Use of the halfway cultivation technique improves the nutritional quality of ginger (*Zingiber officinale*)

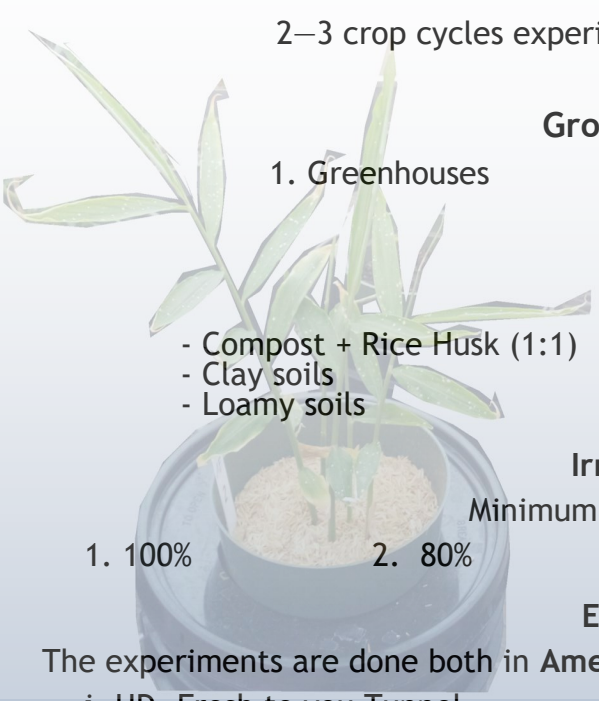
Ginger (*Zingiber officinale Roscoe*) is a spice crop that has long been exploited for its edible, nutritious, and medicinal rhizome. Immature (Baby) ginger is sought to be more nutritional with added pharmacological potential.

OBJECTIVES OF THE EXPERIMENT

- Determine water use efficiency in baby Ginger grown in multi-locations
- Determine optimal growth, development and yield condition for baby Ginger
- Monitor growth and development of baby ginger under varying irrigation frequencies
- Asses allocation, distribution and concentration of bio-compounds within ginger plant parts

DESCRIPTION OF THE EXPERIMENT

2—3 crop cycles experiment (Spring 2022— Summer 2023)



Growing environments (3)

1. Greenhouses
2. High tunnels
3. Open fields

Growing media (6)

- Compost + Rice Husk (1:1)
- Clay soils
- Loamy soils
- Sand
- Sandy soils
- Water (with nutrient solution)

Irrigation treatments (5)

Minimum medium moisture values set at;

1. 100%
2. 80%
3. 60%
3. 40%
4. 20 %

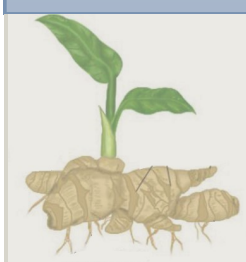
Experimental locations

The experiments are done both in **America - USA** and **Africa - TANZANIA** in the following location;

i. UD, Fresh to you Tunnel
ii. UD, Fresh to you open field
iii. UD, Georgetown Tunnel
iv. UD, Georgetown open field
iv. UD, Fisher Greenhouse Laboratory
v. WorldVeg— ESA Tunnel
vi. WorldVeg— ESA Laboratory
vi. WorldVeg— ESA open field

Parameters collected

- Plant growth parameters
- Weather parameters
- Biochemical differentiation
- Irrigation data



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