

### Review Form 3

Journal Name:	<a href="#">Annual Research &amp; Review in Biology</a>
Manuscript Number:	Ms_ARRB_128500
Title of the Manuscript:	Level of susceptibility of mycosphaerella fijiensis to mefentrifluconazole, a new triazole molecule in industrial banana plantations in Côte d'Ivoire
Type of the Article	

#### **General guidelines for the Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### **Important Policies Regarding Peer Review**

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#### **PART 1: Comments**

	<b>Reviewer's comment</b>	<b>Author's Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>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.</b>	The manuscript addresses a critical issue in banana production, which is significantly impacted by <i>Mycosphaerella fijiensis</i> , a pathogen responsible for banana black spot disease. The study highlights the susceptibility of this pathogen to mefentrifluconazole, a new triazole fungicide, offering a potential solution for effective disease control in Côte d'Ivoire. The findings are relevant for agricultural scientists, plant pathologists, and banana industry stakeholders as they provide data-driven insights into fungicide sensitivity, aiding in resistance management and improving productivity.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	The title is suitable as it reflects the core focus of the study. However, it could be made slightly more precise: Suggested Title: " <b><i>Susceptibility of Mycosphaerella fijiensis to Mefentrifluconazole in Industrial Banana Plantations in Côte d'Ivoire: An In Vitro Study.</i></b> "	

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<p><b>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.</b></p>	<p>The abstract is generally clear, but it could benefit from a few improvements:</p> <p><b>Suggested Improvements:</b></p> <ul style="list-style-type: none"> <li>▪ Include specific data points (e.g., range of IC50 values) to emphasize the results.</li> <li>▪ Reframe the conclusion to emphasize the implications for managing fungicide resistance.</li> </ul> <p><b>Abstract can be revised as</b> (Suggestion): "Banana black spot, caused by <i>Mycosphaerella fijiensis</i>, severely impacts banana production in Côte d'Ivoire. This study evaluates the susceptibility of <i>M. fijiensis</i> isolates to mefentrifluconazole, a new triazole fungicide, compared to difenoconazole. In vitro tests on 17 isolates from industrial plantations revealed IC50 values ranging from 0.005 to 0.073 mg/L (average 0.037 mg/L), indicating high sensitivity. Growth inhibition rates were higher for mefentrifluconazole, demonstrating its superior efficacy. These results suggest mefentrifluconazole as a promising alternative for managing black spot and mitigating resistance development."</p>	
<p><b>Is the manuscript scientifically, correct? Please write here.</b></p>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>○ The methodology is robust, with clear descriptions of sampling, culture preparation, and evaluation techniques.</li> <li>○ Results are well-documented, with appropriate statistical analysis of IC50 and inhibition classes.</li> <li>○ The study's conclusions are aligned with the presented data.</li> </ul> <p><b>Areas for Improvement:</b></p> <ul style="list-style-type: none"> <li>○ <b>Statistical analysis:</b> Provide additional clarity on how IC50 and IC95 values were calculated. Were replicates included for each test?</li> <li>○ <b>Discussion Section:</b> Expand on the potential mechanisms of resistance (e.g., CYP51 gene mutations) and the significance of differences in IC50 values between untreated and industrial plantations.</li> <li>○ <b>Figures:</b> The figures are informative but could be improved for clarity. For example, label axes and provide units where applicable.</li> </ul>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p>The references are sufficient and include recent studies. However:</p> <p>A few more studies on <i>M. fijiensis</i> resistance mechanisms (e.g., CYP51 gene overexpression) would strengthen the discussion.</p> <p><b>Suggested References:</b></p> <p>Peng et al. (2024) and Ishii et al. (2021) are already cited but can be elaborated on further in the context of resistance development.</p>	

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<b>Is the language/English quality of the article suitable for scholarly communications?</b>	The manuscript's language is generally clear but requires major revision for grammar and phrasing. Ensure that a thorough proofreading by a native English speaker is recommended to improve fluency, before publish.	
<b>Optional/General</b> comments	The study could provide practical recommendations for field trials to validate the laboratory findings. Include a short section on future research directions, such as investigating the polygenic basis of fungicide resistance in <i>M. fijiensis</i> .  I declare that I have no competing interest as a reviewer. <b>No ethical issues were detected as the study involves plant pathogens and standard laboratory practices.</b>	

#### **PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

#### **Reviewer Details:**

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