

Review Form 3

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_128894
Title of the Manuscript:	Molecular Diversity of commercially available edible oyster mushroom by SSR marker
Type of the Article	

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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 is an increasingly important topic due to the growing demand for sustainable, plant-based protein sources, however, there are several areas that require improvement to enhance its clarity, scientific rigor, and readability	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes	
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 contains grammatical errors, awkward phrasing, and inconsistent use of tenses, which detract from its clarity. For example, "Oyster mushroom (Pleurotus species) was commercially grown in the worldwide." . Improved: "Oyster mushrooms (Pleurotus species) are commercially cultivated worldwide."	
Is the manuscript scientifically, correct? Please write here.	Yes	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Yes	
Is the language/English quality of the article suitable for scholarly communications?	The MS contains awkward phrasing and redundant sentences that can be streamlined for better readability	
Optional/General comments	<p>The study entitled "Molecular Diversity of commercially available edible oyster mushroom by SSR marker" addresses the nutritional importance of oyster mushrooms and their potential as a vegan protein source. This is an increasingly important topic due to the growing demand for sustainable, plant-based protein sources, however, there are several areas that require improvement to enhance its clarity, scientific rigor, and readability. For example:</p> <p>1. Abstract The abstract contains grammatical errors, awkward phrasing, and inconsistent use of tenses, which detract from its clarity. For example, "Oyster mushroom (Pleurotus species) was commercially grown in the worldwide." . Improved: "Oyster mushrooms (Pleurotus species) are commercially cultivated worldwide."</p> <p>2. Introduction * The introduction lacks a direct link between these statistics and the importance of genetic diversity in <i>Pleurotus</i> species. Suggestion, discuss the specific challenges faced in <i>Pleurotus</i> production (e.g., susceptibility to diseases, yield variability) and how genetic diversity can address these issues. Example, "Despite the significant production figures, challenges such as strain uniformity, vulnerability to pathogens, and declining yield necessitate a deeper understanding of genetic diversity in <i>Pleurotus</i> species." * While the statistics provide valuable context, the detailed focus on specific states in India (e.g., Bihar and Odisha) feels excessive and detracts from the broader scientific narrative.</p>	

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	<p>Suggestion, summarize the statistics briefly and refocus on how genetic diversity impacts production globally.</p> <p>* Although the utility of SSR markers is mentioned, the introduction does not explain why they are particularly suited to studying <i>Pleurotus</i> species compared to other markers.</p> <p>Suggestion: include specific examples of how SSR markers have been successfully used in fungal studies to provide context and strengthen the argument. Example, "SSR markers have been widely applied in fungal studies, such as genetic mapping in <i>Aspergillus flavus</i> and population analysis of <i>Ganoderma lucidum</i>."</p> <p>* The applications of SSR markers are mentioned broadly, but the introduction would benefit from concrete examples to illustrate these points.</p> <p>Suggestion: Provide specific examples of traits in <i>Pleurotus</i> that have been targeted or could be targeted using SSR markers. Example, "For instance, SSR markers have been used to identify strains of <i>Pleurotus ostreatus</i> with enhanced lignin-degrading ability, a trait valuable for bio-remediation efforts"</p> <p>* The introduction contains awkward phrasing and redundant sentences that can be streamlined for better readability. Suggestion: "Pleurotus species, commonly known as oyster mushrooms, are saprophytic fungi widely cultivated for their nutritional value, medicinal properties, and ability to grow on diverse lignocellulosic substrates. These traits make them integral to sustainable agriculture."</p> <p>3. Results and discussion</p> <p>* The text mentions genetic distances but fails to explain why certain species exhibit higher or lower distances, leaving readers without a clear understanding of the implications. Suggestion, discuss ecological, evolutionary, or geographical factors that might explain the observed genetic distances. Example, "The high genetic distance (0.73) between <i>P. florida</i> and <i>P. sajor-caju</i> may reflect differences in their adaptation to distinct ecological niches or selective breeding practices."</p> <p>* While previous studies are referenced, their findings are not adequately linked to the current results. This weakens the broader relevance of the study. Suggestion, compare the results with findings from similar studies, such as highlight consistencies or differences. Example, "The genetic similarity observed between <i>P. ostreatus</i> and <i>P. pulmonarius</i> aligns with XXXX who reported a close phylogenetic relationship between these species based on SSR markers."</p> <p>* The effectiveness of specific primers is not adequately discussed. For example, PoM908 failed to produce any bands, but the reason for this failure is not addressed. Suggestion, investigate and explain potential reasons for primer inefficacy, such as sequence mismatches or low template DNA quality. Example, "The inability of primer PoM908 to produce bands may be due to its lack of complementarity with conserved regions of the tested species' genomes."</p> <p>* The section focuses on numerical results but does not explore their biological significance. Suggestion, discuss how the observed genetic diversity could impact traits like growth, yield, or environmental adaptability in <i>Pleurotus</i> species. Example, "The genetic diversity identified between <i>P. florida</i> and <i>P. sajor-caju</i> suggests potential for cross-breeding programs to combine desirable traits such as higher yield and enhanced resistance to pathogens."</p> <p>* Figures lacks a detailed description of the gel electrophoresis results, leaving the reader without a clear understanding of the visual evidence supporting the findings.</p> <p>* The repetition of species names and genetic distances without a clear narrative creates confusion. Suggestion, structure the discussion to clearly present key findings for each primer and their implications for specific species.</p>	
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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)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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