

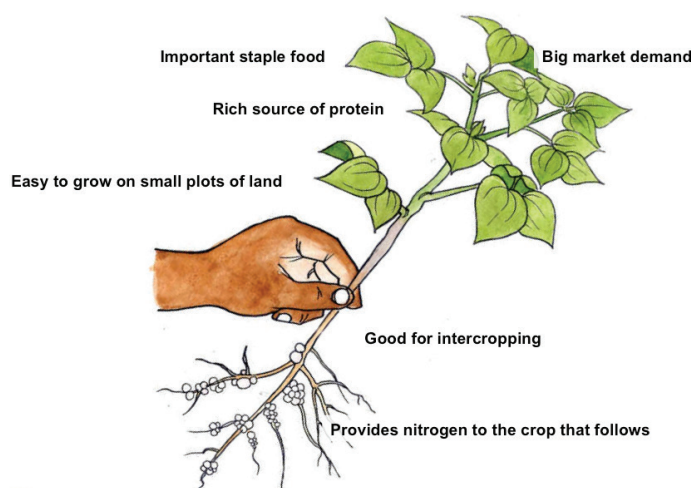
# GROWING BEANS THE ORGANIC WAY



Beans can be grown on practically any soil when a few simple guidelines are followed. As leguminous crops, they enhance soil fertility and are suitable for intercropping and crop rotations.

According to the International Federation of Organic Agriculture Movements (IFOAM, 2008) **organic agriculture** is «a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.»

## Why grow beans and how to choose good varieties

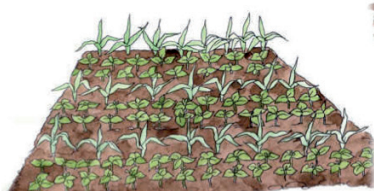


Beans offer many benefits to farmers. Nevertheless, for successful cultivation, careful variety selection is crucial:

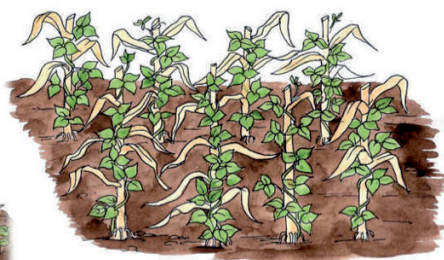
- › Choose varieties suitable for the local climate.
- › Use healthy seeds only.
- › Consider improved varieties with resistance or tolerance to local pests and diseases.
- › Make sure to separate seeds of different varieties.

## Beans are suitable for intercropping and crop rotation

- › **Good for small scale farms**
- › **Higher production per land unit**
- › **Natural pest regulation**
- › **Higher yield security**



Bush beans can be intercropped with maize, banana, root/tubers, sorghum



Climbing beans can be sown towards the end of the maize growing season using dry maize stalks for support

When monocropping beans, make sure to alternate with other crops to enhance benefits of nitrogen fixation and reduce pest pressure.

### Green beans

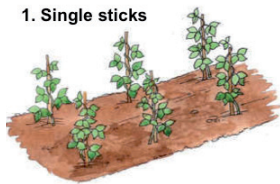
- › have potential in export markets.
- › depend on good growing conditions (test on small plots first).

### Dry beans

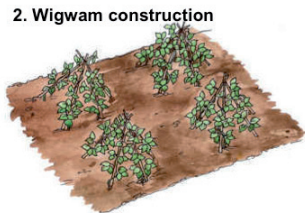
- › can be stored easily.
- › are an important foodstuff in the off-season.

## Proper field establishment and crop management

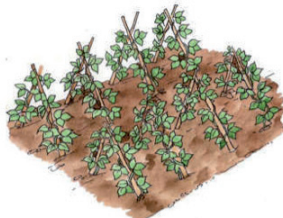
1. Single sticks



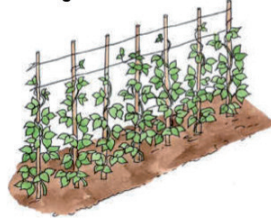
2. Wigwam construction



3. Tent construction



4. Single row trellis



5. Live trellis



- › Select an appropriate support system for climbing beans depending on cost, available materials and convenience of picking.
- › Conserve soil by building terraces and by intercropping beans with stronger plants.
- › Incorporate organic materials well into the soil for fertilization.
- › Compost animal manure before application to avoid attraction of the bean fly.
- › Apply timely hoeing and ridging to manage weeds.

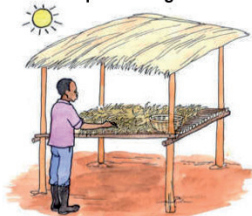
## Green beans: Harvesting and postharvest handling

1. Timely harvesting



Green beans are harvested when the seeds are not fully developed

2. Proper sorting under shade



3. Bring immediately to the market



- › Green beans are ready for harvest after 7 to 8 weeks.
- › Bush beans can be harvested 2 to 3 times, climbing beans up to 6 times.
- › Put beans under a damp cloth or into a cool storage right after picking.

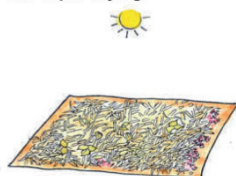
## Dry beans: Harvesting and postharvest handling

1. Timely harvesting



Harvest when the pods turn yellow for fresh or completely dry for dry beans

2. Proper drying



3. Proper threshing



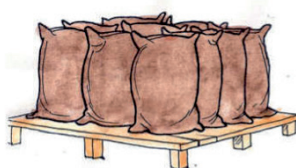
4. Winnowing to remove trash



5. Proper sorting to remove damaged beans



6. Proper storage off the ground



- › Dry beans are ready for harvest after 10 to 12 weeks.
- › Make sure beans for storage are brittle when bitten to ensure appropriate moisture content and to ensure storage stability.
- › Stored beans should be spread out in the sun occasionally to reduce moisture.
- › Sorting of the beans according to the variety enhances their value.