

Effect of plant spacing on cabbage yield

Objective: To assess the effect of spacing on cabbage yield .

Methods and materials:

Test location: Mama Clementina Foundation Production Farm (Weruweru Farm), in Weruweru, Hai District of Kilimanjaro region.
Bimodal rain pattern: Oct – Dec and March – June, approx. 1200 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 three replications

Sowing date: 15 April 2016

Planting date: 9 May 2016

Harvest date: 22 July 2016

Plant spacing: Between rows 50 cm; in row distances: 75, 60 or 50 cm.

Seedlings of Gloria F1 were raised in seedling trays. Transplanting was done in a well prepared field. Furrow irrigation was used. Basal fertilizer was applied as 135 kg/ha Di-Ammonium Phosphate. The crop was topdressed with 415kgN/ha applied as Calcium Nitrate & Urea and 560 kg/ha Muriate of Potash in weekly applications up to 4 weeks after transplanting. Spraying against diseases and insects was done when need arose.

Results:

There was no significance difference in yield between treatments but there were significant differences in average head size with 75 x 50 cm and 60 x 50 cm having the bigger head sizes.



Treatments	Yield t/ha	Average weight per head(kg)
75 x 50 cm	120	3.1b
60 x 50 cm	124	2.8b
50 x 50 cm	116	2.4a
L.s.d	15.8	0.36
P-value	0.5 (NS)	0.005

NS is Not significant at p =0.05

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

Conclusion:

Within the range tested, spacing does not affect overall yield. Different markets demand different cabbage head sizes. This experiment showed that head size can be controlled by spacing used, with wider spacing giving bigger heads and closer spacing giving smaller heads.

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