

REVIEWER'S REPORT

Manuscript No.: IJAR-50642

Date: 14/3/2025

Title:

Molecular Breeding vs. Genetic Engineering: A Comparative Study in Crop Improvement

Recommendation:

Accept as it is

Accept after minor revision.....●

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer Name: Dr.Sumathi

Date: 14/3/2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

Molecular breeding is the application of molecular biology tools, like DNA markers, to improve traits in plants and animals by manipulating DNA at the molecular level, often used in conjunction with traditional breeding methods.

Detailed Reviewer's Report

- 1. Genetic engineering, also known as genetic modification, involves altering an organisms DNA to change its traits or functions, using techniques like inserting genes from one species into another.**
- 2. Crop improvement refers to the intentional modification of crops through various methods, including plant breeding and genetic**

REVIEWER'S REPORT

engineering to enhance their desirable traits like yield, quality, and resilience to environmental stresses.

3. Transgenic crops, also known as genetically modified crops, are plants whose genetic material has been altered through genetic engineering techniques, typically by introducing genes from another species, resulting in new or enhances traits.
4. Biotechnology innovations encompass a wide range of advancements, including tissue engineering, artificial intelligence, big data analysis and gene editing, all revolutionizing fields like medicine, agriculture and environmental science.
5. Sustainable agriculture aims to produce food and fiber in ways that protect the environment, maintain soil health and ensure economic viability for farmers supporting both current and future generations.
6. This research findings coming under plant biotechnology and its useful for scientic area.
7. Very less information and references. Can be added more if possible.
8. From review points can be given with flow charts of important points.
9. There is no pictures and graphs in this paper.
10. Summary parts can be included.
11. References should be in alphabetical order.