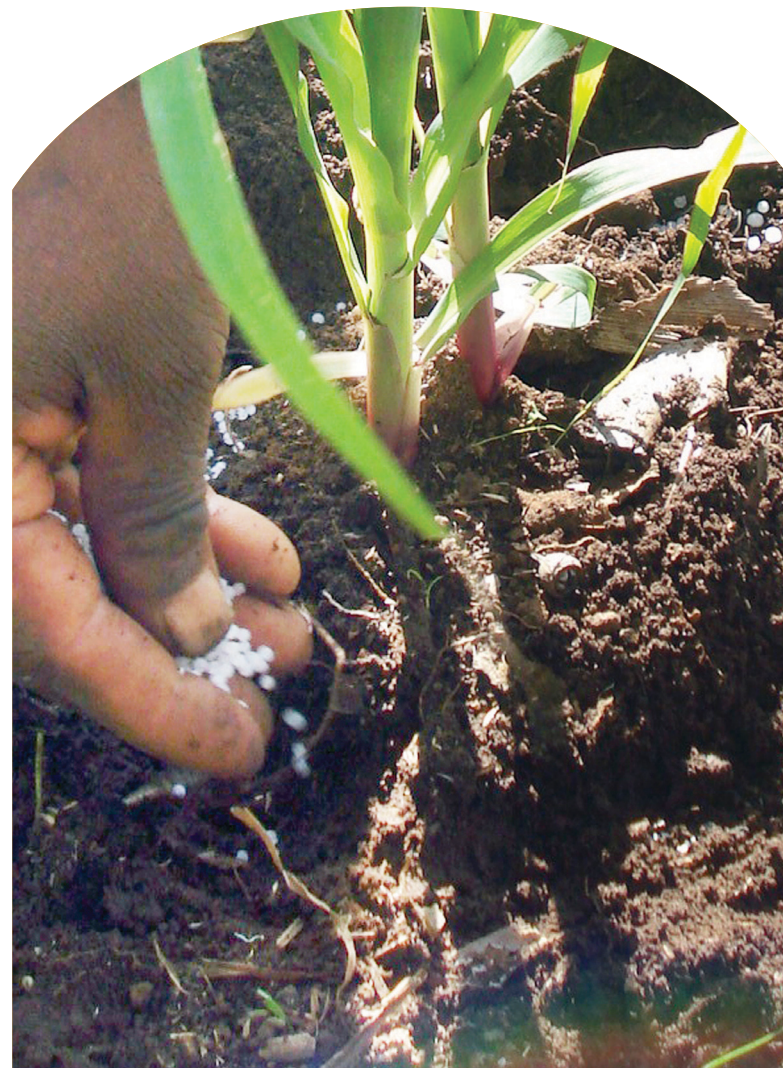


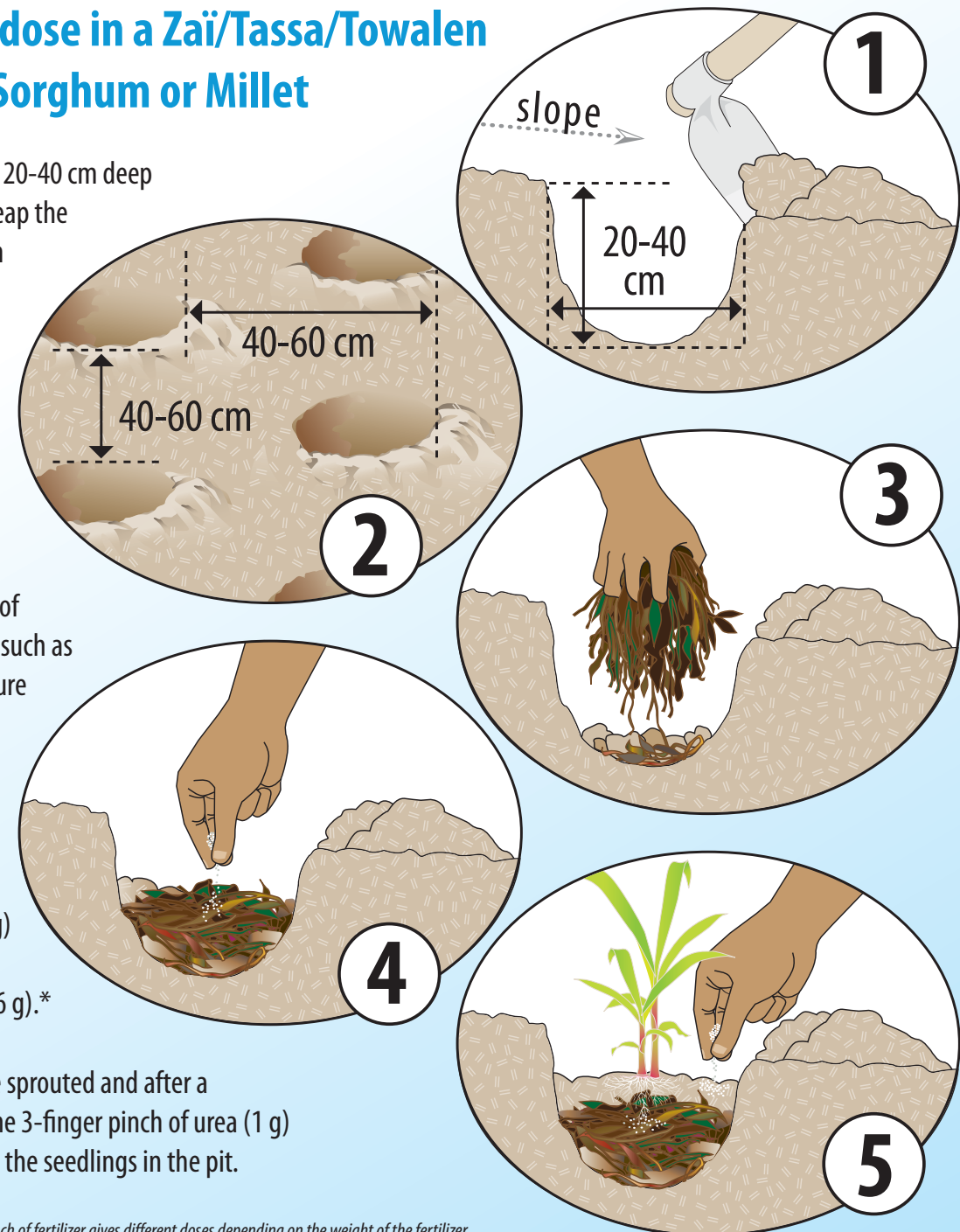
# Microdose

## Procedure for Planting Using Microdoses of Fertilizer



### Using Microdose in a Zai/Tassa/Towalen System for Sorghum or Millet

- 1) Dig planting pits 20-40 cm deep and wide, and heap the excavated dirt on the lower side.
- 2) Stagger the pits in rows 60 cm and 40 cm apart for sorghum and 40 cm for millet.
- 3) Mix about 300 g of organic material such as compost or manure with the soil in the pit.
- 4) In each pit, add one 3-finger pinch of DAP (2 g) OR two 3-finger pinches of NPK (6 g).\*
- 5) Once plants have sprouted and after a good rain, put one 3-finger pinch of urea (1 g) in the soil beside the seedlings in the pit.



\* Using three fingers to take a pinch of fertilizer gives different doses depending on the weight of the fertilizer.

## Notes on Microdose (MD) Application

- ▶ **When to apply:** when planting the seeds after a good rainfall.
- ▶ **How much to apply:** approximately 2 g of fertilizer. This is about as much as using three fingers to pick up most granulated fertilizers, or using half a Coca-Cola® bottle cap as a measure.
- ▶ **Millet** requires about 9 kg/ha of phosphorus, which can be met by applying 60 kg/ha of NPK or 20 kg/ha of DAP (for a planting density of 10,000 pockets/ha).
- ▶ **Tip:** Organic input is very important, especially for sandy or poor soils. It improves soil structure and nutrients status as well as improving water infiltration and soil water-holding capacity.



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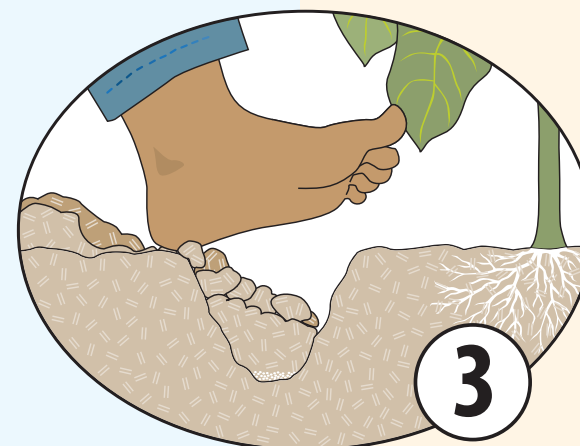
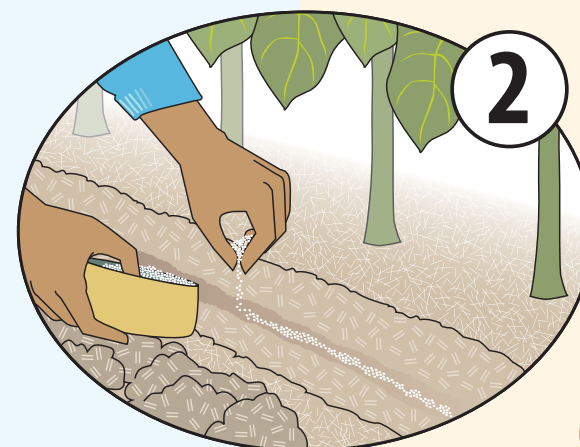
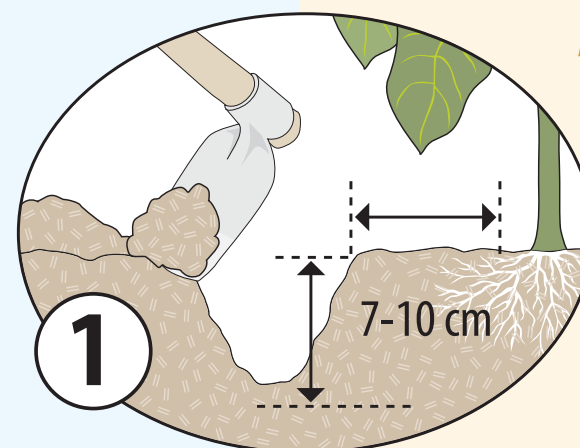
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## How to Top-dress Other Crops with Microdose

- 1) Dig a row about 7-10 cm away from the plant stem or roots. The row should be 7-10 cm deep.
- 2) Sprinkle or apply the fertilizer at the bottom of the row.
- 3) Cover firmly with soil.

### Note:

Urea should be applied in good soil moisture conditions, without exposure to the sun and wind.



## Advantages of MD

- ▶ Greatly improved yields with a minimum investment in mineral fertilizers, especially on degraded soils.
- ▶ Efficient use of fertilizer with limited losses to volatilization or run-off.
- ▶ A boost to plant growth for early maturity as well as protection against dry weather at the end of the season.
- ▶ Increased profit margins due to increased production.

## Constraints of MD

- ▶ Lack of access to fertilizers for rural or impoverished populations (expense and non-availability).
- ▶ Use of the Zai/Tassa/Towalen system is labor-intensive on clay/loam soil (300 man-hours of labor are required to prepare one hectare).