

Effect of in-row spacing on yield of African eggplant

Objective: To determine the most appropriate in-row spacing for optimum yield of African eggplant.

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 each per variety, and the blocks being the irrigation systems.

Sowing date: 6 April 2016

Planting date: 11 May 2016

1st harvest date: 20 August 2016

Plant spacing: 75 cm between rows; In-rows: 30 cm, 45 cm, 60 cm, 75 cm.

Seeds of the open pollinated variety Mkulima Chungu were raised in trays. The plot was ploughed and tilled into a fine tilth. Then beds were prepared. The beds were single row spaced at 1.5 m. Transplanting was done in a drip irrigated plot.

Results

There was no significant difference between treatments in yield (t/ha). Also results show that there was no significant difference between treatments in average fruit weight (g).



Results: The results displayed on the table below

In row spacing	Yield (t/ha)	Average fruit weight (g)
30 cm	12.3	25.1
45 cm	11.0	25.4
60 cm	12.7	25.8
75 cm	10.1	25.9
l.s.d	4.3	3.4
p-value	0.6 (NS)	0.9 (NS)

NS is Not significant at $p = 0.05$

Conclusion

The results indicate that farmers can therefore use any in-row spacing from 30 to 75cm depending on their situation.