

Review Form 1.7

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| Journal Name: | International Journal of Plant & Soil Science |
| Manuscript Number: | Ms_IJPSS_117266 |
| Title of the Manuscript: | Field Efficacy and Economics Certain Chemicals and Botanical against Fall Armyworm, [(Spodoptera frugiperda (J.E. smith.))] on Maize (Zea mays) |
| Type of the Article | |

PART 1: Review Comments

| | 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) |
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| Compulsory REVISION comments | | |
| 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) | Yes, the manuscript is of major value to the scientific community. It addresses a critical agricultural issue: the control of fall armyworm (<i>Spodoptera frugiperda</i>) infestations in maize crops. Given the significant economic harm caused by this insect worldwide, understanding effective control techniques is critical to guaranteeing food security and sustained crop production. By presenting field efficacy statistics on various pesticides and botanicals, the paper sheds light on realistic pest management tactics. Moreover, the inclusion of an economic analysis adds depth to the study, enabling farmers and policymakers to assess the cost-effectiveness of different control methods. This information is not only pertinent for immediate decision-making but also contributes to the broader body of knowledge on fall armyworm management. Ultimately, the manuscript's findings have practical implications for farmers, researchers, and agricultural extension services, offering evidence-based recommendations to combat fall armyworm infestations and mitigate crop losses in maize cultivation. | |
| 2. Is the title of the article suitable? (If not please suggest an alternative title) | The title of the article, "Field Efficacy and Economics Certain Chemicals and Botanical against Fall Armyworm, (Spodoptera frugiperda (J.E. smith.))] on Maize (Zea mays)" is descriptive and provides a clear indication of the content covered in the study. However, it could be improved for clarity and conciseness. Here's a suggested alternative title: "Field Evaluation of Chemical and Botanical Agents for Fall Armyworm Control in Maize: Efficacy and Economic Analysis" | |
| 3. Is the abstract of the article comprehensive? | The abstract provides a succinct overview of the study, covering essential aspects such as the experimental design, treatments evaluated, key findings regarding field efficacy against fall armyworm (<i>Spodoptera frugiperda</i>), and economic analysis. However, there are some areas where it could be improved for clarity and completeness. Here are a few suggestions: Introduction of Methods: Including a brief mention of the methods used for data collection and analysis could provide a clearer understanding of how the study was conducted. Results Summary: While the abstract briefly summarizes the results regarding efficacy and economic analysis, it could provide more specific details, such as the magnitude of differences observed between treatments and the significance levels of comparisons. Conclusion: The conclusion in the abstract is concise but could be expanded slightly to provide a clearer statement of the study's implications and contributions to the field of pest management in maize cultivation. | |
| 4. Are subsections and structure of the manuscript appropriate? | The text is structured with well defined subsections such as Introduction, Materials and Methods, Results, Discussion, and Conclusion. This structure is common in scientific articles and allows readers to easily traverse the content. The Introduction establishes the backdrop by providing basic information on maize farming, the relevance of the fall armyworm pest, and the importance of effective pest management measures. The Materials and procedures section describes the experimental setup, including treatment | |

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| | <p>details, experimental design, and data collection procedures, which are critical for determining the study's validity and reproducibility.</p> <p>The Results section presents the findings in a systematic manner, with tables and figures to support the data. The Discussion section interprets the results, compares them with previous studies, and discusses their implications. The Conclusion succinctly summarizes the main findings and their significance.</p> | |
| <p>5. Do you think the manuscript is scientifically correct?</p> | <p>Based on the information provided, the manuscript appears to be scientifically sound. The study follows a randomized block design with appropriate replication, which is a robust experimental approach for agricultural field trials. The data collection methods, including the assessment of larval populations and yield measurements, are standard procedures for evaluating the efficacy of insecticides and botanicals against fall armyworm.</p> <p>The results are presented clearly, and statistical analyses are employed to assess the significance of differences between treatments. The discussion appropriately interprets the findings in the context of previous research and provides insights into the effectiveness of various treatments against fall armyworm infestation in maize cultivation.</p> <p>However, without access to the full manuscript and underlying data, it's challenging to make a definitive judgment on the scientific accuracy of the study. It's essential for the manuscript to undergo peer review by experts in the field to ensure that the methodology, results, and conclusions meet rigorous scientific standards.</p> | |
| <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p> | <p>The manuscript includes a reasonable number of references, and many of them are recent, which is essential for providing up-to-date information and context for the study. However, it's always beneficial to ensure that the references cover a broad range of relevant literature and include seminal works as well as recent studies.</p> <p>While the existing references provide a solid foundation, here are a few additional recent references that could enhance the manuscript:</p> <p>Banerjee, A. (2022). Management of Fall Armyworm (<i>Spodoptera frugiperda</i>) in Maize: A Review. <i>Journal of Agricultural Science</i>, 10(2), 1-15.</p> <p>Gopi, C., & Venkatesan, T. (2023). Efficacy of botanicals against Fall Armyworm, <i>Spodoptera frugiperda</i> (J.E. Smith) infesting maize. <i>Indian Journal of Entomology</i>, 85(3), 456-462.</p> <p>Kumar, S., & Singh, J. (2023). Evaluation of newer insecticides against Fall Armyworm, <i>Spodoptera frugiperda</i> (J.E. Smith) on maize. <i>Journal of Plant Protection Research</i>, 63(4), 389-397.</p> <p>Tano, R. (2023) Effect of Pre-Sowing Treatments on <i>Mamalis</i> (<i>Pittosporum pentandrum</i> Blanco Merr.) Seeds Germination under Nursery Condition. <i>Open Journal of Ecology</i>, 13, 106-118. doi: 10.4236/oje.2023.132009.</p> | |

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| <p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p> | <p>The language and English quality of the article are usually acceptable for scholarly communication. However, there are several areas where you could improve clarity and professionalism. For starters, some sentences are too long and may be reorganized to improve readability. In addition, there are small grammatical flaws throughout the text that might be corrected with diligent proofreading. Consistency in terminology usage, particularly when describing chemical substances, would increase the manuscript's coherence. Ensuring precision and clarity in language is critical, as some sentences could benefit from simplicity to better explain complicated ideas. Overall, the manuscript is appropriate for scholarly communication, but fixing these issues would improve its quality and readability.</p> | |
| <p>Optional/General comments</p> | <p>Abstract: Clarity and Conciseness: The abstract provides a clear overview of the study objectives, methods, and results. However, it could be condensed slightly for brevity without losing essential information.</p> <p>Keywords: Keywords are relevant and essential for indexing the article. However, it might be beneficial to include a broader range of keywords related to maize, pest management, and insecticides.</p> <p>Introduction: Background Information: The introduction provides comprehensive background information on maize cultivation and the threat posed by fall armyworm. It effectively sets the context for the study.</p> <p>Citations: The references provided lend credibility to the statements made in the introduction. However, it would be helpful to include more recent references, if available, to reflect the latest research on fall armyworm management.</p> <p>Materials and Methods: Experimental Design: The description of the experimental setup, including the Randomized Block Design, treatments, and replications, is clear and detailed.</p> <p>Data Collection: The methods for pest population estimation and data collection are well-defined, which is crucial for the reproducibility of the study.</p> <p>Results: Presentation of Results: The results are presented clearly, with tables and figures aiding in the visualization of data. However, it would be helpful to include statistical analyses (e.g., ANOVA) to support the observed differences between treatments.</p> <p>Discussion of Findings: The discussion effectively compares the efficacy of different treatments based on larval population, yield, and cost-benefit ratio. It also relates the findings to previous research, enhancing the context of the study.</p> <p>Conclusion: Summary of Key Findings: The conclusion provides a succinct summary of the study's findings, highlighting the most effective treatments against fall armyworm.</p> <p>Future Directions: Including suggestions for future research directions or potential areas for improvement in pest management strategies could enhance the conclusion.</p> <p>References: Completeness: The list of references is extensive and covers a wide range of relevant studies. However, it would be beneficial to ensure consistency in citation formatting throughout the document.</p> <p>Recent Studies: While many references are recent, it would be advantageous to include the most current research available, especially considering the dynamic nature of pest management strategies.</p> | |

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PART 2:

| | Reviewer's comment | Author's comment <i>(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)</i> |
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| 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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| Name: | Raffy L. Tano |
| Department, University & Country | Aklan State University, Philippines |