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| Journal Name: | [**Journal of Scientific Research and Reports**](https://journaljsrr.com/index.php/JSRR) |
| Manuscript Number: | **Ms\_JSRR\_137195** |
| Title of the Manuscript: | **Multivariate analysis in chickpea (Cicer arietinum L.) cultivars** |
| Type of the Article | **Original Research Article** |

**PART 1: Comments**

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|  | |  |  | | --- | --- | | **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer** | | | **review.** |  |   **Reviewer’s comment** | **Author’s Feedback** (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 contributes valuable insights into the genetic variability and trait associations among diverse chickpea (Cicer arietinum L.) genotypes using robust multivariate statistical tools. By integrating classical approaches such as ANOVA and path analysis with advanced techniques like PCA and cluster analysis, the study provides a comprehensive evaluation of key agronomic traits relevant to yield improvement. The identification of promising genotypes and traits with high heritability and genetic advance can significantly support the development of superior chickpea cultivars, especially in the context of climate-resilient agriculture. These findings are important for plant breeders, geneticists, and agricultural researchers working to enhance pulse productivity and nutritional security in developing countries. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes, the title is generally suitable** and clearly reflects the scope of the study, which involves multivariate analysis on chickpea genotypes. |  |
| **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 **adequately summarizes** the study’s aim, methodology, and key findings. However, it **lacks numerical precision** and **needs tightening** for better impact.  **Suggestions**:   * Include **specific values** for important findings (e.g., heritability values, significant correlations). * Clearly state the **implication** of findings in the final sentence.   Remove phrases that are too general such as “These findings aid…” and replace with concrete application (e.g., “…supporting the selection of ICC 2300 for yield breeding programs”). |  |
| **Is the manuscript scientifically, correct? Please write here.** | Yes, These methods are well-established in plant breeding and genetics. However, **some areas require improvement**:   * The **assumptions of statistical tests (e.g., normality)** were not stated. * The **interpretation of PCA and cluster analysis** can be strengthened with clearer trait-cluster associations. * Some **data visualization (figures/tables)** could be improved or included in-text for clarity. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The manuscript includes a good range of **relevant classical and regional references**, but it **lacks sufficient recent international literature** from the past 5 years. |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | The manuscript requires **moderate English editing**. **Problems noted**:   * Several grammatical errors and awkward phrasing (e.g., “revealed a wide distribution of the scores for the 13 quantitative traits” could be simplified). • Inconsistent capitalization and terminology in headings (e.g., “material and methods”). * Repetitive phrases, lack of clarity in some long sentences, and occasional typos. **Recommendation**: * A thorough **professional English proofreading** is recommended to meet the standards of scholarly publication. |  |
| **Optional/General** comments | The manuscript addresses an important area in plant breeding and genetics by evaluating genetic diversity and agronomic performance in chickpea cultivars. The use of multivariate analysis enhances the depth of interpretation, and the inclusion of both PCA and cluster analysis is commendable. However, the manuscript would benefit from thorough English language editing to improve readability and scholarly tone. Additionally, the authors are encouraged to refine the discussion section by linking findings more explicitly to previous research and clarifying the implications for breeding programs. Overall, this is a valuable contribution with potential for publication after minor to moderate revisions. |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (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)* |  |

**Reviewer details:**

**Sri Fajar Ayu, Universitas Sumatera Utara, Indonesia**