

Effect of different levels of NPK fertilizer (15-9-20) on yield of carrot

Objective

To determine the most appropriate NPK fertilizer rate for carrot

Methods and materials:

Test location: Mama Clementina Foundation Production Farm (Weruweru Farm), in Weruweru, Hai District of Kilimanjaro, Tanzania.

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.

Sowing date: 16 November 2016

Harvest date: 23 February 2017

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

Fertilizer treatments: No fertilizer, 300 kg/ha NPK 15-9-20 and 600 kg/ha NPK 15-9-20.

Varieties:

Seeds of Morelia F1 were sown at an inter-row spacing of 25 cm in beds of 8 m long and with 4 rows per bed. Thinning of seedlings was done two weeks after emergence to end up with an average in row spacing of 5 cm. Drip irrigation was used.

Results



NPK level	Marketable yield (t/ha)
None	5.11a
300 Kg/ha	7.95a
600 Kg/ha	11.12b
<i>l.s.d.</i>	2.95
<i>p-value</i>	0.004

*Means with the same letter are not significantly different at 5%.
l.s.d.= least significant difference.*

Conclusions and recommendations:

For higher yields, 600 kg/ha NPK 15-9-20 is recommended. However, the ultimate choice of rate to use will depend on availability of resources.

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