

Review Form 1.7

Journal Name:	Asian Journal of Advances in Agricultural Research
Manuscript Number:	Ms_AJAAR_100451
Title of the Manuscript:	Differential changes in some antioxydant enzymes and biomolecules in leaves of tomato infected by Phytophthora infestans (Mont.) de Bary.
Type of the Article	Research

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:

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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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> Is the manuscript important for scientific community? (Please write few sentences on this manuscript) Is the title of the article suitable? (If not please suggest an alternative title) Is the abstract of the article comprehensive? Are subsections and structure of the manuscript appropriate? Do you think the manuscript is scientifically correct? Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The manuscript important for scientific community. In Cameroon, tomatoes yields remain low due to attacks by pathogens and insects. <i>Phytophthora infestans</i> (PI) is responsible for the downy mildew of tomatoes, a fungal disease responsible for enormous economic losses. To contribute to the search for means of control, the stimulatory effect of the tomato defence system by extracts of some plants was evaluated. Tomato plants were treated with the aqueous macerates of <i>Callistemon citrinus</i> (<i>C. citrinus</i>) and <i>Cymbopogon citratus</i> (<i>C. citratus</i>) at 10% (W/V). After 4 days of spraying with the macerates, plants were inoculated with a virulent strain of PI. Tomato leaves collected at 2-day intervals for 10 days were used to determine the contents of chlorophyll a, proteins, carbohydrates, lipids, amino acids and proline. The activities of the main antioxidant enzymes were also assessed: ascorbate peroxidase (APX), phenylalanine ammonia lyase (PAL), peroxidase (POX), superoxide dismutase (SOD). The results showed that treatment of tomato plants with aqueous macerates of <i>C. citrinus</i> and <i>C. citratus</i> and their inoculation with PI induced an increase in chlorophyll a, protein, carbohydrate, lipid, amino acid and proline contents in tomato leaves; an increase in APX, PAL, POX, and SOD activities. Our results suggest that increased metabolite synthesis on the one hand, and increased enzymatic activities, on the other hand, could mitigate the oxidative damage that occurs during pathogen expansion. Aqueous macerates of <i>C. citrinus</i> and <i>C. citratus</i> could be used as natural products to stimulate the tomatoes defence system against PI.</p> <p>The title of the article is suitable.</p> <p>The manuscript is scientifically correct, and subsections and structure of the manuscript are appropriate.</p> <p>References are sufficient.</p>	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> Is language/English quality of the article suitable for scholarly communications? 	<p>English quality of the article is suitable for scholarly communications.</p>	
<p>Optional/General comments</p>	<p>In Cameroon, tomatoes yields remain low due to attacks by pathogens and insects. <i>Phytophthora infestans</i> is a phytopathogenic fungus (PI) <u>add abreviature.</u></p> <p>tivity notably against <i>Phytophthora infestans</i> and <i>Fusarium oxysporum</i> of tomato are used as a biocontrol agent- agents (Dakole et al. 2016).</p> <p>Seeds of the Rio Grande variety of tomato <u>were</u> purchased at the Mfoundi market (Yaounde, Cameroon).</p> <p>. 1... 0 days after transplanting, the tomato plants were divided into 4 lots: How many tomato plants?</p> <p>Plants treated with <i>Callistemon citrinus</i>, <i>Cymbopogon citratus</i> and salicylic acid and inoculated with PI, respectively. (add comma)</p> <p>Superoxyde Superoxide dismutase (SOD)).</p> <p>Our study reveals that when tomato plants are inoculated with PI, the chlorophyll a content has decreased. The increase in metabolite synthesis on the one hand, and the increase... (add comma)</p> <p>Figure 8: POX activity (expressed in U.g⁻¹ FW) in... delete space</p>	

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	<p>Figure 9: SOD activity (expressed in U min⁻¹ g⁻¹ FW) ... delete space</p> <p>Same for the rest of captions.</p> <p>3.7. Effet des extraits de plantes sur la variation des activités des enzymes antioxydants des feuilles de <i>L. esculentum</i>. (check the language)</p> <p>Check the fonts in references: e.g. Graham, T.L., Kim, J.E. and Graham, M.Y. (1990). Role of constitutive isoflavone conjugates in the accumulation of glyceolin in soybean infected with <i>Phytophthora megakaria</i>. <i>Molecular Plant-Microbe interaction</i>, 6, 157-166.</p>	
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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>	

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