

Pocket garden as a potential strategy to vegetable production and improvement in micronutrient status: Lessons from field intervention in rural Tanzania

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The Scenario

Part of a study (2016-2018) for a bigger research project on

"Scaling Up Nutrition (Scale-N) which focus on the development of nutrition-sensitive strategies to improve nutrition and health status of small-scale farmers in Dodoma and Morogoro regions, Tanzania"



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Background

- The pocket garden intervention aimed to enhance vegetable production and improve micronutrient status of the study population through diversified agriculture.
- This goal was addressed by implementing training modules regarding setting up of pocket gardens and distribution of quality seeds.

Study Areas

Dodoma Chamwino district Mzula & Chinoje villages

> Morogoro Kilosa district Tindiga & Mhenda villages



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Cross-sectional surveys: baseline and endline

- Results from 2 cross-sectional nutrition surveys in 4 villages from 2 districts in Tanzania
- Study population:
- Mothers/ caregivers who completed follow up (N=580)
- School children 7-12 years who completed follow up (N=563)
- Purposive selection of 2 regions, 2 districts and 4 villages (2 per district)
- Random selection of participants at village level

Cross-sectional surveys: baseline and endline

- Baseline: July-August 2016 (sample size: N= 666 Households)
 Scale N villages
- Intervention phase:
 - Intervention area: All 4 Scale- N villages
 - Pocket gardening (July 2017 to May 2018), a total of 559 households received training
 - Nutrition education (September 2017 to April 2018)
- Endline: July-August 2018

Pocket garden intervention-Materials needed





Pebbles

Manure-Goat dung



Rod

Fertile soil



Water





Chinese cabbage seeds





Chinese cabbage

Steps in making a pocket garden



1. Dig a hole about 20 cm deep



2. Inserting the rod into a hole

3. Preparing the soil-Mixing soil & manure



4. Mixing soil, manure, sand and water

5. Cutting the centre of the sack and setting up the garden



6. Filling the sack with soil and making a central well of pebbles



8. Making holes with a sharp knife

vodacon



A pocket garden



Preparing vegetables for consumption

Results



HH-Households , VAD- Vitamin A Deficiency = Retinol < 0.7 μ mol/L

Pocket gardens- Their potentials

- They require minimal amount of land and less amount of water
- Do not need specific technical knowledge to prepare
- By placing them near the household, they save time and energy going frequently to the market as well as money
- They allow diet diversification thus addressing micronutrient deficiencies
- They can also be implemented in an urban area set-up
- Could serve as a source of income and thus contribute to poverty reduction

Pocket gardens- Challenges

- Water scarcity
- Vegetable pests and diseases
- Lack of proper fencing
- Wearing out of polyethylene bags
- Theft of vegetables
- Limited arable soils, manure and pebbles in some study villages



Conclusion

- Nutrition sensitive interventions such as home gardening (pocket gardens) integrated with Nutrition education can contribute to improved micronutrient status.
- Community involvement is an important parameter for a successful intervention

Thank you so much! Asante sana!