Evaluation of the different components of the article
Title :

The title is correct but could be reworded for better understanding.

Abstract
The summary reflects the results in the body of the document. However, the last paragraph of the summary should be reworded without emphasizing the central importance of the results.

Introduction
The introduction highlights the importance of entomopathogens, such as bacteria, as biological control agents in tropical agroecosystems. Their use offers several advantages, including their safety for humans, medium to high specificity and low risk of resistance.
A strain of *Metarhizium anisopliae* has been identified as promising for controlling oriental fruit fly in Africa.
Innovative strategies, such as self-inoculation of wild flies in the field or the release of mass-reared sterile males, are being explored for more sustainable fruit fly control.
The study also examined the effect of insect sex on immunity. The study aimed to assess the virulence of *M. anisopliae* spores on adult *B. dorsalis* flies as a function of inoculation dose, actual spore load, formulation and seasonal air temperature.

Materials and methods
The methodology used is explicit enough to be repeated or improved for other similar studies.
The statistical analyses described seem appropriate for the study in question. The following is an assessment of each method used:

- ✓ Cox model: This model is commonly used to analyze survival data. It is appropriate for examining how several factors influence the time to a specific event, such as mortality in this case.
- ✓ Pearson correlation: This method is used to measure the linear correlation between two variables. It is suitable for examining the relationship between tube doses and fly load.
- ✓ Probit method: This method is commonly used in toxicology to determine the dose of a substance that is lethal to a certain percentage of the population. It is suitable for calculating lethal doses and lethal times.
- ✓ Generalized Linear Model (GLM): GLMs are an extension of ordinary linear models that allow for non-normal errors. The use of a Poisson distribution for germination and a Gaussian distribution for growth seems appropriate given the nature of the data.

Results

The results presented meet the objectives of the study.

Tables and figures
Figures and tables are understandable without reference to the body of the article.

They have an appropriate legend.

Discussion

Studies on the dose-mortality relationship in insects, particularly with regard to the application of fungal spores, often lack precise information on the number of spores actually ingested or carried by individuals. This study examined this relationship to determine a "minimum" and "maximum" inoculation dose to induce mortality. It was found that the range between these two thresholds was very narrow, suggesting that a low number of spores can cause flies to die.

However, this mortality could be better explained by fungal penetration of the weakest parts of the fruit fly cuticle: the head and joints.

The study's conclusion seems well-founded and relevant to its objectives:

1. Standardization of virulence assessment: The study succeeded in providing elements for standardizing the virulence assessment of entomopathogenic fungal strains against adult fruit flies.

2. Low-dose efficacy of Met69OD: The results on the low-dose efficacy of Met69OD against oriental fruit flies are of interest as they may help optimize the use of this strain in control strategies.

3. Dilution effect of the corn starch adjuvant: The discovery of the dilution effect of the corn starch adjuvant is interesting in view of the longer survival time of the vector. This could help adjust product formulation to maximize efficacy. However, it will be imperative to evaluate this mixture in the context of a study on horizontal transmission.

4. Temperature-mediated virulence: Understanding how temperature affects Met69OD virulence is crucial. This can help plan product application according to climatic conditions.

Overall, the conclusion of the study seems well supported by the results presented and offers valuable information for improving control strategies against oriental fruit fly. However, as with all scientific research, it is important to note that these findings should be validated by further studies and field trials to confirm their efficacy and applicability in different conditions and regions.

References

These three references are missing.

36.↲

Leger, R. S., Cooper, R. M., & Charnley, A. K. (1988a). The effect of melanization of *Manduca sexta* cuticle on growth and infection by Metarhizium anisopliae. Journal of Invertebrate Pathology, **52**(3), 459–470.

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Leger, R. S., Durrands, P. K., Charnley, A. K., & Cooper, R. M. (1988b). Role of extracellular chymoelastase in the virulence of *Metarhizium anisopliae* for *Manduca sexta*. Journal of invertebrate pathology, **52**(2), 285–293.

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Membang, G., Ambang, Z., Mahot, H. C., Kuate, A. F., Fiaboe, K. K. M., & Hanna, R. (2021). Thermal response and horizontal transmission of cameroonian isolates of the entomopathogenic fungi *Beauveria bassiana* and *Metarhizium anisopliae*–Candidates for microbial controls of the banana root borer Cosmopolites sordidus. Fungal Ecology, **50**, 101042.

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