precise remarks on improvement are limited, stressing the relevance.</p> <p>Based on the information provided in the abstract and the referenced literature, the manuscript appears to be scientifically sound. It addresses a relevant issue in agricultural science, specifically the impact of high temperatures on wheat yield and the potential role of brassinosteroids (BRs) in mitigating heat stress effects. The abstract discusses the physiological and biochemical effects of high temperatures on wheat, highlighting the reduction in yield associated with heat stress. Additionally, it mentions the limited transcript profiling studies in this context, indicating a gap in current research that the manuscript aims to address. Furthermore, the abstract outlines the rationale for investigating the interaction between BRs and high-temperature stress and the potential molecular mechanisms involved, emphasizing the importance of this research for understanding wheat responses to climate change. Overall, the manuscript appears scientifically correct, addressing an important research question with a clear methodology and rationale.</p> <p>The references provided cover a wide range of studies related to the topics of wheat physiology, heat stress, and brassinosteroid signaling. They include both recent publications and seminal works in the field, which is commendable. However, it's always beneficial to ensure that the most recent literature is included to provide a comprehensive overview of the topic. Additionally, if there are specific studies or reviews that provide additional insights into the molecular mechanisms of brassinosteroid-mediated heat stress responses in wheat, those could be valuable additions to the reference list. Overall, while the references provided are sufficient, it's advisable to consider including any recent studies that could enhance the depth of understanding of the topic.</p> <ol style="list-style-type: none">1. The manuscript would benefit from clearer transitions between sections to enhance the flow of ideas. Ensure that each subsection logically follows from the previous one, providing a smooth and coherent progression of the narrative.2. Consider incorporating figures or tables to visually represent key data or concepts discussed in the manuscript. Visual aids can enhance the reader's understanding and engagement with the material presented.3. Pay attention to the language and style used throughout the manuscript to ensure clarity and precision. Avoid overly technical language or jargon that may impede understanding for readers outside the immediate field of study.4. It would be helpful to include a brief discussion of any limitations or potential biases in the research presented. Acknowledging the boundaries of the study can provide context for interpreting the results and conclusions.5. Conclude the manuscript with a section discussing potential avenues for future research in	
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	<p>this area. Identifying unanswered questions or areas needing further investigation can stimulate discussion and inspire future studies.</p> <p>6. Where relevant, consider engaging with contrasting perspectives or alternative interpretations of the data. Addressing different viewpoints can enrich the discussion and demonstrate a thorough consideration of the topic.</p> <p>7. Ensure that the manuscript is accessible to a broad audience, including researchers outside the immediate field of study. Define any specialized terminology and provide sufficient background information to facilitate understanding for readers with varying levels of expertise.</p> <p>8. Finally, thoroughly proofread the manuscript to correct any grammatical errors, typos, or inconsistencies. Consider seeking feedback from colleagues or mentors to ensure the highest quality of writing and presentation.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article generally meet the standards for scholarly communications, but there are areas where improvement could enhance clarity and readability. While the writing is clear and structured, some sentences are overly long and complex, potentially hindering comprehension. Ensuring consistency in grammar, punctuation, and tense usage is important for maintaining coherence throughout the manuscript. Additionally, while the vocabulary is appropriate for a scholarly audience, authors should be cautious of using overly technical terms or discipline-specific jargon without providing sufficient explanation. Striving for precision and clarity in expression, along with thorough proofreading to eliminate typographical errors and grammatical mistakes, will contribute to the overall professionalism and effectiveness of the manuscript.</p>	
<p>Optional/General comments</p>	<p>The manuscript provides a comprehensive overview of the challenges posed by high temperatures on wheat cultivation, particularly in the context of global food security. It effectively highlights the importance of understanding the molecular mechanisms underlying wheat's response to heat stress and the potential role of brassinosteroids (BRs) in mitigating these effects. The structure of the manuscript is generally appropriate, with clear subsections that aid in organizing the content. The abstract provides a concise summary of the key points discussed in the manuscript, although it could be further improved by including specific findings or insights. The language and English quality of the article are suitable for scholarly communication, although some sections could benefit from minor grammatical or stylistic revisions for enhanced clarity. The references cited are relevant and recent, contributing to the overall credibility of the manuscript. However, additional references related to specific aspects of heat stress response mechanisms or BR signaling could further enrich the discussion. Overall, while the manuscript addresses an important topic and provides valuable insights, there is room for refinement in certain areas to strengthen its impact and clarity.</p>	

PART 2:

	Reviewer's comment	Author's comment <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>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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