



Promoting cotton **BY-PRODUCTS** in Eastern and Southern Africa

Project: 1617K - Funded by the United Nations Development Account - 2016-2019

WTO Cotton Days, Geneva, 29 November 2018





Outline of the presentation

- Overview of the project
- Project countries and their cotton sectors
- Impediments to the development of cotton by-products
- Project activities and deliverables
- Cooperation with CIRCOT
- By-products selected for development
- Policy advantages of cotton by-products
- Lessons learned
- Next steps

Overview of the project

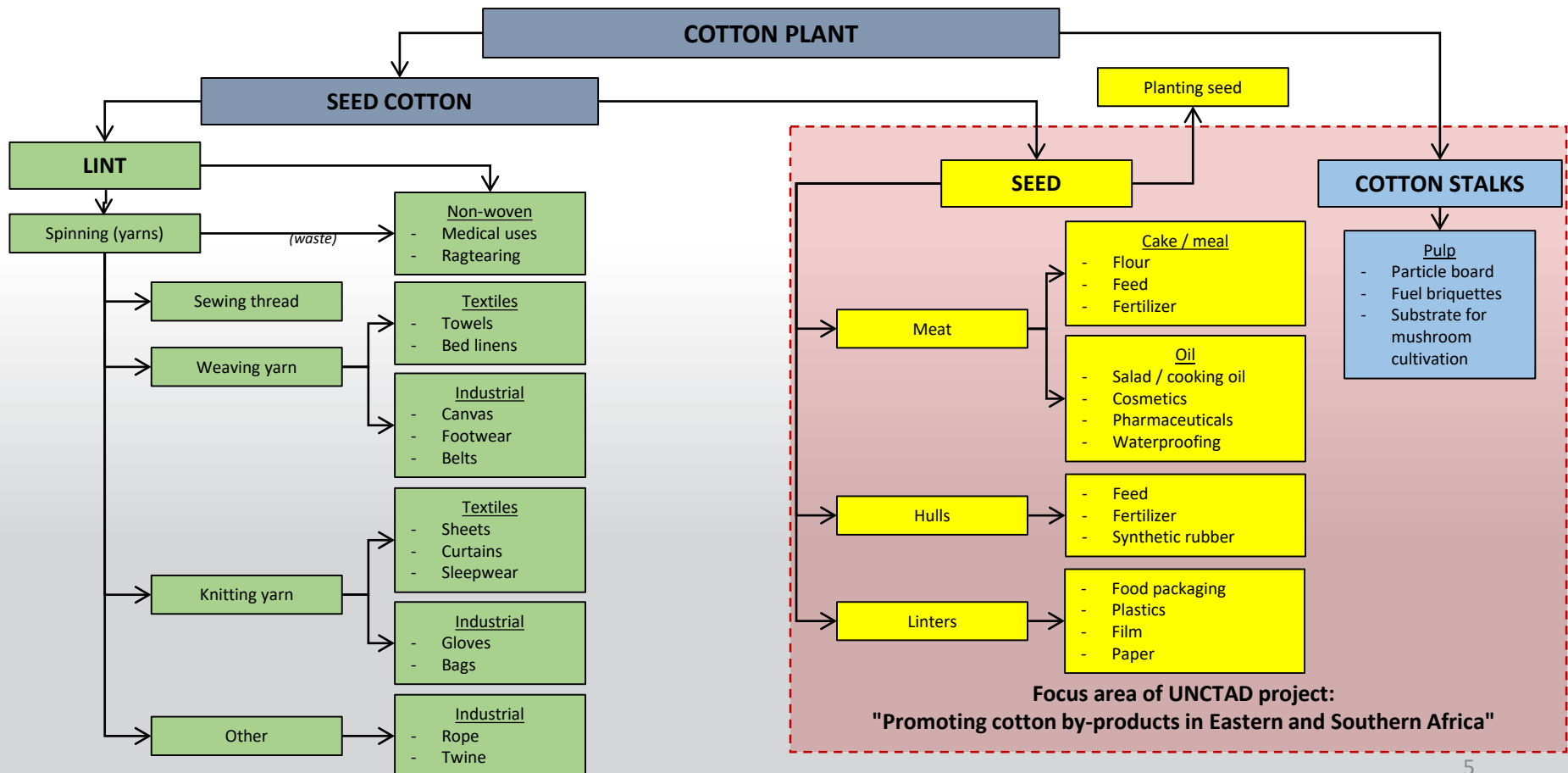
| | |
|---------------------|---|
| Title | Promoting cotton by-products in Eastern and Southern Africa (ESA) |
| Funding source | United Nations Development Account (Project 1617K) |
| Countries | United Republic of Tanzania, Uganda, Zambia and Zimbabwe |
| Start date | March 2016 |
| End date | December 2019 |
| Total budget | US\$ 591,000 |
| Implementing agency | United Nations Conference on Trade and Development (UNCTAD) |
| Partners | United Nations Economic Commission for Africa (UNECA) Common Market for Eastern and Southern Africa (COMESA) |



Overview of the project (cont)

- Expected Accomplishment 1:
 - Improved capacity of cotton value chain stakeholders (government officials, the private sector and farmers) to assess the potential value, market situation and prospects for cotton by-products.
- Expected accomplishment 2:
 - Improved capacity of policymakers to (a) formulate evidence-based policies that improve the value added of cotton by-products; and (b) devise investment profiles to attract potential investors.
- Focus on new / pre-commercial opportunities, e.g. applications for cotton stalks, rather than upgrading opportunities, e.g. replacing obsolete oil extraction technologies.
- Approaches:
 - Process-based, not expert-based
 - Build capacity of country experts
 - Inclusive participation, with an emphasis on farmers and women
 - Inter-agency collaboration
 - South-South cooperation

Our project on by-products looks at “products derived from the non-lint parts of the cotton plant”.





Value addition in the 4 countries is characterized by collapsed textile industries and minimal use of by-products.

General

- Collapse of textile sectors as of liberalization in the mid-1990s
- Contributed to lower average yields, quality, cultivation area and production
- Ginneries currently operating at 30% or less of installed capacity
- 95% or more of lint exported

By-products

- Oil milling relatively developed, but with obsolete technology
- Oil mills operating at 30% or less of installed capacity
- Unmet demand for edible oil; less reliable market for cottonseed cake
- Otherwise only a few cottage activities for by-products: mushrooms or chicken feed from hulls
- Pest management regulations require farmers to destroy their cotton stalks



Country surveys highlighted the main impediments to the development of cotton by-products.

Primary

- Economies of scale due to low production of raw material
- Lack of general awareness
- Lack of policy coherence from production, to value addition, to trade

Secondary

- Misaligned incentives in farmer-ginner relationship, including:
 - Skepticism among farmers that they will not receive by-product income through the seed cotton producer price formulae; and
 - Contract farming models that provoke race-to-the-bottom competition, especially on inputs.
- Asymmetric tax treatment with respect to imported substitutes
- Obsolete oil milling machinery

Project activities run from 2016 until mid-2019, followed by an evaluation by end-2019.

Complete

- Surveys
- National capacity-building workshop (National Action Plan)

Underway

- Investment profiles
- Study visit

Remaining

- Draft pilot project plans and funding proposals
- Regional workshop
- Evaluation



The image shows the cover and title page of a report. The top part is a blue header with the UNCTAD logo and the text "UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT". Below this is a colorful patterned banner. The main title is "PROMOTING COTTON BY-PRODUCTS in Eastern and Southern Africa". Below the title is a map of Africa. The bottom part of the image shows the title page for "COTTON AND ITS BY-PRODUCTS in Zambia ANALYSIS OF COTTON BY-PRODUCTS SURVEY". It includes a small image of cotton plants and a red box with the number 8 and the text "SECRET WORKING GROUP".

Cooperation with India's Central Institute for Research on Cotton Technology (CIRCOT)

- UNCTAD selected India as an example for project countries, due to:
 - Similarities between the production models and geographic densities;
 - India has revived its cotton sector by developing local value addition technologies and businesses, adapted to the rural context.
- CIRCOT researches, designs technologies and incubates businesses for post-harvest processing of cotton and its by-products.
- Close link with processors and machine fabricators.



CIRCOT participation in project activities:

- At each national workshop, presented its work on cotton applications for cotton by-products.
- Will host a study visit for project participants in January 2019.



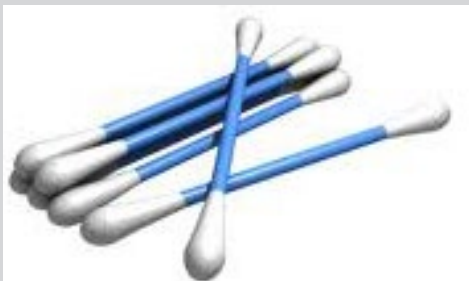
CIRCOT

ICAR - Central Institute for
Research on Cotton Technology

At national workshops, stakeholders agreed on National Action Plans to develop 2-4 by-products.

Cotton by-products selected for National Action Plans

| Raw material | End product | Tanzania | Uganda | Zambia | Zimbabwe |
|---------------------|------------------------|----------|--------|--------|----------|
| Stalks | Briquettes and pellets | 👍 | 👍 | 👍 | 👍 |
| Stalks / hulls | Mushrooms | | 👍 | | |
| Cottonseed cake | Gossypol-free cake | 👍 | 👍 | | 👍 |
| Short staple cotton | Absorbent cotton wool | 👍 | 👍 | 👍 | |



In each country, the selected cotton by-products respond to several policy priorities.

| Policy priority | Biomass briquettes / pellets from stalks | Mushrooms from cotton stalks | Absorbent cotton wool | Gossypol-free cottonseed cake |
|--|--|------------------------------|-----------------------|-------------------------------|
| Income opportunities for farmers | Y (direct) | Y (direct) | Y (indirect) | |
| Small-scale, rural business opportunities, including for women | Y | Y | | |
| New business opportunities for entrepreneurs | Y | Y | Y | |
| New markets for existing businesses | | | | Y |
| Import substitution | Y | Y | Y | |
| Substitution of fossil fuels | Y | | | |
| Reduced pollution | Y | | | |
| Reduced deforestation | Y | | | |



Lessons learned

- Value addition – for lint or by-products – can't be treated in isolation from cotton production
- Existing producer price formulae don't give farmers sufficient incentive to grow more cotton
- Governments and ginners can help develop by-products to increase incentives for farmers to grow cotton
- In Africa, economies of scale are only possible for a few by-products
- In project countries, cotton by-product opportunities mostly for domestic consumption and import substitution, not export
- Trade deficits in project countries for: edible oil, surgical wool and fuel
- Economics aside, cotton stalk-based fuels respond to policy priorities on forests, emissions and substituting fossil fuel imports



Next steps

- Remaining project activities:
 - Complete investment profiles for priority cotton by-products;
 - Study visit to CIRCOT in Nagpur, India, 14-18 January 2019;
 - Regional workshop, May-June 2019;
 - Project evaluation, by end 2019.
- Work with country focal points to draft selected initiatives into project plans and funding proposals for next phase of work.
- Propose a similar project to other cotton-producing countries in Africa.
- Coordinate with joint WTO-UNCTAD-ITC initiative on cotton by-products.



For more information

- Project site, including all project documents:
<https://unctad.org/en/Pages/SUC/Commodities/SUC-Project-1617K.aspx>
- Contact Kris Terauds:
 - kris.terauds@un.org
 - +41.22.917.5931

UNCTAD

PROSPERITY FOR ALL

www.unctad.org



UNITED NATIONS
UNCTAD