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| Book Name: | [Food Science and Agriculture: Research Highlights](https://www.bookpi.org/bookstore/product/food-science-and-agriculture-research-highlights-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4219** |
| Title of the Manuscript: | **NEW APPROACHES IN MATHEMATICAL MODELING OF GRAIN STORAGE** |
| Type of the Article | **BOOK CHAPTER** |

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| 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 explores innovative approaches to mathematical modeling for grain storage, addressing challenges associated with temperature, humidity, and pest control in storage structures.  It highlights the integration of analytical and numerical methods such as Computational Fluid Dynamics (CFD) and Finite Element Methods (FEM), offering potential improvements in post-harvest grain management.  The research is relevant to agricultural engineering, with direct applications in optimizing storage conditions and minimizing post-harvest losses. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title is suitable and reflects the content of the manuscript. |  |
| 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. | The abstract provides a comprehensive overview but can benefit from a clearer statement of the primary findings or implications of the new modeling approaches. Consider explicitly mentioning the key advantages of these methods compared to traditional approaches. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript appears scientifically robust. Equations and models are well-documented and relevant to the subject matter.  However, there could be more emphasis on validating these models with experimental or real-world data. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | References are sufficient and relevant, with a mix of foundational and recent works. It would be beneficial to include more recent studies (post-2020) to ensure the manuscript reflects the latest advancements. |  |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript's language is clear but could benefit from minor grammatical and stylistic improvements for enhanced readability. For example:  Replace "didn’t stopped" with "did not stop."  Ensure consistent use of terms like "silo/bin." |  |
| Optional/General comments | The manuscript could benefit from additional diagrams or figures illustrating the flow of stresses in silos or the impact of dynamic friction coefficients.  A comparison table summarizing the advantages and limitations of numerical versus analytical approaches would enhance understanding.  1.Clarify the abstract by including specific findings or implications of the research.  2.Add more recent references to reflect ongoing advancements.  3.Improve the language for grammatical accuracy and consistency.  4.Include more visuals or diagrams to support the text.  5.Provide a brief validation or discussion of how the models perform under experimental conditions. |  |

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| **PART 2:** | | |
|  | **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)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** | |
| Name: | **Haishui Yan** |
| Department, University & Country | **China** |