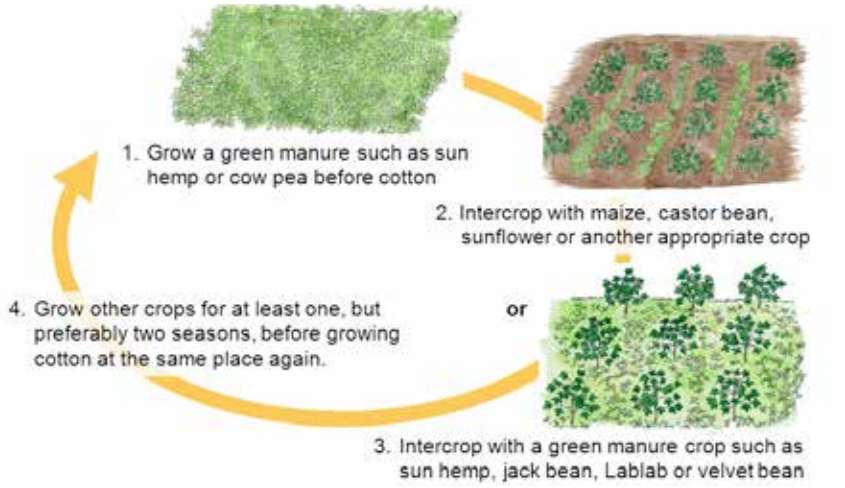
GROWING COTTON THE ORGANIC WAY

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.»

Creating good conditions



Collaboration

› Certification and marketing of organic cotton requires organisation of farmers and other partners of the value chain.

Site selection

› Avoid sites with excess water.

Diversification

› Grow cotton in rotation with legume crops or green manures to maintain soil fertility.

› Intercrop cotton with maize, sorghum, sunflower or pulses to distract or trap pests, reduce production risks and improve benefits.

Establishing the crop


1. Incorporate the green manure or apply animal manure

2. Sow at the beginning of the rainy season


3. In dry climate cover the soil between the rows with crop residues and grass


4. Thin the rows when the plants are about 8 cm high leaving two plants per hole

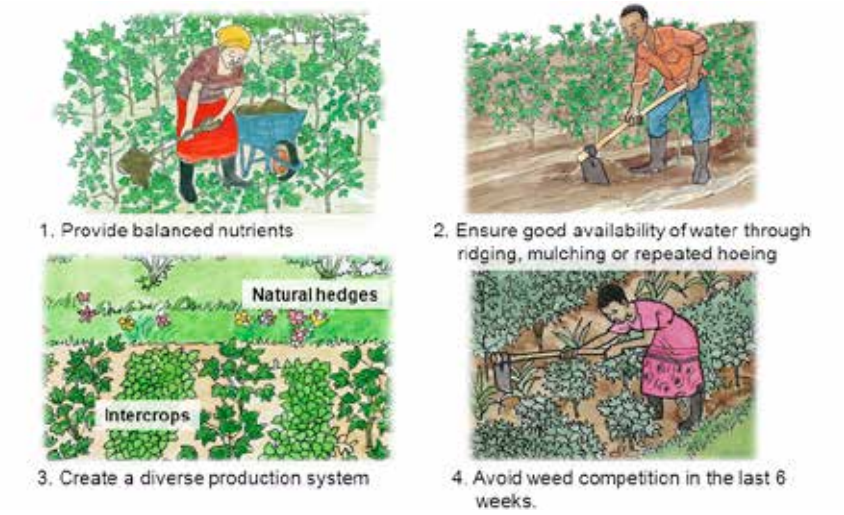
› Prepare the land early while incorporating the green or animal manure into the soil.

› Cultivate the soil superficially to minimize loss of nutrients and water.

› Use robust varieties with good tolerance to pests, diseases and droughts and with moderate nutrient requirements. Avoid using chemically treated and GMO seeds.

› Sow the cotton in rows 60 to 90 cm apart at a spacing in the row of 20 to 50 cm. Put 3 to 4 seeds into each planting hole.

Encouraging healthy plants



- A fertile soil provides balanced nutrients and contributes to healthy plants.
- Ensure good availability of water and nutrients between first flowering and boll formation, when the nutrient requirements are highest.
- Growing cotton together with other crops that flower at the same time distracts pests and promotes natural enemies.
- Avoid weed competition in young cotton, whereas in grown cotton tolerate weeds to host beneficial insects.

Monitoring and direct control of pests

- Start monitoring 8 weeks after germination.
- Check the plants weekly until the bolls open by crossing the cotton field.
- Every 5 to 10 steps, count all newly opened flared squares. For each flared square, forward the marker on the pegboard by 1 hole.
- Continue the procedure until you have inspected 30 plants, or until you have found 15 flared squares.
- When the stick for the flared squares reaches the red zone, the economic threshold is reached and spraying is recommended for the same day.
- No spraying is necessary, when less than 15 flared squares are found.

Monitoring

- Monitor pest levels regularly during the critical growth periods.

Direct control

- Use direct control measures only, when the economic threshold is reached.
- Spraying of neem formulations is efficient to control bollworms and other pests. However, neem sprays affect beneficial insects, too.
- Spray in the morning hours. Spraying wet plants is less effective.

Proper harvest and post-harvest handling

Harvest

- Picking mature and undamaged bolls only. Avoid picking leaves.
- Grade the bolls while picking using a second picking bag.

Post-harvest

- Store the bolls in a clean and dry environment to avoid moulds and contamination by dust.
- Avoid any mixing of organic and non-organic cotton.

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