



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_66344
Title of the Manuscript:	Treatment of tomato seedlings with cell-free culture filtrate of phytopathogenic Fusarium oxysporum f.sp lycopersici (Sensu lato) offered protection against wilt disease under pathogen challenge
Type of the Article	

General guideline for 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 guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/journal/10/editorial-policy>)



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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)
Compulsory REVISION comments	<p>In this study, authors made an attempt to use the culture filtrate of two pathogenic <i>Fusarium oxysporum</i> f.sp <i>lycopersici</i> strains, isolated from the wilt infected tomato plants as wilt controlling agents, against self <i>Fusarium</i> pathogens. Overall, authors compared the two <i>Fusarium</i> isolate for their growth, sporulation, and infection rates. Also, the impact of these conidia on tomato seeds germination, infection progress, wilting, agro and pathological parameters were evaluated as a comparison to culture filtrates pre-treated plants. In general, the work was good, however, I suggest some changes and improvements to manuscript.</p> <ol style="list-style-type: none"> 1) In materials and methods, divide the section "Source of <i>Fusarium</i> isolates and evaluation of growth and sporulation rates" into two sections- 'Source of <i>Fusarium</i> isolates' and 'evaluation of growth and sporulation rates' 2) Expand the abbreviation of PDA on its first usage 3) Does the isolation of <i>Fusarium</i> Isolate-1 and <i>Fusarium</i> Isolate-2 was performed in this work? or done in earlier work which was published already? If it was a previous work coat the reference properly or else it is advisable to provide the methodology used for strains isolation, identification, and pathogenesis detection. <p>Although, authors coated that "Details of the isolation procedure, microscopical characteristics used for identification and evaluation of pathogenicity of the two isolates to tomato plants were described elsewhere", but, the reference coated was also saying same and coating another reference. So, it is advised to add a brief methodology for the sake of researcher's readability and reproducibility for their work.</p> <ol style="list-style-type: none"> 4) To count the number of conidia, the growth rate studied plates after 14 days are used? Or a separate set was placed for 21 days? Try to mention it clearly. 5) In section: Evaluation of conidia viability- Do separate plates used for each time point 24, 48, and 72h? If so specify. As technical replicates three areas in plate were considered. However, specify the number of plates developed for study as biological replicates and the no. of counted coverslips, as it was just mentioned as "among 50 randomly counted were done under microscope in each coverslip field. 6) The "Effect of infective conidia of <i>F. oxysporum</i> on viability of tomato seeds" experiment was performed aseptically, which needs prior seed sterilization. Does author done it? If so, mention briefly the methodology. 7) Expand the abbreviation of <i>Fol</i> on its first usage 8) It was mentioned that "fusarium wilt disease-susceptible landrace of tomato were sown" Mention the tomato cultivar name. 9) Specify the number of plants used for each study- infection study, agronomic and pathological parameters. 10) In results of section "Growth and sporulation rates of <i>F. oxysporum</i> isolates and viability of infective conidia", the no. of conidia mentioned in the text (F-Isolate 1: 6.5×10^4 and F-Isolate 2: 5.4×10^4 conidia per cm^2 colony area) was not matching with result shown in Figure 2 (approximately F-Isolate 1: 60×10^4 and F-Isolate 2: 50×10^4 conidia per cm^2 colony area). Correct the data as required. 	<p>Checked all the suggested portion and correction as per suggestion</p>



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	<p>11) Figure 1A and 1B can be merged to Figure 1 showing mean of replicates of F-Isolate 1 and 2 with standard deviation</p> <p>12) For Figure 2 and other figures, write the analysis performed, replications used, and p value in legend. Mention the no. of days of the shown experiment result.</p> <p>13) Figure 5 replications, standard deviation?</p> <p>14) Conclusion was stated that “results showed that culture filtrate of pathogenic isolates of <i>Fol</i> invoked systemic defense in susceptible tomato cultivar”, but there are no experimental results for systemic defense activation like PR proteins, phenolics levels, defense enzymes, antioxidants levels etc. So don't state it as such. The results shows the protection against wilt disease. Just mention so.</p> <p>15) Check for uniformity for references cited in the text and units</p>	
Minor REVISION comments		
Optional/General comments		

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>	