



# Tiko 22 Steps Out Of Poverty For The Subsistence Farmer

## Permaculture and climate-smart integrated/circular farming

### A: Munda – the field

1. **No burning** ever, leave residue on the field for enriching the soil: don't ever use chemicals, they kill the life in the soil
2. Put a **living fence** around field (munda) or at least the vegetable garden (dimba) with jatropha, leucena, bamboo, shatata, masao
3. Use gamphani/basins to save compost (and water) or do **ripping**, make mounds for cassava, but use **crop rotation**
4. **Do not cut trees**, but plant around them, plant Msangu tree
5. Plant cassava for nsima instead of hybrid maize, with inoculated cowpeas
6. Use QPM (quality protein maize), drought resistant and growing well with compost. Can also be used for seeds
7. **Crop diversity**: Have a diversity of crops with at least 30% legumes, including soya, to counteract global warming as well as another four staples other than cassava and maize, i.e. sun flower, soya, bonongwe, ground-nuts and sweet potato

### B: Dimba – the vegetable garden

8. Plant **nitrogen-fixing trees** among the vegetables
9. Grow and eat **local vegetables**, incl. **Moringa**, and fruit
10. Make a **compost heap** Berkeley method 18 days regularly
11. Have eco-toilets or **composting toilets** and use human manure in the field
12. Use compost, tea manure and **cultivate worms** for humus
13. Have **vegetable rings**, they need less water, and use 'grey' water, i.e. what you have used before
14. Plant garlic, chilli, marigold as **organic pest control**, if you can, plant a neem tree

### C. Sustainability

15. Make **pawpaw circles** where **water** is flowing out – dig a hole, fill with stones, plant PAWPAW suckers on the rim
- 16... Save firewood by getting an energy-saving mud stove and use an axe to cut **firewood** as the centre of an outdoor kitchen to also avoid inhaling fumes and plant firewood trees
17. Use **child spacing**

### D. : Livestock protein the cheapest beginnings

18. Have rabbits and kunda as banks for emergency, rabbits for their urine – best fertilizer ever
19. Have chicken, ducks, rabbits, cows (zero grazing), fish and pigs
20. feed with hydroponic fodder (chicken 30%, cows 90%)- no methane
21. feed with maggots from the black soldier fly 50% protein

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