



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">Annual Research &amp; Review in Biology</a>                          |
| Manuscript Number:       | Ms_ARRB_57829  |
| Title of the Manuscript: | Genetic divergence in corn genotypes for high and low phosphorus in Pará, Brazil |
| Type of the Article      | Original research papers   |

**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) |
|-------------------------------------|---|---|
| <b>Compulsory</b> REVISION comments | <p>The manuscript is upto the point and it is well written upto the materials and methods. More focus on results and discussion is necessary. Details for how the phosphorus dosages were fixed and how the nutrient need was tested could further be elaborated in materials and methods. Coming to the results and discussion. The ANOVA and mean performance for the experimental study has to be included. The genetic distances and suitable combinations for hybrid production is given, whereas, the cluster mean performance is not elaborated. As given in the introduction, if phosphorous stress affects the yield, then which among the ten had a higher yield across two locations could give a broader idea in selection of genotypes. The elaborated explanation of variation in the ten genotypes across two conditions based on phosphorous will be more rewarding as the paper mainly focuses on this. What are all the key traits affected by phosphorus and which genotypes were superior and inferior in two conditions will be make the readers have a complete view on this study. The introduction covers the complete information of the study and it is mentioned that phosphorous affects the seed set in maize. But in results there is a greater percentage contribution for only grain yield and lesser contribution of number of grains per ear, the author could briefly explain this. Supporting to this fact, the genotype performance could be discussed and which cluster had a higher and lower mean for grain yield and the yield attributing traits is not discussed. The similarity among genotypes is given based on the genetic distance alone and which trait was similar in a cluster is not discussed. For example, If a cluster has a similarity for a trait and this trait is related to phosphorous deficient tolerance, then selection of that cluster will be advantageous in breeding. Such informations are lacking. Divergent genotypes will yield better hybrids but lack of information of their pooled performance for two conditions, leads to confusions on selection of genotypes for hybrid production. The author could provide the performance details of the genotypes in individual and pooled means. Since the phosphorous is the main focus, did the author notice any variations for key traits caused by these two conditions is not given in detail. Moreover, there are two diversity analysis for low and high Phosphorous with pictorial representation and a diversity for the pooled data and its cluster mean performance would enable us to focus on selecting genotypes based on their overall pooled performance across two conditions and finally outcomes from pooled data will be more reliable.</p> |   |
| <b>Minor</b> REVISION comments      |   |   |
| <b>Optional/General</b> comments    |   |   |



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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> |   |

**Reviewer Details:**

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|----------------------------------|--|
| Name:                            | <b>Lydia Pramitha .J</b>                         |
| Department, University & Country | <b>Tamil Nadu Agricultural University, India</b> |