COTTON ASSOCIATION OF ZAMBIA
CAZ

CONVERTING COTTON STALKS INTO ENERGY

DIVERSIFICATION OF COTTON WASTE INTO THE ENERGY SECTOR IN ZAMBIA

Forest and Farm Facility
a partnership between:
Food and Agriculture Organization of the United Nations
iied
IUCN
AGRICORD

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COTTON ASSOCIATION OF ZAMBIA

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OUR PARTNERS

CFU CONSERVATION FARMING UNIT

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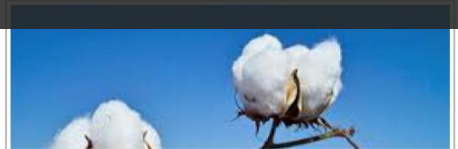
BACKGROUND

- The Cotton Association of Zambia (CAZ) was formed in July 2005 and registered in December, 2006 as an affiliate of the Zambia National Famers Union (ZNFU) in order to provide the smallholder cotton farmers with the platform to participate more effectively in the operations and future development of the cotton sector in Zambia.
- Key roles is to provide services to the membership in the areas of information, yield improvement, trainings and value addition.

Welcome to Cotton Association of Zambia

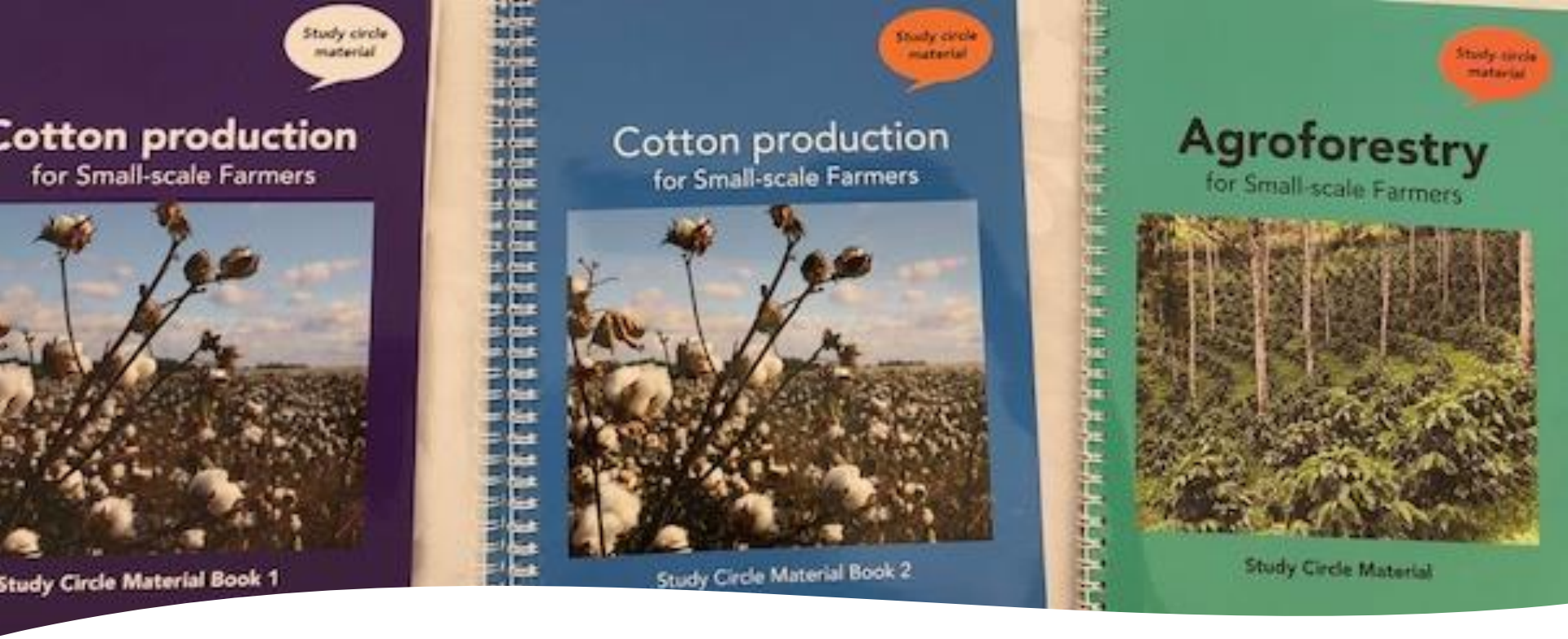
Our Opening Hours

Monday:	08:00 - 17:00
Tuesday:	08:00 - 17:00
Wednesday:	08:00 - 17:00
Thursday:	08:00 - 17:00



INTRODUCTION

- Over 350,000 smallholder farmers produce cotton annually.
- About 400,000 hectares are planted to cotton annually.
- The cotton regulations (S1 52 of 2007) provides for all residual cotton stalks to be burnt by 1st October of every year in a bid to control pests.
- CAZ farmers practice the cotton-based farming system.
- Open burning of cotton stalks at farm level has oftentimes led to uncontrolled forest fires and contribution to climate change.



THE CHALLENGES

- Unacceptable low seed cotton yields on standing stalks due to poor pollination, climate change etc.
- Pests and disease management increase the cost of production
- Lack of transparency in seed cotton pricing.
- Disposal of cotton stalks as a Government requirement is another added cost.
- Lack of technologies to add value to other parts of the cotton plant
- The ginneries retain the seeds, which means farmers cannot press the seeds for oil or use them for animal feed.
- Farmers exit and enter cotton production for several seasons at a time and fail to accumulate the technical knowledge and skills that would lead them to increase yields.

RESPONSES

- The Cotton Association of Zambia intends to increase revenue for the farmers by encouraging value addition on the farm where cotton stalks will not be burnt but will be used to produce cotton briquettes which can be used as an alternative in place of charcoal.
- This will contribute greatly to environmental sustainability and reduce deforestation. It will also enhance our technical service provision to the famers.
- In Zambia plans to produce briquettes from cotton stalks and other agriculture residues have been proposed.
- In the photo agroforestry works promoted by CAZ among its farmers.

RESPONSES

- The main driver is an increase in demand for charcoal due to high levels of urbanization and population growth. Therefore, production of briquettes may help reduce the situation of deforestation since production of briquettes use agricultural residues such as cotton stalks, soybean straw, maize Stover/cobs and other specific agro-forestry waste suitable for the purpose. The model provides potential investors with options on the end- product.

RESPONSES Continues…

THE DEVELOPMENT IMPACTS OF THE BRIQUETTES CAN REDUCE CHARCOAL/WOOD FUEL.

IN THE RURAL AREAS, THE USE OF BRIQUETTES IN TLUDE STOVES CAN SUPPLY HEAT ENERGY.

IN THE URBAN AREAS, BRIQUETTES CAN PROVIDE CHEAPER SOURCE OF ENERGY.

BOTH RURAL AND URBAN WOMEN (AND CHILDREN BELOW 2 YEARS) CAN BENEFIT FROM REDUCED EXPOSURE TO CARBON MONOXIDE AND PARTICLES.

TO REDUCE DEFORESTATION.

UNIQUE FEATURES

- High calorific value of cotton stalks
- Briquettes as alternative to charcoal
- Conversion of high calorific value of stalks into briquettes
- Working with small scale cotton farmers across the country.
- The special benefits is to provide affordable and clean cooking energy to restaurants, facilitates compliance with the cotton disease control regulations, increases income, improves management of cotton stalks and increases cotton productivity.

PRACTICAL INTERVENTIONS: FAO-FFF

- The forest and farm facility program is a joint initiative by FAO, IIED, IUCN, and Agricord to support build capacity of forest and farm producers for climate resilience and improved livelihoods.
- The FFFP has been working with CAZ for the capacity development of the forest and farm producers in Zambia.
- The FFF program under Forests, Farmer, Agriculture, Sustainable Together (FFAST) initiative has supported the CAZ to develop the cotton stalk value chain through development of bankable business proposals for onward submission to impact investment

PRACTICAL INTERVENTIONS: UNCTAD

- 2 training workshops were organized (2016/2017) on cotton by products in Zambia.
- The action plan included: Carbonized briquettes and Absorbent cotton technologies.
- Farmers exposed to the technology in India and locally on development of carbonized briquettes from cotton.
- The government of the republic of Zambia has shown interest in as a means of reducing deforestation.
- The pilot project is to be initiated in Mumbwa in collaborations with farmer owned ginnery company.

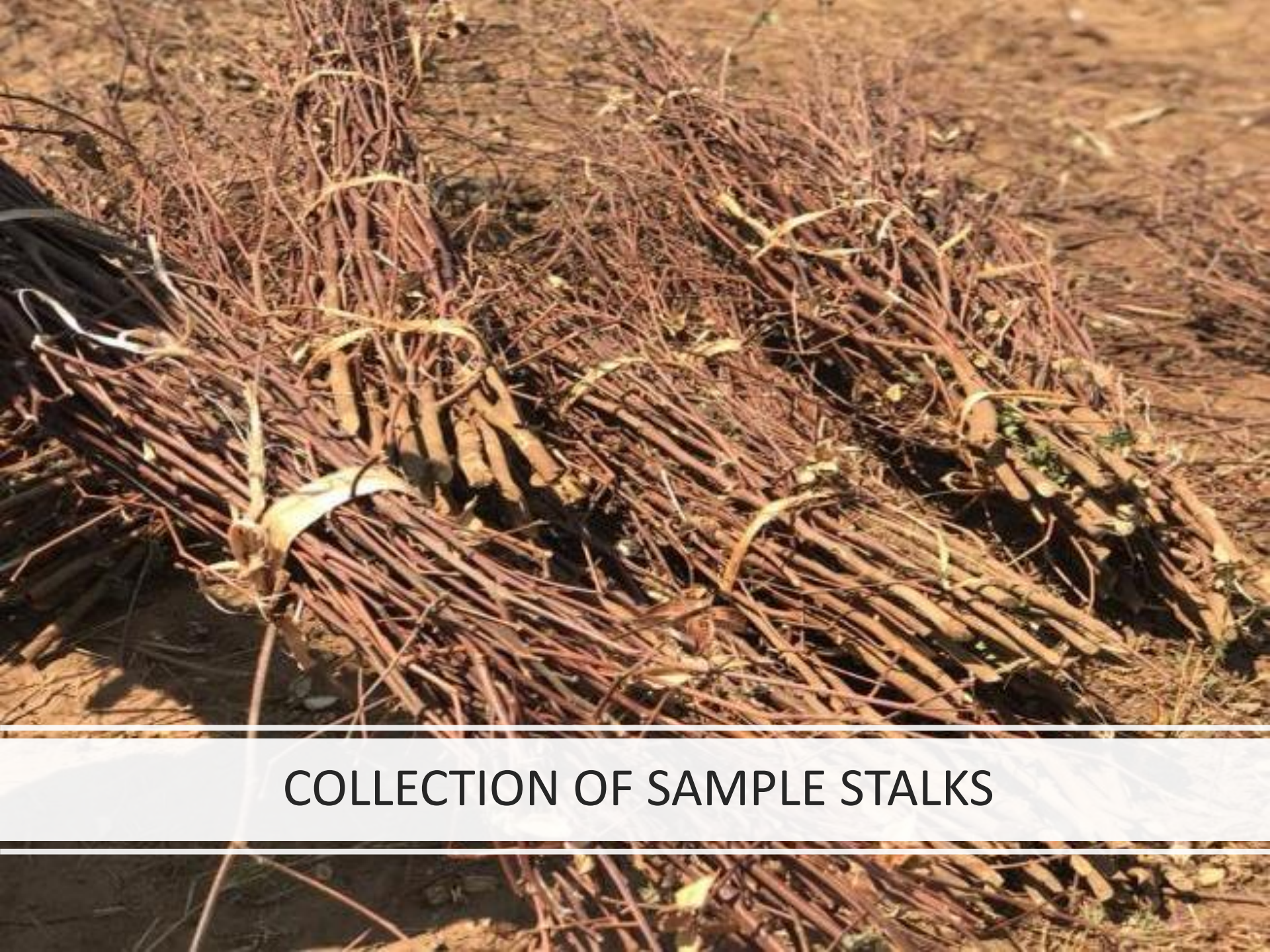
THE FUTURE- THE DAWN OF AN ERA

- The ever farmer owned Mumbwa ginnery has demonstrated potential for the cotton farmers to boost their incomes and livelihood through increased market power and value addition.
- Cotton farmers will soon be able to produce carbonized briquettes using cotton stalks for their energy.
- The Zambian government good will and positive intervention in the sector as stipulated in the 7th National Development Plan.

THE FUTURE- THE DAWN OF AN ERA

- Increased job opportunities in both urban and rural areas for women, youth and differently abled will be assured.

COLLECTION OF SAMPLE STALKS



COLLECTION OF SAMPLE STALKS

DEMOSTRATING MANUAL CHAFF CATER IN MAGOYE- ZAMBIA

CARBONIZED BRIQUETTES

NON-CARBONIZED BRIQUETTES

CURRENT COTTON VALUE CHAIN IN ZAMBIA

END OF PRESENTATION – THANK YOU!

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