

Peer Review

Review of: "Row Configuration and Soil Amendment Affect Performance of Popcorn (*Zea mays* L. var. *everta*) in Semi-Arid South Africa"

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The research article “**Row Configuration and Soil Amendment Affect Performance of Popcorn (*Zea mays* L. var. *everta*) in Semi-Arid South Africa**” presents a well-structured field experiment evaluating the interaction between plant spacing and organic versus inorganic fertilization under semi-arid conditions, demonstrating strong experimental design using a split-plot RCBD across two growing seasons and providing detailed agronomic measurements with appropriate statistical analysis. The study offers practical agronomic insights, particularly identifying the optimal combination of 20 × 20 cm spacing with either 8 t/ha compost or 90 kg N/ha, which enhances its applied agricultural relevance and regional importance. However, some weaknesses include relatively high coefficients of variation for several yield parameters, suggesting experimental variability; limited soil physicochemical characterization beyond baseline nutrient levels; insufficient economic analysis comparing the cost-benefit of compost versus mineral fertilizer; and lack of multi-location validation, which restricts broader generalization of findings. The article would be strengthened by incorporating long-term soil health assessments, detailed nutrient-use efficiency calculations, a stronger discussion of environmental sustainability outcomes, and validation across multiple agroecological zones.

Declarations

Potential competing interests: No potential competing interests to declare.