



Effects of staggered planting periods and potassium fertilization on the performance of cassava cultivars in South-Kivu, Democratic Republic of Congo

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Introduction

- Cassava: Most important staple crop
- South-Kivu: climate disturbances
- Farmers adjust the planting time to coincide with the most regular rainfall
- Aim: unravel whether cassava can withstand rainfall disturbances by adjusting planting time in line with the onset of rains and assess the potential role of K in improving cassava's tolerance to climate disturbances for contrasting cultivars



Figure 1: Field Trial - P2 plots at 4MAP



Figure 2: Obama storage roots at P2 harvest

Methods

- Full factorial on farm experiment with 3 factors: 3 planting period (P1, P2, P3), 2 cultivars (Obama vs M'Bailo) and 2 fertilizer (NP vs NPK)
- 4 replications.
- Data: Growth data at 4MAP and Yield data at 12MAP

- Planting late exposed to well-watering within the 4 MAP
- The earlier the plantation was done the larger was the yield
- Yield was higher for the improved cultivar
- K can mitigate the negative effect of planting late
- The landrace cultivar was more resilient to planting late stress than the improved

Results

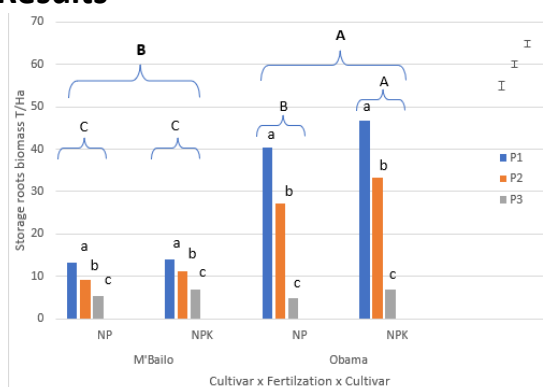


Figure 3: Storage roots biomass mean by Planting period x Cultivar x Fertilization. The errors bars represent the standard errors for comparison for Planting period, Fertilization and Cultivar respectively from left to right.

Conclusion

- Delaying the planting date leads to the loss of yields
- Obama, produces better in good conditions
- The omission of K leads to the reduction of total biomass production.
- Plantation should be done early in the rainy season with regular rainfall.