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## Seeding the Green Future – Participatory organic cotton breeding

### Background

Worldwide, India is the most important country for organic cotton production with 67% market share.

In India, organic cotton production is challenged by 95% genetically modified (GM) cotton cultivation.

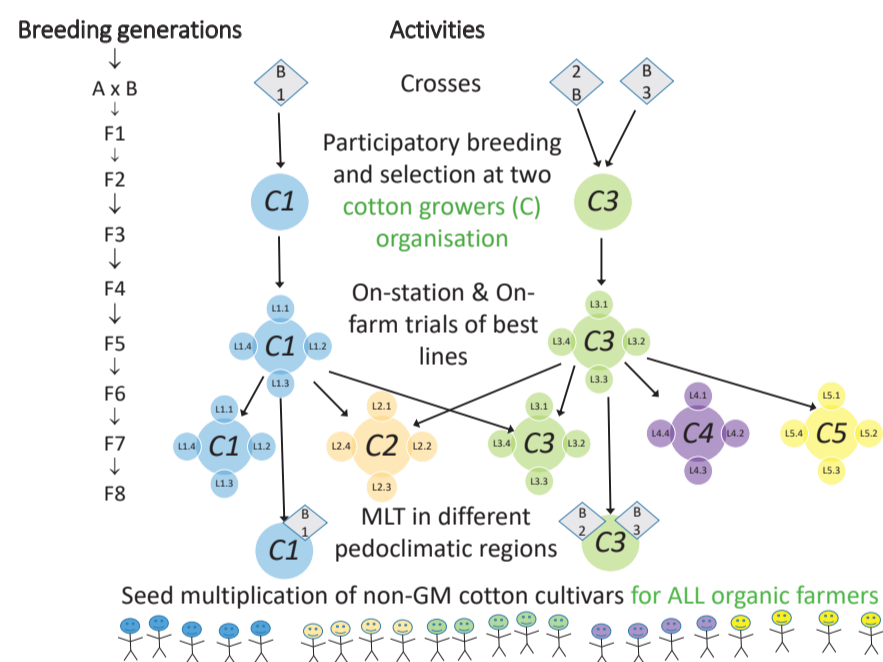
Public breeding and seed multiplication were neglected and local non-GM seeds supply were eroded.

With the continuous growth of the organic market it is important to maintain non-GM germplasm, to enlarge the offer of organic cultivars with a better performance that meet the demand of the market, and to rebuild the seed sovereignty of organic smallholder cotton farmers.

Participatory breeding of *Gossypium hirsutum* and traditional *G. arboreum* cotton offers a great opportunity for developing locally adapted cultivars for increasing genetic diversity.



### Project Approach



### Objectives

- Secure seed availability for organic cotton farmers in India.
- Develop a portfolio of new cotton cultivars including traditional *G. arboreum* cotton with:
  - improved agronomic performance,
  - high fiber quality (fiber length of more than 28 mm),
  - adaptations for various growing conditions,
  - high resilience to climate change.
- Achieve high adoption rate by farmers and address anticipated changes in cultivation (mechanization).
- Improve integrity of organic cotton by capacity building and close collaboration of actors along the supply chain.

### Milestones

- Local facilitator installed to coordinate the activities among 7 partners and timely implementation of the project.
- Special focus on involvement of female farmers and Indian tribes with marginal growing conditions.
- Training and local capacity building in breeding and seed multiplications.
- Crosses and single plant selection of early and advanced generations.
- Establishment of 5 on-station and 150 on-farm field trials in 6 Indian states testing promising cultivar types (*G. hirsutum*, *G. arboreum*, hybrids and inbred lines).

The project is open to involve more farmers associations and serves as model to safeguard organic cotton seed on global scale.

#### Supporters:

STIFTUNG  
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#### Partners:

