



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_42472
Title of the Manuscript:	Weak Competition and Ideally Distributed Populations in a Cooperative Diffusive Model with Crowding Effects
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. 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)
Compulsory REVISION comments	<p>This paper discusses the system solution, which involves two species. The dynamics model, which describes cooperation-competition between these two species, is studied. Weak competition and different resource functions are considered in the analysis. The results are well-discussed. However, the presentation of the paper could be further improved.</p> <p>Some comments are given as follow:</p> <ol style="list-style-type: none"> 1. Please do not mention "in my PhD thesis". The PhD thesis that is mentioned in the text could be cited and put it in the reference list. 2. In Page 3, see in the first important result, "... the steady state ($K(x)$, 0) of (1.1) is..." What is $K(x)$ in the text? Please mention clearly. 3. Please do not use "part" or "portion" when state the content of the corresponding section. Use "section" is better. 4. In Section 2, the proof for Proposition 1 and Lemma 1 is not given. Is there any reason? 5. In Page 6, see sentence before Equation (2.13), the term of "$K(x)$" shall be written consistently, if use the term "K" in the text, then it is better to mention clearly. Any difference between "$K(x)$" and "K"? 6. The notations σ_1 and $\phi(x)$ for Equations (3.2) and (3.3) shall not be the same since Equations (3.2) and (3.3) consider different steady state, that is, $(u^*(x), 0)$ and $(0, v^*(x))$. Moreover, the right-hand-side of the notations σ_1 and $\phi(x)$ is totally not the same. See Sections 3, 4 and 5 for the same comment. 7. In Page 8, do not use "...the equation (3.4)..." Please use "Equation (3.4)" in the text. 8. In Pages 8 and 9, do not use "proposition 2" and "proposition 3" in the text. They are special name, which refer to the corresponding proposition. Please use "Proposition 2" and "Proposition 3". 9. In Section 3, Theorem 1 does not have proof. Any reason? 10. In Section 4, Theorems 4 and 5, and Lemma 8 do not have proof. Any reason? 	<p>For all corrections, please check the yellow marked area in the revised version of the manuscript.</p> <ol style="list-style-type: none"> 1. The reviewer suggestions are followed. 2. Clarified after system (1.1) and in the first result in pp-3, please check yellow marked area. 3. "part" or "portion" is changed to "Section". 4. The proof Proposition 1 and Lemma 1 is available in reference papers as cited. 5. There is no difference between $K(x)$ and K and in the revised version it is written consistently. 6. I am agreeing with the reviewer and notations are changed in Section 3, 4 and 5. Now ϕ is for $(u^*, 0)$, ψ for $(0, v^*)$ and φ for (u_s, v_s). Only don't change σ_1 for simplicity and I hope the readers could understand easily. Moreover it can make the complexity when we use different symbols for same meaning since σ_1 is the principal eigenvalue. 7. Corrected. 8. Changed to "Proposition". 9. The original system (1.1) is strong monotonically dynamical system and there are four equilibria. If we can show three of them are unstable then the rest one is globally asymptotically stable or just stable and this result is well established. So the proof is available in the manuscript before the statement of the Theorem 1 within few sentences. Also check Remark 2 on page-13. For more details to study the monotone dynamical system, please check the citations [13--16]. 10. The same reason as described in 9. We can easily put the proof but it will just increase the volume of the manuscript and will decrease the quality of the article. The proof of Lemma 8 is similar to Lemma 6 and such a reason the proof is omitted since it's a research work not a textbook.
Minor REVISION comments	<ol style="list-style-type: none"> 1. The numbering of the citations shall be put in order, for example, [1], [2], ... and so on. 2. The numbering of equations shall be labelled in order, for example, (1), (2), ... and so on. The way used in the paper, which is (1.1), (2.1), (2.2)...., and so on, is for equation labelling in the thesis or the book. 3. There are some grammatical mistakes. Please do the correction carefully. 	<ol style="list-style-type: none"> 1. The numbers of citations are putted in order. 2. I maintained the equation number for different sections (neither the thesis nor the book style). I think sometimes its more easier for the readers. 3. Whole manuscript is double checked to correct the grammatical error.
Optional/General comments	Be careful to use the notation in order to represent the symbolic solution. Of course, using the same notation for different equations is much easier, but the solution would not be the same.	Thank you for this suggestion. In the current version, different notations are used for symbolic solutions.
General: We also acknowledge the reviewers for their valuable comments and suggestions to enrich the manuscript. Please check the acknowledgment section.		