

Establishing sustainable solutions to cassava diseases in mainland Southeast Asia

Final Review Hung Loc Agricultural Research Center (HLARC)

Objective 4: Develop and evaluate economically sustainable cassava seed system models for the rapid dissemination of new varieties and clean planting material to farmers in different value chains and production contexts

Alliance



**Effect of density and fertilizer on cassava variety TMEB419
grown from cuttings and plantlets from the Tunnel
on red soil of Dong Nai province**



I. Objectives

- Determining the optimal planting density for cassava variety TMEB419 grown from cuttings and plantlets from the tunnel.
- Establishing the appropriate fertilizer formula for cassava variety TMEB419 grown from cuttings and plantlets from the tunnel.



II. Materials and Methods

- . Location: HARC, Dong Nai province
- . Duration: 06/2022-03/2023
- . Variety: TMEB419
- . Experimental Design: Split-Plot with 3 replications, consisting of 4 levels of fertilizer and 4 levels of density .

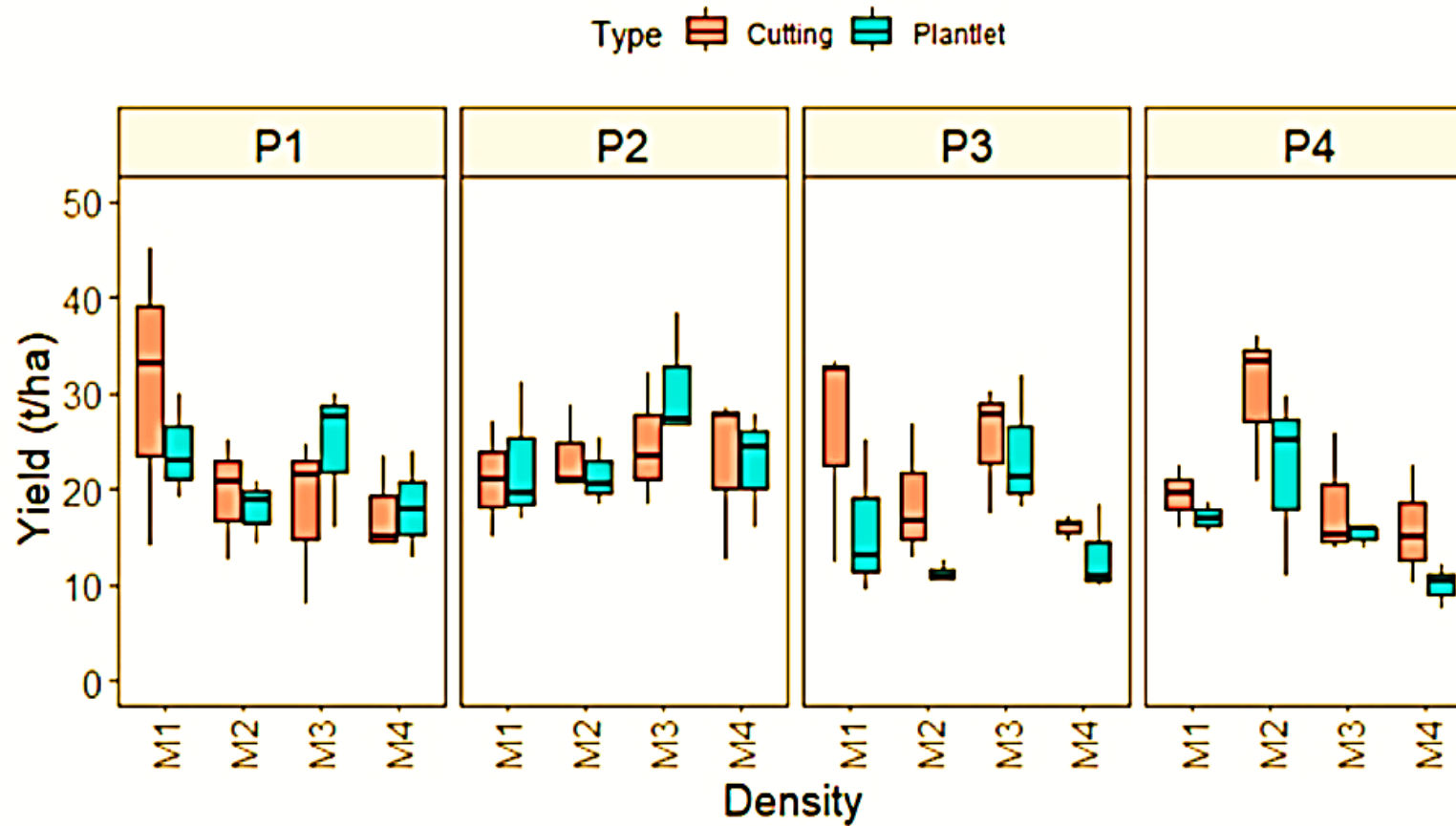


M1	1,0 m x 1,0 m
M2	1,0 m x 0,8 m
M3	0,9 m x 0,7 m
M4	0,8 m x 0,7 m

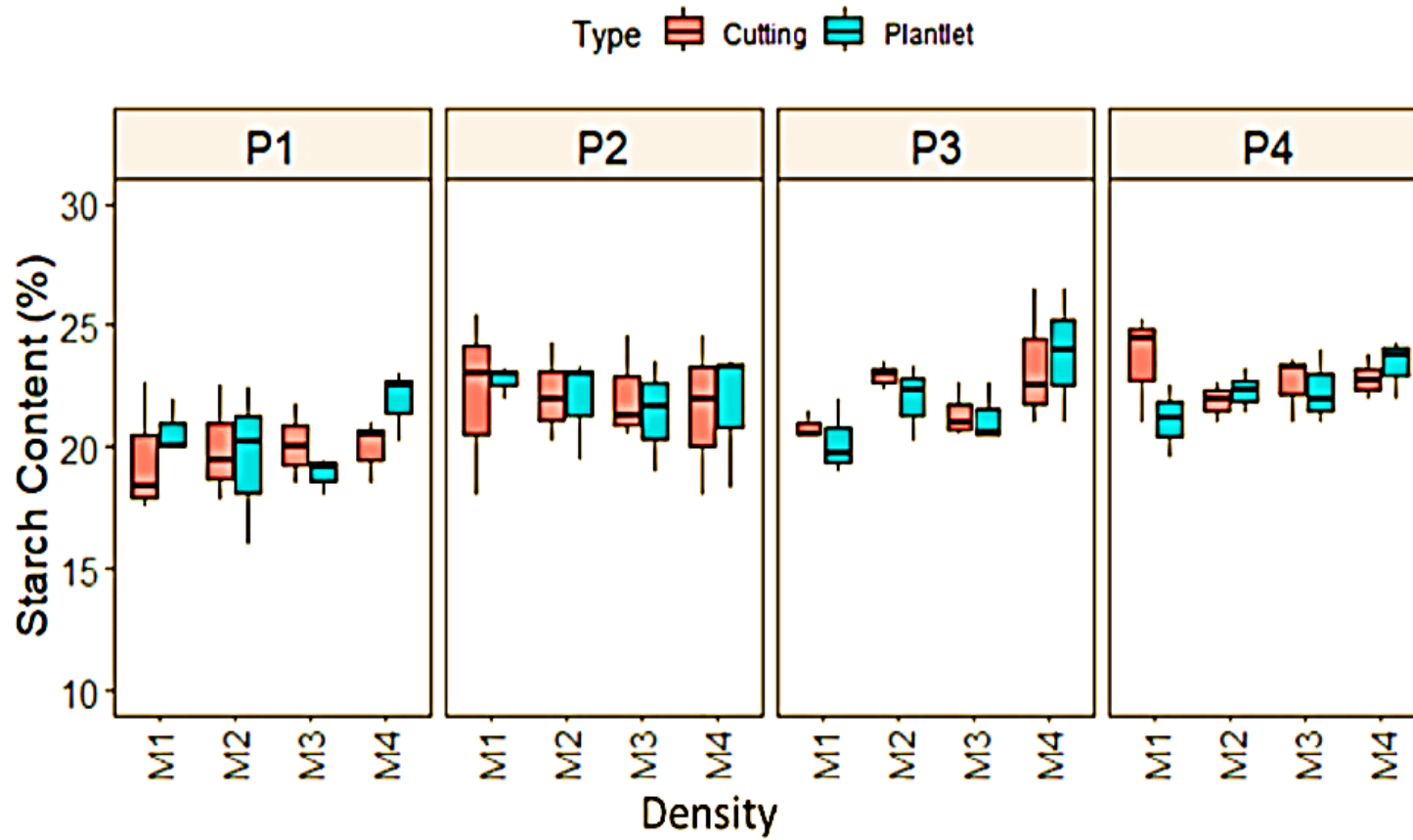
P1	60 N – 30 P ₂ O ₅ – 60 K ₂ O
P2	80 N – 50 P ₂ O ₅ – 80 K ₂ O + 1,5 tons of organic fertilizer
P3	100 N – 60 P ₂ O ₅ – 100 K ₂ O
P4	120 N – 90 P ₂ O ₅ – 120 K ₂ O

III. Results and Discussion

1. Effect of density and fertilizer on fresh tuber yield of cassava grown from cuttings and plantlets from the Tunnel



2. Effect of density and fertilizer on starch content of cassava grown from cuttings and plantlets from the Tunnel



IV. Conclusion and Recommendation

1. Conclusion

- Different Fertilizer formulas and Density levels affected both the yield and starch content of the cassava variety TMEB419 for both planting materials: cuttings and plantlets from the Tunnel.
- Cuttings (from stem) demonstrated higher yield compared to Plantlets (from tunnel).



1. Conclusion

- Initially, the fertilizer formula and density combination that maximizes the fresh tuber yield and starch content for the TMEB419 cassava variety were identified. This combination is P4M4 (Fertilizer: 120 N – 90 P2O5 – 120 K2O; Density: 0.8 m x 0.7 m) for both planting materials.



2. Recommendation

The experiment “Effect of planting density and fertilizer level on cassava variety TMEB419 grown from cuttings and plantlets from the Tunnel” should be repeated with different conditions for more accurate and comprehensive conclusions.



Thank for your listening!

