



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2012 AJEA 2811 http://www.sciencedomain.org/uploads/1333284911-BJAST.docx
Title of the Manuscript:	Interaction of fluorescent pseudomonads with <i>Pythium ultimum</i> and <i>Rhizoctonia solani</i> in cucumber roots

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(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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PART 2: 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)
<u>Compulsory</u> REVISION comments	The paper by Salman et al. Investigates the interactions between <i>P. fluorescens</i> CW2 and <i>P. ultimum</i> or <i>R. solani</i> both in liquid media and gnotobiotic system. While the MS is sufficiently well written and the experiments are mostly performed correctly, I find that the major flaw of the work is the apparent lack of novelty and the failure to highlight the real significance of the results. The pattern of root colonization by <i>P. fluorescens</i> have been extensively studied before by confocal fluorescent microscopy (Bloembergen et al., 2000; Lugtenberg et al., 2001) and there are numerous strains of <i>P. fluorescens</i> whose biocontrol activity has been thoroughly described. <u>Therefore the authors must state why CW2 was chosen for this work and what makes the strain so special.</u> A more detailed description of the strain (with literature, if any) including features such as original isolation host/year/properties should be given in the introduction or in M&M and bio control data should be provided in order to be able to compare the protection provided by CW2 in comparison with at least one of the well-known bio control <i>Pseudomonas</i> strains such as F113, CHA0 or Q2-87. Both introduction and discussion are way too general (i.e., about common properties of fluorescent <i>Pseudomonads</i>) and not focused on the real properties of the strain studied herein (what is the primary bio control mechanism of CW2? Antibiosis? Competition for resources on the root?) and the results obtained in this work, respectively.	We appreciate the comments of the reviewer. A paragraph was written in the introduction (highlighted) to explain why was CW2 used in this study. We hope that our response will satisfy the reviewer comments.



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	<u>References</u> B.J.J. Lugtenberg, L. Dekkers, G.V. Bloemberg. 2001. Molecular determinants of rhizosphere colonization by <i>Pseudomonas</i>. Ann Rev Phytopathol 39: 461-490. G.V. Bloemberg, A.H.M. Wijfjes, G.E.M. Lamers, N. Stuurman, B.J.J. Lugtenberg. 2000. Simultaneous imaging of <i>Pseudomonas fluorescens</i> WCS365 populations expressing three different autofluorescent proteins in the rhizosphere: new perspectives for studying microbial communities. MPMI 13: 1170–1176.	
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Minor REVISION comments	Order of subchapters in M&M and Results sections should be concordant. M&M Line 135: why use KB and incubate for 2 h thus theoretically allowing (re-)growth of the bacteria outside the root system. Wouldn't dilution in 0.9% saline better reflect the number on the root? Results There's no statistical difference between dipping and drenching at any time point, only between time points (Fig. 1). This is not accurately reflected by the text in Section 3.1.1. Fig. 3 and 4 are only partially directly comparable as apparently not the same region of the hyphae is shown, i.e. middle section of the hyphae in panel A (untreated) only hyphae tips in other panels (with CW2). Fig. 5: changing the order of the panels may facilitate the reader. My suggestion A D (healty roots) B E F (+<i>P. ultimum</i>) C G H I (+<i>R. solani</i>) _____CW2 added _ No bacteria Discussion Lines 278-280: where are the data about the increased number of bacteria in presence of the pathogen?	In this work the protocol of Fakhouri and Buchenauer 2003 was used for isolation of bacteira from plant roots. Fakhouri, W., H. Buchenauer: Characteristics of fluorescent pseudomonad isolates towards controlling of tomato wilt caused by <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i>. – Z. PflKrankh. PflSchutz 110, 143–156, 2003. This was clarified in in section 3.1.1 The population sizes of CW2 reisolated from the rhizosphere of cucumber seedlings were slight higher but not significantly different Fig 3 and 4 show the effect of bacteria on fungal hyphae not only tips or middle sections Fig 5. Changing the panels order will lead to change the figure caption, which in turn will be un understood for the reader It's clear from fig 5 that the colonization in the presence of the pathogen was higher
Optional/General comments		