INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Geneva, Switzerland
23-25 January 2017

Contribution of Uganda

to the CSTD 2016-17 priority theme on 'The role of science, technology and innovation in ensuring food security by 2030'

How post-harvest technology improvement can contribute to ensuring food security and create employment opportunities.

Case study: "Enhancing food security in Africa through improvement of rice post-harvest handling, marketing and development of new rice-based products", the Ugandan Chapter.

Location

The above project is been implemented in eight African countries: Senegal, The Gambia, Sierra Leon, Ghana, Nigeria, Mali, Cameroon and Uganda. It is implemented in Uganda by the National Agricultural Research Organisation (NARO) and the main field sites are in Lira district northern Uganda. However the area has now radiated to Amuru and Nwoya districts.

Implementation period

The project started in April 2011 and will end in March 2017

Main Actors

The main actors of the projects are Africarice and the National Agricultural Research Systems (NARS) of those eight countries. In Uganda, it is National Agricultural Research Organisation

Target Audience

The main target audience of this are the smallholder rice farmers, particularly women and youth. Other audiences include farmer cooperatives, rice millers, traders and local agro-machinery manufacturers.

Funder

The project is been funded by Canadian Government through Global Affairs Canada (GAC)

Technology and innovation been used

The technology of focus in this case study is improved rice threshing technologies. These are ASI and NARO Lightweight Rice threshers. The ASI is thresher is a design obtained from

Africarice and is bigger in size than the NARO Lightweight thresher. The smaller thresher (NARO Lightweight thresher) focuses on women and youth.

Tools used to disseminate the technology and innovation

A couple of tools have been used to disseminate the technology and these are:

1. Business model has been adopted to disseminate the technologies among the rice farming communities of Lira, Amuru and Nwoya districts. The threshers are been operated as business. In addition to working on their own farms, the farming entrepreneurs hire the threshers to others at fee and make money from the innovation.
2. Training of the beneficiaries on the use of the technologies and business skills
3. Training of local private agro-machinery fabricators who are within the proximity of the rice farming communities to carry out manufacture of more threshers, market and after sale service
4. Field days and radio announcements in the local languages have been organised to create awareness among the farming communities

Issues addressed/focus related to food security

The threshers are addressing issues of:

1. High quantitative postharvest loss reduction. The threshers have ably reduced postharvest grain loss during threshing using traditional methods from 4.87% to a mere 0.01%. This translates to about USD 12 million. This saving of grain contributes having more food on the table and hence ensuring food security. The grain saved could also be sold to get more income to improve wellbeing of the families
2. Improvement of grain quality. The threshers are enabling farmers to thresh rice on tarpaulin thus significantly reducing soil contamination
3. Improvement of labour productivity. The threshers are enabling farmers especially women and youth to save up to 59% threshing labor. Thus enabling farmers either increase production area thus producing more food or farmers use the laboured saved for other household activities
4. Employment creation. In addition to working on their own farms, the farming entrepreneurs hire the threshers to others at fee and make money from the

innovation. The local agro-machinery fabricators are in cottage business of fabrication, marketing and maintenance of the threshers

The total economic gain farmers get through use of these threshers is USD 159/ha per season

Goals and objectives related to food security

Goal:
Contribute to Uganda attaining Self-sufficiency in Quality Rice

Objective:
Introduce improved postharvest technologies among rice farming communities in Uganda for reducing postharvest losses and improving quality of local rice

Stage of implementation

The implementation of the project is now at the dissemination stage

Is resilience or sustainability of the projects measured or evaluated?

No, however plans are under way to carry out impact/outcome studies early next year 2017