Research Institute of Organic Agriculture FiBL
info.suisse@fibl.org, www.fibl.org

OCRT Regional Meeting: South Asia

Amritbir Riar & Monika Messmer

Organic Cotton Round Table 2018

Milano 22 October 2018

Regional Workshop South Asia

- Organic cotton Challenges survey
- Organic Cotton Strategy for South Asia: keeping the lead – FiBL
- Pakistan as emerging player for organic cotton - SIA Foundation

Organic cotton Challenges survey

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Organic Cotton Strategy for South Asia: keeping the lead

Amritbir Riar, Tanay Joshi & Monika Messmer

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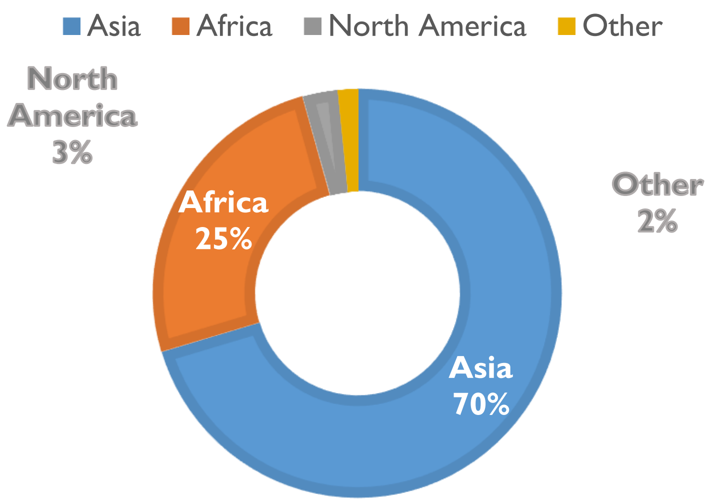
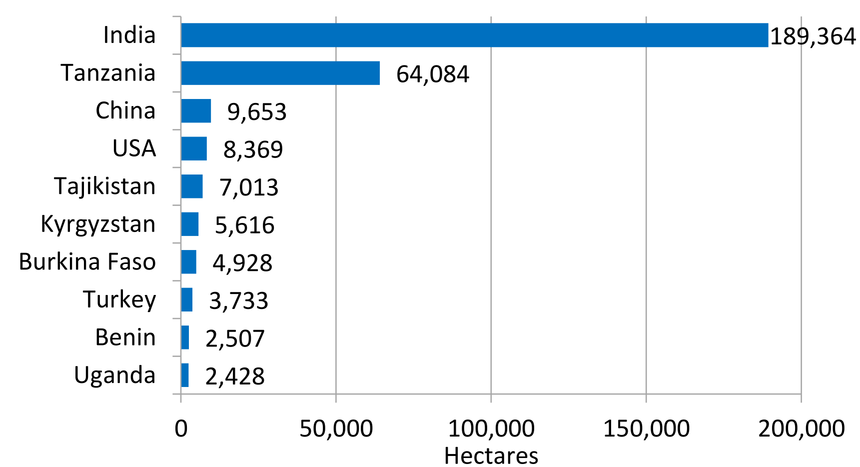
Organic cotton: What is next for South Asia

ORGANIC 2016



Organic top10 countries



Updates from 2017

- Total production for the 18 countries growing organic cotton in 2015-16 was 107,980 MT of organic fiber (4% decrease from last year), with India representing a slimmer majority than ever before (a decline in share from 67% to 56%).
- **China ranks second, holding a 14% share of total production.**
- **Growth in Central Asia continues** with Kyrgyzstan reporting 7,981 MT organic cotton fiber (44%), and Tajikistan 6,620 MT organic cotton fiber (562%) placing the country third in the production rankings.
- A **15 per cent increase** for the **Texas Organic Cotton Market Co-op (TOCMC).**
- Research shows that 80 per cent of OBEPAB farmers in Benin are experiencing **yields higher than the average organic yield for the country**, and in **Tanzania, yields have doubled for bioRe farmers**

Full report @ https://textileexchange.org/2017-market-reports/

FiBL has a strong track record in organic cotton breeding – with years of experience in improving the situation in India together with local partners

FiBL's involvement in organic cotton seed breeding in India

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2021 2022 2023

Participatory Cotton Cultivar Evaluation

Involvement in *Seed & Soil Task force*

Green Cotton Project: *Cotton breeding & genetic diversity*

Seeding the Green Future

Workshop
Disappearance of non-GM cotton

Follow-up workshop
Disappearance of non-GM cotton

Organic Cotton Seed Summit

Partners & Major Donors

STIFTUNG MERCATOR SCHWEIZ

coop

TextileExchange

Chetna Organic
Environment..Ethics..Equilibrium

Pratibha

ASA आसा

C&A Foundation

OCA ORGANIC COTTON ACCELERATOR

bioRe

bioRe STIFTUNG HUMAN RIGHTS ORGANIC COTTON

COTTON CONNECT
TRANSFORMING THE WORLD'S COTTON FOR GOOD.

CSA

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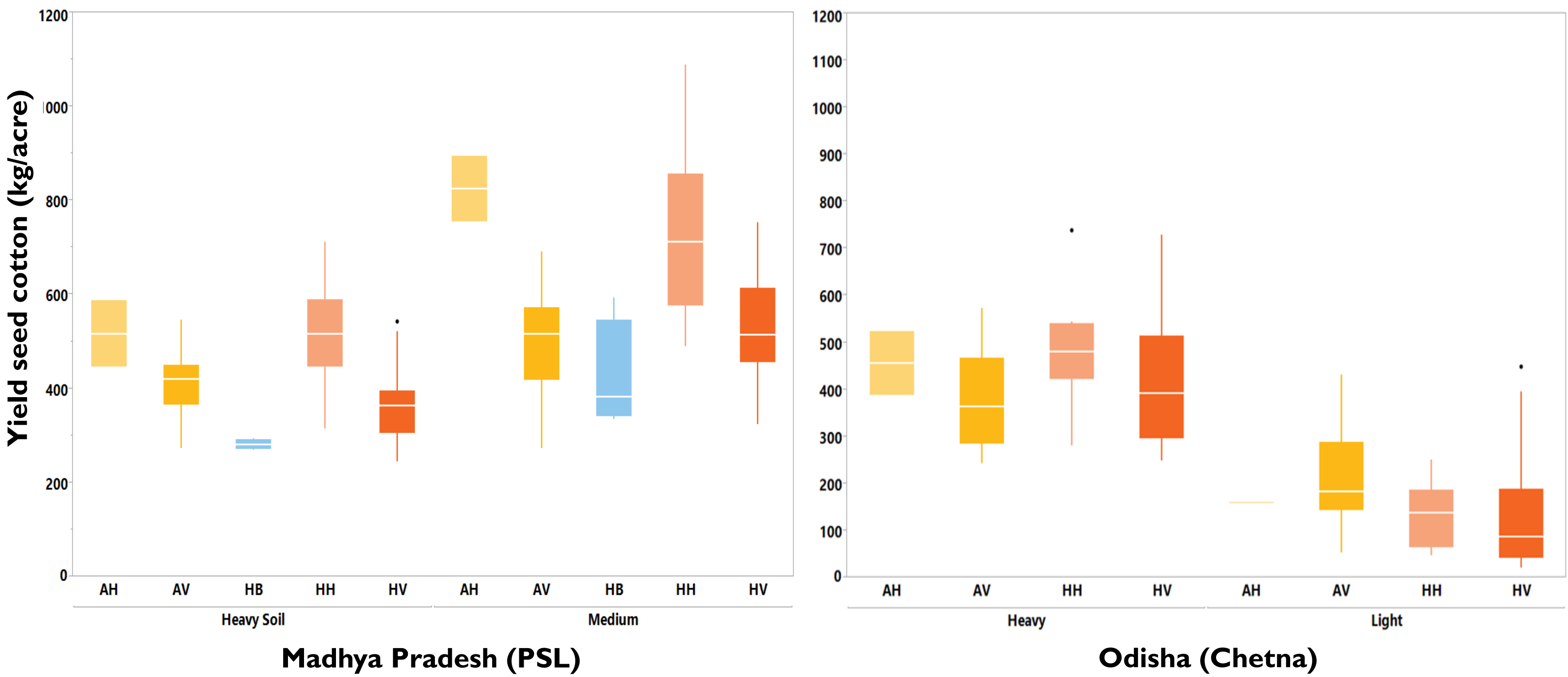
Results highlight the need for agro-ecological zone specific cultivar development for different soil and water dynamics



Legend

G. arboreum *(desi)*
- AH: arboreum hybrid
- AV: arboreum variety

G. hirsutum *(upland)*
- HH: hirsutum hybrid
- HV: hirsutum variety

G. barbadense *(egyptian)*
- HB: hirsutum X barbadense hybrid

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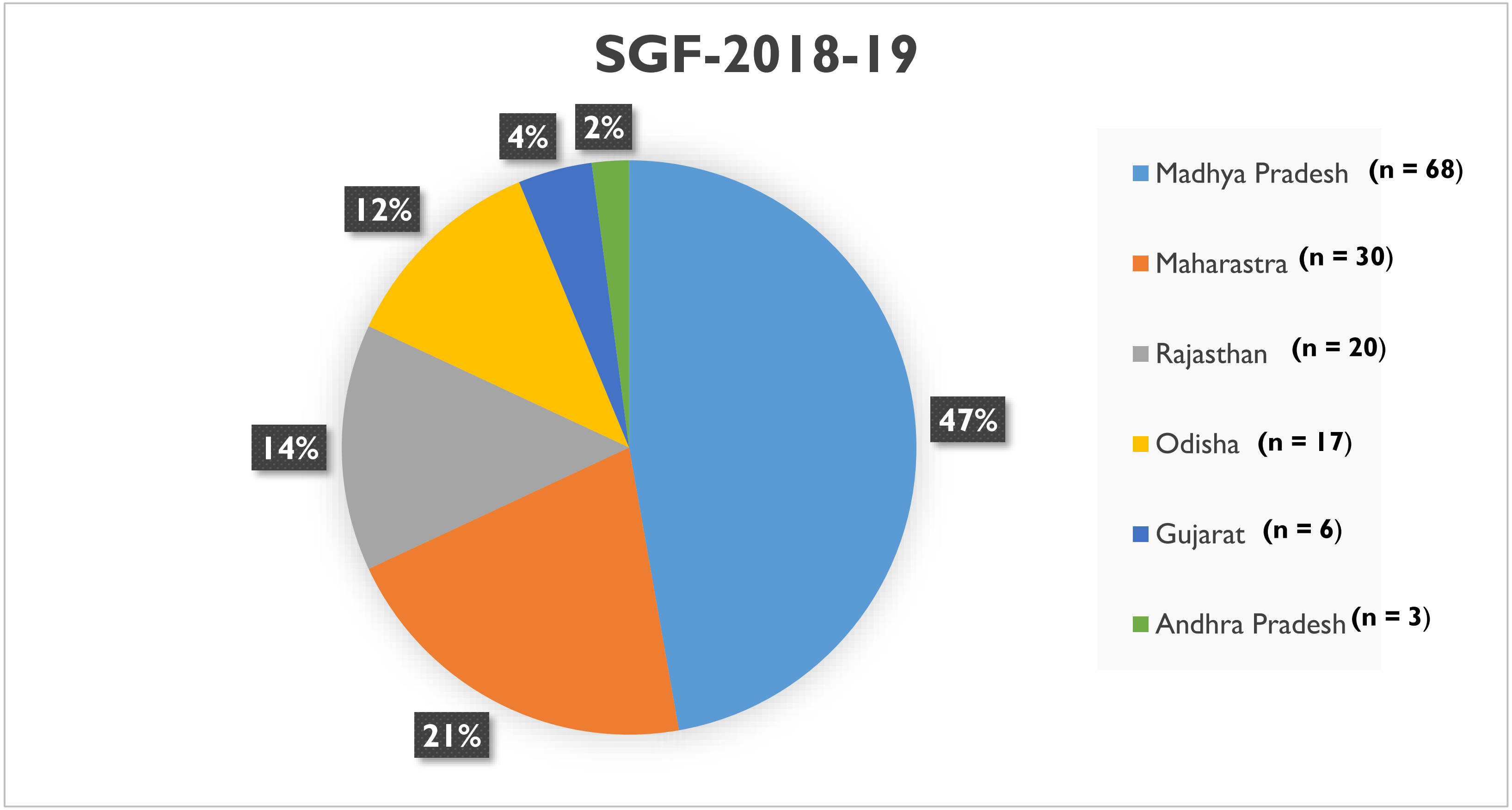
Main results

- Capacity enhancement of farmers, research and extension staff
- Active engagement of the farmers
- Increased seed availability and choice of cultivars
- Improved arboreum cotton

Lessons learned moving forward

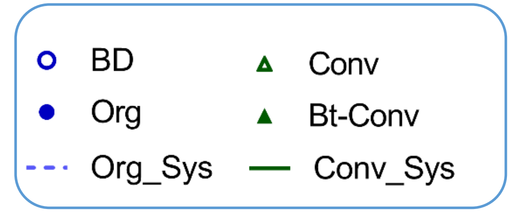
- Fast progress can be achieved through selection under organic conditions
- Varietal lines can achieve similar yield as hybrids
- Farmer adoption is key
- Testing at least 3 years under representative organic conditions to make recommendations
- Involvement of higher Indian agricultural institutions is key to access genetic material

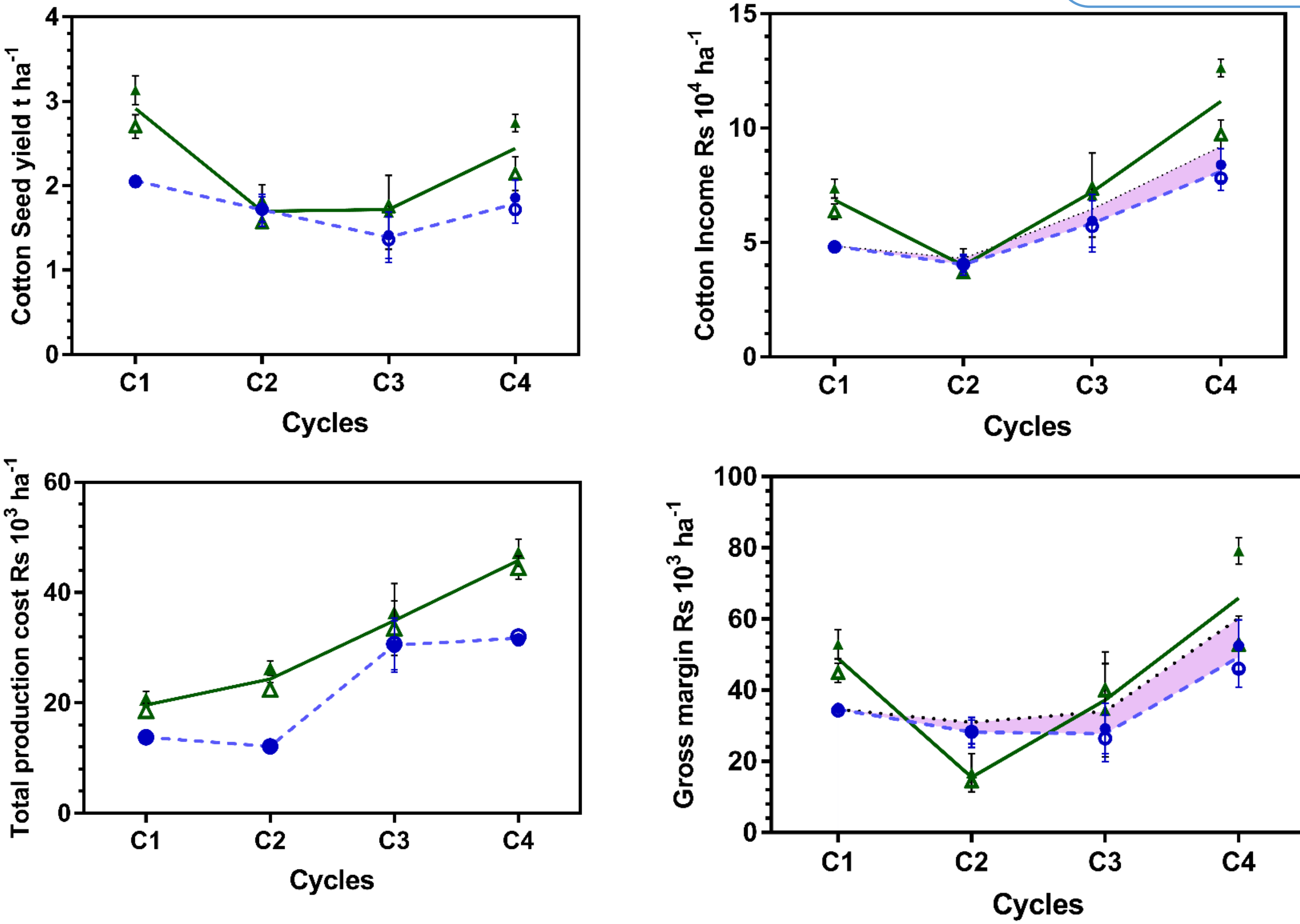
Percent Distribution of Trials Across Different States



Long-term Experiment (LTE)

Cotton





Bollworm: how much we can control?

- 68 different hybrid and varietal lines of Gossypium hirsutum and varietal lines of G. Arboreum

- Bollworm can damage up to 65% of bolls under irrigated and highly fertile conditions.

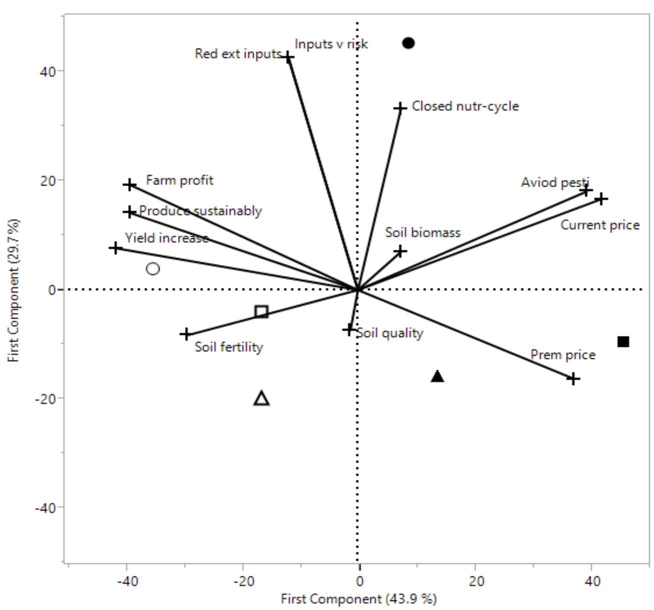
- Damage from bollworms range from 13 -91%

- G. hirsutum varietal lines were more susceptible than G. hirsutum hybrids and traditional G. arboreum varietal lines.

Why farmer grow organic cotton?

Large holding organic farmers (> 4 ha) are concerned about closed nutrient cycle to reduce their dependence on market for inputs.

Premium price of cotton crop is an important motivation for medium (2-4 ha) and small holding (<2 ha) organic farmers



frontiers in Plant Science

ORIGINAL RESEARCH
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Check for updates

A Diagnosis of Biophysical and Socio-Economic Factors Influencing Farmers' Choice to Adopt Organic or Conventional Farming Systems for Cotton Production

Amritbir Riar[1], Lokendra S. Mandloi[2], Randhir S. Poswal[3,4], Monika M. Messmer[5] and Gurbir S. Bhullar[1]*

Strengths, Weaknesses, Opportunities, and Threats

SWOT analysis for South Asia

S

- Arable land
- Climate
- Strong and well dispersed research and extension system
- Subsistence Agriculture + Local knowledge
- Growing organic market
- Infrastructure for value addition

W

- Small and dispersed land holding
- Fragmentation of land
- Under developed value chains
- Complex bureaucracy
- Limited traceability
- Unsustainable Water Management

O

- Bridgeable yield gaps
- Educated youth
- Economic development + Purchasing power
- Politics and polices

T

- **Contamination**
- Limited policies and funding for organic
- Limited availability of **organic seeds**
- Increasing labour cost and shift to other short duration cash crops

Contact

Amritbir Riar

amritbir.riar@fibl.org

Research Institute of Organic Agriculture FiBL

Ackerstrasse 113 / Postfach 219

5070 Frick

Switzerland

Phone +41 62 8657-288

Fax +41 62 8657-273

info.suisse@fibl.org

www.fibl.org