ICAC Research Support

PROJECTS
1. Training Master Trainers in Cameroon & Burkina Faso
2. Virtual Reality Films for Training
3. ICAC Cotton Expert App for least literate farmers: 26 languages
4. Sustainable yields through Regenerative Agriculture in Zambia

RESEARCH NETWORKS
1. XV Southern & Eastern African Cotton Meeting, Mozambique, 2022
2. World Cotton Research Conference-7, Cairo Egypt, Oct 2022

PUBLICATIONS
1. Manuals (2) & Pocketbooks (6)
2. Videos (14), ppts (12) & VR films (3)
3. ICAC Expert App
4. ICAC Cotton Databook 2022
5. ICAC RECORDER 2022

Keshav Kranthi
Chief Scientist
VIRTUAL REALTY FILMS
German Agency for International Cooperation or (GIZ).
GIZ project Agreement number: 81244022; US$ 1,457,771
2020 to 2022

HIGH YIELDS
IPM
LAUNCH PREMIER March 2022 CAMEROON
Interactive Mobile Application
in 26 languages for least literate farmers.
German Agency for International Cooperation or (GIZ).
GIZ project Agreement number: 8127078; US$ 450,906
May 2021 to Nov 2022

ICAC COTTON EXPERT
1. ASK A QUESTION
2. IMAGE DIAGNOSIS
3. ECO-PESTICIDE MASTER
4. CROP HEALTH DOCTOR
5. BEST PRACTICES & ADVISORIES
6. SOIL HEALTH
7. MARKET TODAY
8. WEATHER
9. ORGANIC COTTON
10. MY CROP STAGE

Download on App Stores (IOS) & Play Store (Android)
ACP: Strengthening Productive Capabilities & Value Chain Alliances in Zambia
ITC- EU Project Agreement number: B807; USD 388,915
April 2020 to April 2023

Sustainable high yields through

Regenerative Agriculture

ONLINE TRAININGS: 6
IN-PERSON TRAININGS: 5
FIELD EXPERIMENTS: 10
MODEL DEMO FIELDS: 350
EU WORKSHOP: 1

Practical trainings were held on Biochar, Composting and Nano-Biopesticides. Farmers have reported yield increases in the Demo fields.
Cameroon and Burkina Faso Training of Trainers project
GIZ project Agreement number 81271308; Euros: 221,342
April 2021 to November 2022

TRAINING OF TRAINERS

French

TRAINING VIDEOS: 14
POCKETBOOKS: 6
TRAINING MANUALS: 2
PPT PRESENTATIONS: 12
ONLINE TRAININGS: 9
IN-PERSON TRAININGS: 5
POCKETBOOKS
ENGLISH & FRENCH

1. Techniques for High Yields (26 pages)
2. Organic Cotton (46 pages)
3. Best Practices & Innovations (32 pages)
4. Cotton Diseases & Deficiencies (50 pages)
5. Natural Biological Control (32 pages)
6. Insect Pests of Cotton (30 pages)
TRAINING VIDEOS IN FRENCH & ENGLISH

30-40 minutes duration

Introduction to high yields
The cotton plant
Soil health management
Nutrient deficiencies
Manures & composts
Water management
TRAINING VIDEOS IN FRENCH & ENGLISH

30-40 minutes duration

Seed processing
Sucking pests
Bollworms

Minor insect pests
Cotton diseases
Biological control
IN-PERSON TRAININGS

French

CAMEROON: 23-27 Mar 2022: 150 Master Trainers
BURKINA FASO: 11-19 June 2022: 108 Master Trainers
CAMEROON: 19-24 Sept 2022: 65 Master Trainers

Technical guidance to set up model farms and initiate Regenerative Agricultural practices
XV Meeting of The Southern & Eastern Africa Cotton Forum (SEACF)  
29 June to 1 July 2022, Maputo, Mozambique

Prospects for Organic Cotton in Africa

Host: Mozambique Institute for Cotton and Oilseed (IAOM).

95 delegates

Twelve countries
Colombia, Germany, India, Kenya, Mozambique, Nigeria, South Africa, Switzerland, Tanzania, UK, Zambia and Zimbabwe
WORLD COTTON RESEARCH CONFERENCE

- 232 Participants
- 28 Countries
- 10 Plenary Lectures
- 98 Presentations
- Book of Abstracts
- Book of Papers

4-7 October 2022
Steigenberger Hotel, El Tahrir, Cairo, Egypt
ICAC Researcher of the Year 2022

Lead Scientist
Cotton genetics research group. USDA Crop Genetics Research Unit, Stoneville, Mississippi USA

Adjunct Professor
Mississippi State University.

Research
• Identified and developed several molecular markers
• Developed ultra-early cotton with verticillium wilt resistance
  Developed cotton leaf curl disease resistant cotton
• Developed CLCuD diagnostic tests and best management practices to mitigate effects of the disease.
• Identified resistant germplasm

Awards
• 2014 National Cotton Genetics Research Award,
• 2016 Federal Laboratory Consortium’s Regional STEM Education Award (co-recipient)
• 2016 Secretary of Agriculture’s Abraham Lincoln Award.

Dr. Jodi Scheffler
ICAC COTTON DATABOOK 2022

500+ Pages

• 38 Countries: Production
• Data on states/provinces etc.
• Cost of Cultivation
• Production practices
• Cropping systems
• Fertilizer usage
• Pesticide use
• Water footprints
• Etc.
21.26 Million Cotton Farmers
99% of them are in India, China, Pakistan and Africa

- India: 9,983,454
- China: 5,900,000
- Pakistan: 1,600,100
- Africa: 3,584,345
- Others: 190,356
2,487 Million Man-Days of Employment

97% of cotton farm employment is in India, China, Pakistan and Africa

- India: 1,484
- China: 424
- Pakistan: 212
- Africa: 284
- Uzbekistan: 62
- Others: 21
Cotton occupies 2.3% of the global crop land... 
...4.3% of the global irrigated area is under cotton

But, cotton uses 48.36 trillion litres (TL) of irrigation water which is only 1.73% of the global irrigation water (2800 TL) used
Global Fertilizer share (Million Tonnes) of Cotton

Global Fertilizers: 246.4 Million Tonnes (2020)

But, cotton uses 6.93 Million tonnes of fertilizers which is 2.8% of the global fertilizers used.
Cotton consumes 4.8% of Pesticide Market Value
4.26% of pesticides by Volume
91.0% of pesticides & 92.6% of Insecticides on Cotton are used by 5 Countries

Brazil, China, India, USA & Pakistan which occupy 73% of the global cotton area
SUMMARY

SOCIAL SUSTAINABILITY
- Africa, China, India & Pakistan: Provide livelihood to 21.3 million farmers
- Africa, China, India & Pakistan: Provide employment of 2.5 Billion man-days

ENVIRONMENTAL SUSTAINABILITY
- Cotton uses only 1.73% of the Global irrigation water
- Cotton uses only 2.8% of the Global fertilizers
- Cotton uses only 4.26% of the Global pesticides
- Africa & Argentina: Have the highest Fertilizer-use-efficiency
- Africa, Argentina & Brazil: Have the highest Water-use-efficiency
- Argentina, Australia, Brazil, China & USA: Leading on Conservation Tillage

ECONOMIC SUSTAINABILITY
- Argentina: Most efficient in cost of production
- Africa & Argentina: Lowest cost of cultivation
- Australia, Brazil & Turkey: Highest net returns
Thank You