



Maize growing in zai pits in Kotido district

Zai pit system for crop production in Karamoja dry lands



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ZAI is a farming practice to dig pits in the soil during the pre-season (dry season). Zai pits address issues of land degradation, low soil fertility, and soil moisture.

How it works

- Dig small pits of 30 cm wide and 20 cm deep, spaced 65 cm apart in the garden. Ridge the excavated soil around the pit. It is recommended to dig the pits during the dry season from November to April.
- The number of pits per acre will be about 9500 pits,
- After digging the pits, kraal manure is added at an average rate of 600g/pit (About 2 handfuls) and covered with a thin layer of soil.
- Plant 3 maize seeds per pit at the start of rains and thin to two
- Once dug, they can be re-used for at least 4 planting seasons and new ones dug between the old pits

What it does

- ✓ Captures run-off water and fertile top soil for the crop
- ✓ Protects seeds and manure against being washed away
- ✓ Concentrates nutrients and water for the crop.
- ✓ Manure attracts termites which dig tunnels in the soil thus improve water infiltration.



Germinating maize in zai pits



Farmers in Kotido digging zai pits

Farmers collecting Kraal manure for use in zai pits

Key results

- ✓ The maize yield increases by at least 400 kg per acre
- ✓ Zai pits collect 25% of run-off coming from 5 times its area
- ✓ Soil moisture content more than doubles in the zai pit than flat planting, thus improved availability to crops



Women in Kotido involved in manure application