



SDI Review Form 1.6

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| Journal Name: | Journal of Engineering Research and Reports |
| Manuscript Number: | Ms_JERR_45548 |
| Title of the Manuscript: | Development of an Energy Storage Chamber to Enhance Solar Drying of Grain at Night |
| Type of the Article | Original Research Article |

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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) |
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| Compulsory REVISION comments | it can be accepted for publication in the journal if the authors considers the following minor corrections as suggested. | |
| Minor REVISION comments | <p>The manuscript entitled “Development of an Energy Storage Chamber to Enhance Solar Drying of Grain at Night” is an interesting paper. The authors investigated to design a thermal energy storage chamber (parabolic collector) connected to a solar drying system (comprising of flat plate collector and drying chamber) to collect and store thermal energy using black coated gravel in order to prevent moisture re-absorption at night. . The test contents are rich, the chart is clear and the conclusions are reliable. Thus, it can be accepted for publication in the journal if the authors considers the following corrections as suggested.</p> <ol style="list-style-type: none"> 1) The sentence “Despite the readily availability of solar energy, its continuous used have not be fully explored.” should be recast as “Despite the readily availability of solar energy, its continuous usage have not be fully explored.” 2) “Black coated gravel” What does it mean? It should be explained. 3) Grain size distributions of pebbles (gravels) used for heat collection and night usage should be given. 4) The origin of the pebbles (or chemical contents) should be explained. 5) The grain size of the materials (before drying) can be given. 6) References used can be increased. The introduction can be detailed. 7) The authors can try to use zeolites for heat transfer for the next studies. 8) Finally, there are typos throughout the paper. They should be corrected by proofreading. | <ol style="list-style-type: none"> (1) The correction has been effected (2) Black coated gravel (i.e gravel particles that have been coated with black paint and allowed to dry to increase its specific heat capacity and thermal conductivity. (3) 30 – 50 mm thick gravel was used for heat collection for night usage (4) The chemical content of the gravel used for heat storage is silicon dioxide (Calcium Carbonate, CaCO_3; Sodium Oxide Na_2O; Calcium Oxide; CaO, Potassium Oxide K_2O and Magnesium Oxide, MgO) (5) The average geometric diameters of cowpea, soya bean, groundnut, maize and sorghum before drying were 8.21mm, 7.06mm, 10.28mm, 7.05mm and 4.02mm respectively (6) Effected (7) Noted (8) Checked and effected |
| Optional/General comments | | |

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