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JournalName:	AsianResearchJournalofAgriculture
ManuscriptNumber:	Ms_ARJA_128417
TitleoftheManuscript:	“PalynologicalStudiesIn PlantBreeding:AComprehensiveReview.”
TypeoftheArticle	

PART1: 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 paper emphasizes the importance of palynology in enhancing plant breeding by providing insights into reproductive biology and hybridization processes. It highlights creative approaches that can increase crop development efforts by incorporating modern molecular and computational technologies, notably in addressing issues like male sterility and stress tolerance. The complete study of case studies from various crops provides academics and practitioners with vital information, fostering a better understanding of pollen dynamics and their consequences for agricultural output. Finally, this work provides a valuable resource to the scientific community, opening the path for future research and applications in sustainable plant breeding methods.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title "Palynological Studies in Plant Breeding: A Comprehensive Review" is appropriate since it appropriately describes the article's content, which is about the importance of palynology in plant breeding and its applications in crop development. An alternative title that captures the content of the article could be "Advancements in Palynology: Enhancing Plant Breeding Through Pollen Studies."	
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.	<p>The abstract of the study presents a thorough overview of the significance of palynology in plant breeding, stressing its applications in reproductive biology, hybridization, and stress tolerance. It effectively highlights methodological advances and the effects of palynology on various crops. However, here are a few suggestions for improvement:</p> <ol style="list-style-type: none"> Important phrases Clarification: To improve clarity for readers who are unfamiliar with these issues, the abstract might benefit from briefly explaining important phrases such as "male sterility," "hybridization barriers," and "stress tolerance." Specific instances: While the abstract cites case studies, it may be more powerful by giving one or two specific instances of successful applications of palynology in crop development, such as yield enhancement or stress resistance. Future Directions: The abstract should briefly include the article's future directions, such as the integration of molecular techniques and AI in palynology, to provide a forward-looking perspective on the discipline. Problems: Including a phrase discussing the problems of palynology, such as environmental sensitivity and resource constraints, would provide a more balanced perspective on the field. Keywords: To improve searchability and relevancy, the keywords mentioned at the end might be broadened to include more relevant concepts such as "hybridization," "crop improvement," and "molecular tools". <p>Overall, these additions may make the abstract more complete and helpful to a larger audience.</p>	

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Isthe manuscript scientifically, correct? Please write here.	<p>Given the background supplied, the manuscript looks to be scientifically correct. It clearly explains the importance of palynology in plant breeding, stressing its applications in reproductive biology, hybridization, male sterility, stress tolerance, and species compatibility. The integration of methodological advances in pollen morphology, viability, germination studies, and molecular analysis backs up the statements made regarding the relevance of palynology in crop improvement.</p> <p>Furthermore, the book includes references to important studies and case cases, which add to its credibility. The mention of new molecular tools like DNA fingerprinting and transcriptomic emphasizes the importance of improved technologies in palynological research. The obstacles and future directions for integrating palynological investigations with developing technology are also adequately addressed, demonstrating a thorough awareness of the topic.</p> <p>Overall, the manuscript presents a comprehensive assessment of palynological investigations in plant breeding that is in line with current scientific knowledge and practices.</p>	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	<p>The references in the context date from 1944 to 2023, reflecting a mix of older and more contemporary works. While some references, such as those from 2021 and 2023, are fairly recent, others, such as those from 1944 and 2010, may not reflect the most recent advances in the subject. To improve the relevance and timeliness of the</p>	

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	<p>references, it would be useful to include more recent research, particularly those published in the previous few years, that focus on advances in palynology, molecular tools, and their applications in plant breeding. To improve the relevance and timeliness of the references, it would be useful to include more recent research, particularly those published in the previous few years, that focus on advances in palynology, molecular tools, and their applications in plant breeding. Additional references should include:</p> <ol style="list-style-type: none"> 1. Recent review or studies on CRISPR-Cas9 in pollen genetics. 2. Current research into the effects of climate change on pollen viability and storage strategies. 3. Recent research into pollen storage strategies and their efficacy in harsh environments. 	
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Yes, the language and English quality of the article appear to be appropriate for scholarly communication. The work is well-structured, employs acceptable scientific vocabulary, and maintains a formal tone suitable for academic writing. Furthermore, it clearly expresses complicated concepts like palynology and its applications in plant breeding, which is critical for scholarly debate.</p>	
<p>Optional/General comments</p>	<p>The examination of palynology and its applications in plant breeding is thorough and covers a wider range of important subjects. However, a few parts may benefit from modest modifications to improve clarity and coherence.</p> <ol style="list-style-type: none"> 1. Introduction Clarity: The introduction may include a more precise definition of palynology and its importance in plant breeding. A quick summary of the historical context or evolution of this area may help the reader understand. 2. Section Headings: Review several section headings for uniformity and clarity. For example, "FUTURE DIRECTIONS" could be more specific, such as "Future Directions in Palynology and Plant Breeding." 3. Case Studies: While the case studies are instructive, including a brief summary or conclusion at the end of each one could aid in synthesizing the findings and their implications for plant breeding. 4. Reference Formatting: Make sure that all references are formatted correctly with the citation style you've chosen. This involves looking for consistency in author names, publication dates, and journal titles. 5. Figures and Tables: If appropriate, provide figures or tables summarizing major findings or approaches presented in the text. Visual aids can help improve comprehension and engagement. 6. Conclusion Strengthening: To strengthen the conclusion, summarize the important insights from the review and emphasize the possible impact of palynological studies on future crop development efforts. <p>Overall, the review is well-structured and informative, but these minor revisions could enhance its clarity and impact.</p>	

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

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