

REVIEWER'S REPORT

Manuscript No.: IJAR-55259

Date: 17.12.2025

Title: Genetic variability for yield and its contributing traits in Indian mustard (*Brassica juncea* L.)

Recommendation:

Accept as it is

Accept after minor revision

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity			✓	
Significance			✓	

Reviewer Name: **ANAPANA GOPAL**

Date: 17.12.2025

Reviewer's Comment for Publication.

General Comments

The manuscript addresses an important and well-established topic in plant breeding, namely the assessment of genetic variability, heritability, genetic advance, correlation, and path coefficient analysis for yield and yield-related traits in Indian mustard (*Brassica juncea* L.). The study is relevant to oilseed crop improvement and aligns well with the scope of journals focusing on crop genetics and breeding. The experimental design is appropriate, and standard biometrical methods have been employed. However, the manuscript requires moderate refinement in data presentation, clarity, and consistency before it can be considered for publication.

Content and Originality

The study provides useful baseline information on genetic variability and yield-contributing traits in Indian mustard. While the overall approach (variability, correlation, and path analysis) is conventional and widely used in mustard breeding studies, the inclusion of genotypes from multiple sources enhances the practical relevance of the findings. The results largely confirm earlier reports rather than introducing novel concepts, but the work is still valuable for regional breeding programmes and germplasm evaluation. The originality is therefore incremental rather than groundbreaking.

Technical Quality

The experimental design (Randomized Block Design with three replications) is appropriate, and the statistical methods used (ANOVA, GCV, PCV, heritability, genetic advance, correlation, and path coefficient analysis) are standard and correctly cited. However, some technical issues need attention:

- Certain tables appear incomplete or poorly formatted (especially Table 3, where traits and values are fragmented).

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- The ANOVA table is described as “simulated,” which raises concerns; actual experimental data should be clearly stated.
- Units, symbols, and abbreviations should be consistently defined (e.g., SP, SB, PH in path analysis).
- The justification for selecting only ten traits could be briefly explained.
- Residual effect in path analysis is reported but not adequately discussed.

Overall, the technical methodology is sound, but presentation and transparency need improvement.

Language and Presentation

The language is generally understandable and suitable for scientific communication, but there are noticeable grammatical errors, repetition, and inconsistencies in formatting. Minor issues include missing spaces, inconsistent capitalization, and typographical errors (e.g., “et.al.” instead of “et al.”, inconsistent use of units and symbols). The manuscript would benefit from careful language editing to improve readability and professionalism.

Structure and Organization

The manuscript follows a standard structure (Abstract, Introduction, Materials and Methods, Results and Discussion, Conclusion, References). However, improvements are needed:

- The Introduction contains repetitive statements and could be more concise with a clearer research rationale.
- Results and Discussion are merged but would benefit from better integration of results with previous literature.
- Tables should be sequentially numbered and clearly titled.
- The flow between correlation analysis, path analysis, and variability parameters can be improved for better coherence.

Despite these issues, the overall organization is acceptable with moderate revisions.

References and Citations

The references cited are relevant and appropriate for the study. Classic and authoritative sources (Burton & DeVane, Johnson et al., Falconer & Mackay) are correctly included. Recent literature has also been cited to support the findings. However:

- Citation style should be standardized according to the journal's guidelines.
- Some references show minor formatting inconsistencies.
- In-text citations should be consistently formatted.

Overall, the references are adequate and relevant.

Overall Recommendation

The manuscript presents scientifically valid results and contributes useful information to Indian mustard breeding research. However, improvements are required in data presentation, clarity of tables, language quality, and consistency before publication.

Final Decision

Minor Revision Required

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The paper may be accepted for publication after addressing the above comments, particularly those related to table clarity, language editing, and technical presentation.