

# Growing maize and soybean in rotation

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| <b>Source</b>                        | FAO  |
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| <b>Sustainable Development Goals</b> | No poverty, zero hunger, responsible consumption and production and life on the land |

## Summary

The agricultural practice highlights the benefits of crop rotation which include, breaking cycle for pests, Nitrogen fixation in the soil and efficient land use.

## Description

The practice is done in stages broken down in years.

Figure 1. Year one grown Soybean



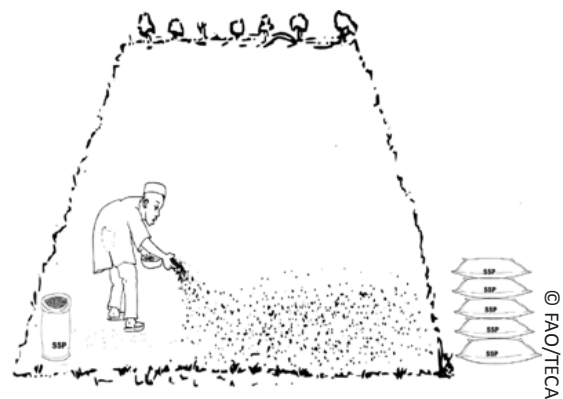
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## 1. Steps for the first year

### 1.1 Apply fertilizer

Apply SSP fertilizer to the prepared land, the application rate is usually based on the level of fertility of the soil in case a soil test has been done (recommended). On average apply six bags of SSP per hectare.

Figure 2. Apply fertilizer



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### 1.2 Making ridges

Make ridges 50 cm apart either by hand, animal traction or by tractor.

Figure 3. Ridge making



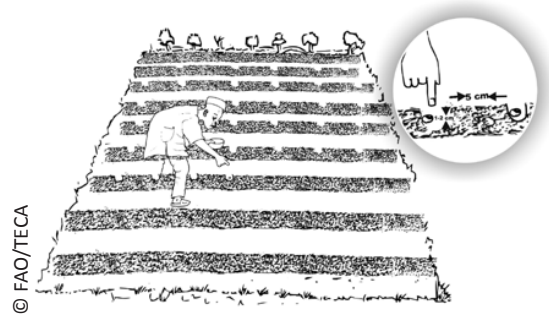
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### 1.3. Planting

Plant after a good rain. Make shallow grooves (1 - 2 cm deep) on ridges and drill soybean seed (1 seed every 5 cm) and cover lightly with soil



Figure 4. planting

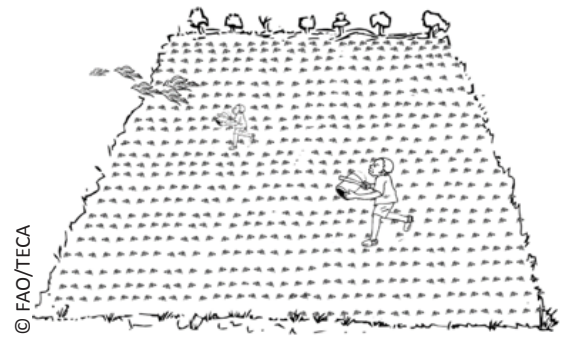


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### 1.4 Bird watching

Scare birds the first two weeks after planting, this can be done manually or with the use of a scarecrow.

Figure 5. Manual scaring of birds

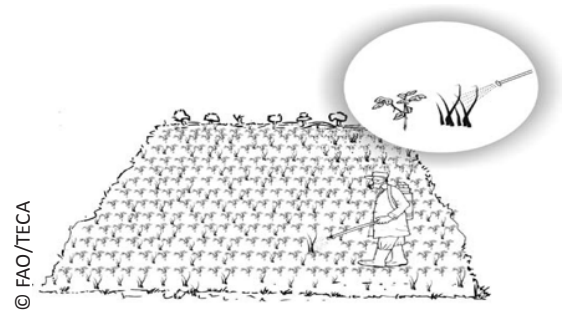


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### 1.5. Weed control

Control weed manually or by use of a herbicide recommended by the extension officers that is good for Soybean.

Figure 6. Weed control

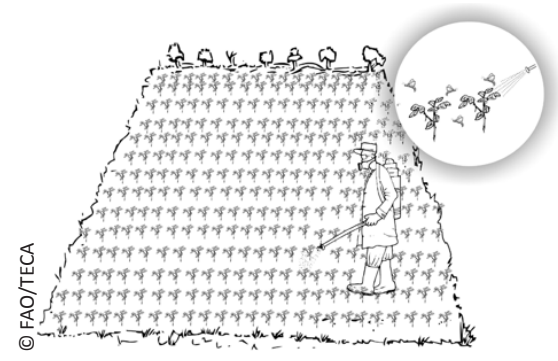


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### 1.6 Pests and Insects control

In instances when the crop is infested with pests or insects spray with the recommended pesticide or insecticide.

Figure 7. Spraying Insecticide



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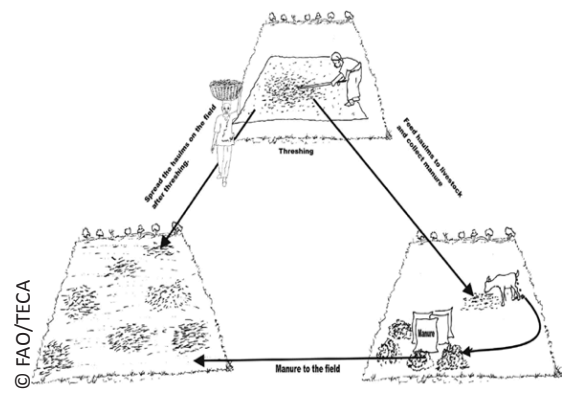
### 1.7 Harvesting

Harvest by cutting at ground level with sickle when leaves turn yellow. Do not harvest by uprooting the plants.

### 1.8 Threshing

Thresh the soybean in the field so that the haulms can be retained in the field, when the haulms is used to feed livestock collect the manure and spread it in the field.

Figure 8. Threshing



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## 2. Year two plant maize on the same field

Figure 9. Maize on the same plot



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### 2.1 Purchasing maize seed

Farmer should buy improved maize seed only from a certified input supplier.

Figure 10. Farmer purchasing maize seed



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### 2.2 Break old ridges

Break the ridges from the old crop in order to make new ones for the maize crop since spacing for two crops differ.

Figure 11. Breaking old ridges

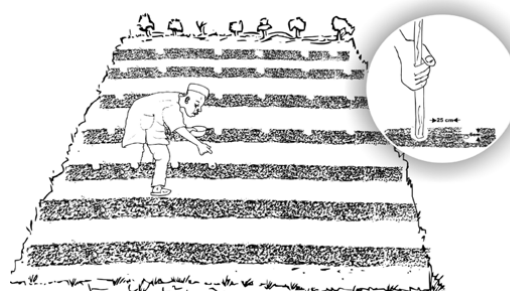


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### 2.3 Planting of maize

Plant after a good rain. Use a stick to make planting holes 5 cm deep at every 25 cm on the ridge. Plant one seed per hole and cover lightly with soil.

Figure 12. Maize planting

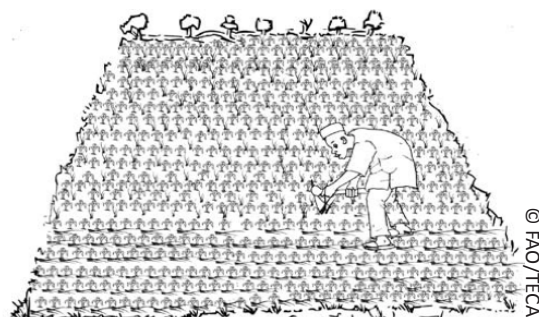


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### 2.4 Weed control

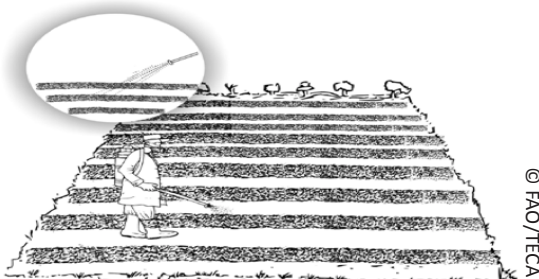
Spray a recommended herbicide to control against weeds or manually control the weeds.

Figure 13. Controlling for weeds in the maize field manually



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Figure 14. Spraying herbicide



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### 2.5 Application of fertilizer

Apply 3 bags of Urea when plants are at the knee height. Use a stick to make a hole at 5 cm away from plants. Place the fertilizer



in the hole using a coca-cola cap (1 cap full) and cover the hole.

Figure 15. Top-dressing with Urea



## 2.6 Bend crops

Bend cobs downward at maturity to hasten drying and to minimize spoilage.

Figure 16. Bending cobs downward



## 2.7 Dehusking

Harvest the maize by dehusking.

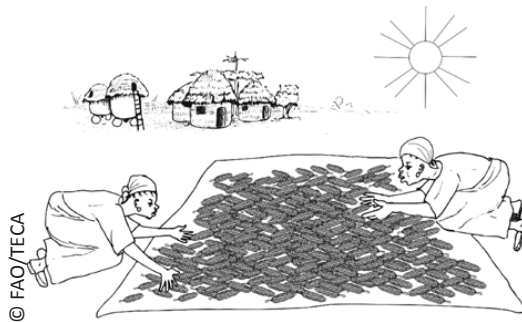
Figure 17. Harvesting



## 2.8 Drying

Dry the cobs properly before storage to avoid contamination with bacteria. Store in a dry place.

Figure 18. Drying the harvested maize



## 3. Minimum requirements for the successful implementation of the practice

Good weather conditions for growing both maize and Soya.

## 4. Agro-ecological zones

Agro-ecological conditions under which the practice has been carried out:

- Subtropics, warm/mod cool; and
- tropics, warm.