Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	**Ms_CJAST_42040**
Title of the Manuscript:	**Effect of different shade levels on growth, physiology and biochemical characteristics of small cardamom (Elettaria cardamomum Maton)**
Type of the Article	**Original Research 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.
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SDI Review Form 1.6

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	**Peer review was done May 13, 2018** **Title of the Article Reviewed**: "Effect of different shade levels on growth, physiology and biochemical characteristics of small cardamom (*Elettaria cardamomum* L Maton)" Abstarct Abstract match the rest of the article, with a clear aim. It is informative and relevant INTRODUCTION Line 26: Please delete "understory crop of" and Plece a period "." at the end of the sentence after "Indian origin". Please insert "It" before "is" in the beginning of the sentence. Line 27: Please delete "the" in the begining of the line. Line 28: Please replace "fruits" with "capsules" and remove the one in parenthesis. Line 30: Please delete "since last many" and insert "for" bedfore "decades" Line 31-33: Please include reference for this sentence Line 33-39: Please include the revised statement pasted below. "Reduced soil water content can decrease the yield of cardamom significantly during summer in the months of April and May. The number of flowers and capsules formed and the percentage of capsule set per plant were also reduced to 30% in summer and 80% in August or September. Synchronous soil and atmospheric warming of cardamom hills (Murugan et al., 2008) is evident which can adversely impact soil nutrient dynamics particularly major nutrients (nitrogen, phosphorus and potassium) leading to unavoidable yield reduction." Line 40: Please replace "has long been known to be" with " is" Line 41: Please delete "and" before "anatomy", and before "cellular". Please also delete "and, ultimately," before "flowering" in line 42. Line 45: please delete "effect" Line 47: Please delete "s" to make singular "irradience" Line 48: Please delete "photoinhibition takes place:" Line 51: Please replace "depression" with "reduction" and place a period"." before "In" Line 54: Please replace "study is needed" with "an investigation is necessary". Line 55-57: Please insert the following revised sentence in place of the original sentence. " Under the fast changing climatic conditions of cardamom growing areas in western Ghats, ecophysiological studies would be of immense use to manage and safe guard the cardamom agroforestry systems." Lines 57-62: Please include the following revisions in the manuscript " The objectives of the present study were 1) to quantify the influence of different shade levels on photosynthetic characteristics, stomatal activity, and physiology of small cardamom, 2) to determine optimum light intensity required for plant growth, and 3) to understand cardamom plant's shade-adaptation mechanism. The present investigation may also help in establishing improved cultivation practices for cardamom and in future crop improvement practices of this economically viable condiment." **Materials and Methods** Plant materials and Growth Conditions Line 71: Please place a period "." after " sea level" and delete "and". Please start a new sentence for weather parameters for that location in the follwoing sentence as "The observed average rainfall in experimental location was accounted to 2783mm with an average temaprature of 20.5 ^{o}C during 2016-18. Line 73-75: Please include a statement about calculation of shade in comparision to natural irradience. It was mentioned 50% and 75% levels besides open natural irradience conditions. Is the statement says that 50% of natural irradience? when used green colour shade nets. Also please include the company from which these nets were purchased, in a parenthesis after "shade nets" in line 75.	NOTED

	Line 75-76: "Figure 1" is missing label to view the design the treatments and replications Line 80: If "Physiological observations " is a subhead, please defferentiate by numbering subheads in not only this section but also in other sections following consistency and flow of the topic discussed. Lines 83-85: Please include standard units of measurements for all the units stated next to each trait measured. For example: PPFD is measured in micromol/m^2/s not in mmol/m^2/s. Lines 88: Please replace "for recording" with "to record" Line 89: Please insert "," after "flourescence" Line 90: Please insert "," after "parameters" Line 94: Please replace "with" with "of" Line 106: Please delete "s" to make singular "test" Results and Discussion and Conclusion Figures cited in the text were not able to locate though were present in the manuscript because all the figures were not labelled and are not provided with a figure title. Line 112: Please include quantitative information in the parenthesis for each trait to justify the information observed from analysis because 5% significance was laready mentioned for the data considered for presentation. Line 120: Please remove "present" and insert "observed" after "results" Lines 123-126: please include supportive literature for three conclusive statements mentioned after results for number stomata. Line 129: Please delete "have" Line 135: Please mention the specific shade treatment , before "shade" and after "in" Line 137: Please replace "under" with "grown in" As suggested before, please include treatment mean values in parenthesis for each variable or trait measured in paragraph three of the results and discussion section. Line 143: Please insert "The net" before "photosynthetic" Line 148: Please start the sentence with "The intracellular carbon dioxide concentration (Ci)" instead of "Ci" Line 155: Please delete ". Gs" and insert "," after "gs" Line 156: Please replace "functioned to" with "resulting in". Please add a supportive reference to this statement. Line 163: please insert "of adaptation to escape from adverse climatic conditions" after "behavior" Conclusions Line 175: Please replace "Our study, which" with "The" Line 177: Please replace "Our" with "The" and insert "clearly" after "results" Line 179: Please insert "and" before "biochemical" Over All Results, Discussion and Conclusions Answered the aims of the study and there were no limitations except to fill in some supportive literature as stated before opportunities to inform future research were missing data is presented appropriately , Categories grouped appropriately with statistically significant results and practically meaningful result. Figures are relevant , clear and needs labelling as appropriate as well as titles. Table is required with mean data References References are cited correctly,with recent and relevant published literature including key studies. The references "Strasser et al 1995 and Yang et al 2014" cited in the text were missing in the references section at the end. Overall The study design is appropriate to answer the aim, study add to what was already known, and the article is consistent within itself Review Overall statement or summary	

	The study methods are valid, reliable, variables measured correctly and defined correctly. Author organised the content and results very well with excellent discussion. Excellent contribution to a valuable crop for its improvement and cultivation Strengths of the article A valuable economic crop improvement in India for adpatation to changing global and domestic climatic conditions and with a scope to enhance the productivity by exapnasion of its cultivation to the similar habitat available globally. Weaknesses identified 1)Supportive literature was missing for some results as stated above 2)Figures are missing with titles 3) A Table with mean data on all the traits observed will add value to the presentation. 4) Please add scope and future lines of research to be conducted to continue improvement of this special crop	
Minor REVISION comments		
Optional/General comments		