

## Factsheet midterm findings Applied Research Fund Call 3



### Enhancing Rice-Green gram productivity in Northern Uganda (ERIGNU)

#### Summary

The overall objective of this project is to contribute to sustainable access to nutritious food by women, children and youth in northern Uganda, by introducing Green gram in rice cropping systems. The project is implemented using a knowledge co-creation approach, which is an integration of scientific knowledge and practitioners' knowledge, resulting in novel outcomes. The project seeks to address the following research questions; A) what practice(s) could increase and stabilize on-farm yields of rice and Green gram? B) How sustainable is a rice-Green gram community based seed system? C) To what extent do improved rice-Green gram yields result into improved malnutrition and food security? D) To what extent does rice-Green gram rotational cropping increase land productivity? E) Does empowerment of women in rice production and marketing enhance their economic power and decision making at household level? F) To what extent does the use of mobile and web applications enhance access to and sharing of usable information on the rice-Green gram among value chain actors, especially women? The project is working directly with 450 farmers, of which 320 are women. Interesting findings have been observed as highlighted in the following sections.

#### Interim research findings

The project is working directly with 450 farmers, of which 320 are women. These were trained on quality seed production, rice-Green gram cropping systems, gender issues, use of mobile app and basic agribusiness. The project established factors that influence the adoption of rice-Green gram technologies in the target area including market conditions and community perceptions. Considering the established factors, a community based seed system for both rice and green gram is being established. Fifteen farmer seed producer groups have been selected and trained on quality community seed production. A seed value chain system has been designed and is being validated and operationalized among the farmers and other stakeholders. New varieties for rice (3) and green gram (2) have been adapted through participatory variety selection exercise. Rice-green gram cropping system evaluation trials are on-going, preliminary results have shown that fertilizer micro-dozing, and rice-green gram intercrop have yield advantage compared to sole cropping system. The impact of rotational cropping is yet to be tested since experiment was conducted for only one cropping cycle. The above cropping systems were established alongside farmer practice (broadcasted monocrop) for comparison. During the field day, which provided platform for farmers to evaluate the different cropping system, the participants observed the difference and overwhelmingly appreciated row-planting in addition to intercropping and fertilizer use. Another study was conducted in the project area that established farmer ICT profile and community characteristics. Based on the findings appropriate mobile-web ICT apps were developed and tested among farmers. The project has also designed and developed animated production guide for green gram and tested it among participating farmers. Preliminary result showed that farmers preferred the animated content since they are more expressing and easier to understand than traditional production guides. The [project website](#) is currently running and a couple of information about the project has been shared for the public. From the baseline study, it was found that men significantly influence choice of women enterprises in the community, therefore empowering women requires the empowerment of men. Based on the finding, trainings previously designed for women have been conducted capturing both men and women in the community. One spinoff has emerged that the use of ERIGNU app can help monitor the delivery of extension services.

## Interim outcomes achieved

There is significant change in attitude of men engaged in the project towards women. These men for example appreciated the value of empowering women in the community, as noted by one man in Kole district, "The project has enlightened me that my wife is an economic asset if well supported and now I do involve my wife in decision making in my home". The training of using ICT tools (such as ERIGNU mobile app) for information access and sharing, has enabled beneficiaries to now use WhatsApp and other social media to access and share information beyond the ERIGNU project. As noted by one woman farmer on Chegere, Apac District "The training on how to use social media to access and share information has been very good for us, we even created a WhatsApp group for our Village Saving Scheme. Through WhatsApp we get a lot of useful information, like community announcement of events". The introduced green gram and rice varieties are gradually becoming an important crop among the farmers as food and cash crop. Knowledge given through training and demonstration, has enabled the participating farmers differentiate between seed and grain, the community in the next few seasons are going to be self-sufficient in accessing seeds of the target crops.

## Project messages to

### A) Actors from private sector:

- The private sector, especially agro-produce dealers, need to create a long-term engagement plan with farmers who are potential buyers and could also be suppliers of other inputs such as quality seed if empowered accordingly. Engagement with farmers should not be parasitic in nature but rather mutual. Thus, farmers should have a say in the engagement. For entrepreneurs in these value chains, it is critical to establish concrete market conditions before investing.

### B) Civil society and practitioners organizations:

- Most civil society organisations (CSOs) have weak documentation of knowledge from their activities and generation of theories. Therefore, it is recommended that CSOs embed data science and knowledge management in every action. Most CSOs have weak research capacity by design. Therefore, partnership and collaboration with academia and research should be seen as opportunity for actualization of the principles of research for development.

### C) Policy makers:

- Community based seed systems are a critical platform in rural innovation and provide numerous benefits including; improved economic opportunities, preservation of genetic materials and streamlining disease management. Therefore, policy makers need to strengthen and put to practice policies which promote the establishment of these community seed systems. Appropriate ICT use in agriculture policies need to be developed and promoted for efficient delivery of extension services at community level and nation-wide. For example, since animated content was cited by farmers as being more impressive and easier to learn, policy on digital content for agriculture needs to be developed, especially on production guides and farmer training materials. There is need to establish policy on digital academy for production officers and extension staff can gain critical knowledge and skills.

## Knowledge products

- [Project website](#)
- Production of traditional and animated production guides
- Project news articles such as [ERIGNU Researchers commit to deepen project visibility and stakeholder engagement](#). Women of Uganda Network, 2019; [Rice-Greengram project documentary](#). Women of Uganda Network, YouTube, 2017; [Gender and digitalisation – supporting women in agribusiness](#). CTA Blog, 2019; [Promoting sustainable farming systems among small-holder farmers through effective use of ICTs](#). Impakter, 2018.
- ERIGNU mobile app frequently updated with information
- Draft research journal articles

## Knowledge networks

This project partners with a number of knowledge networks in which project work is being shared and highlighted. These include; the Regional Universities Forum in Agriculture (RUFORUM) which is a network of 105 universities operating in 37 African countries; the ICT Associate of Uganda, i-Network Uganda, PAEPARD, [ICTM Conference-Kampala](#), [Engaged Scholarly Academic Network](#) (ESCANET), Uganda Communication Commission ICT4Agriculture initiative under their Rural Communication Development Fund (RCDF).

## Co-creation

The project conducted regular stakeholder meetings as knowledge-sharing platform for successful implementation of the project. For example, the choice of varieties (upland rice varieties) to be adapted within the community was based on knowledge shared by one of the district local government leaders about encroachment on wetlands which is not acceptable by the government. In addition, the use of broadcasted rice plots as one of the checks also came up from the farmers who were adamant on row planting citing it as tedious and wanted to know the benefits of row planting. The regular consortium team meetings also peddled co-creation process of the project, which ensured positive changes in the way project activities are implemented. Some of the changes have been cited in the project reports.

## Consortium Partners

- [Women of Uganda Network \(WOUNET\)](#)
- [Makerere University](#)
- [SNV - Uganda](#)
- [National Agricultural research Organization \(NARO\) / National Semi-Arid Resources Research Institute \(NaSARRI\)](#)

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## Project website

[F&BKP Research Project page](#)