

Comparison of hybrid and open pollinated cabbage varieties under Kilimanjaro Region conditions.

Objective: To provide farmers with tangible information on the performance of hybrid varieties versus an open pollinated varieties under both drip and furrow irrigation in Kilimanjaro region.

Methods and materials:

Test location: Mama Clementina Foundation Production Farm (Weruweru Farm), in Weruweru, Hai District of Kilimanjaro.
 Bimodal rain pattern: Oct – Dec and March – June, approx. 1 200 mm annually
 Mean minimum temperature at night is 15°C to 17°C and mean maximum temperature ranges from 25°C to 33°C depending on season.

Design: A randomized complete block design was used with four replications

Sowing date: 15 April 2015

Planting date: 11 May 2015

Harvest date: 7 August and onwards

Plant spacing 75cm x 40cm (26,667 plants/ha)
 Varieties (6x): Copenhagen (OP), Toughma F1, Cilema F1, Tacoma F1, Indica F1 and Victoria F1.



Results: There was no significant difference of irrigation method on the head weight of cabbage. The average head size was as shown below:

Variety	Average head weight (kg)	
Toughma	1.4	a
Cilema	1.7	ab
Copenhagen	1.9	bc
Tacoma	2.1	bc
Indica	2.4	c
Victoria	2.4	c
P-value	0.001	

Means separated by the same alphabet are not significantly different at the 5% level.

Conclusion

The varieties tested showed differences in head sizes. The choice of variety to grow will depend on the market needs.

Beds of 35 m long and 1 m wide were used the space between one bed and another was 0.5 m. fertilizer (61kg/ha P₂O₅) was applied as Di-Ammonium Phosphate. The crop was topdressed with 415kgN/ha applied as Calcium Nitrate & Urea and Potassium fertiliser (340 K₂O) kg/ha Muriate of Potash in weekly applications up to 4 weeks after transplanting.

Note: he conclusion are based on one test only done at Hai (997m ASL) and might be different in other areas