Factsheet final findings Applied Research Fund Call 2

Cassava Applied Research for Food Security in Northern Uganda

Summary

The cassava applied research for food security in northern Uganda project was implemented in the period 2016-2018 with the aim of improving food and income security for smallholder farmers. During this period, various research activities were undertaken under cassava production using participatory approaches such as demonstration gardens, Participatory Variety Seed selection (PVS) and use of multiplication blocks. These approaches were used to create awareness on disease effects and management, increase access to and show effectiveness of using improved varieties and accelerate seed dissemination of farmer chosen varieties. As a result, farmers using indigenous knowledge with support from researchers were able to select 3 near release cassava genotypes and 2 release varieties for adoption, and this increased the number of varieties available to farmers from 2 to 7. The available data on preferred varieties will support release of new varieties for adoption. In addition, farmers have acquired knowledge on cassava agronomy and disease management, which they are now applying effectively. Farmers have increased access to quality planting material which has led to increased production and productivity within the communities. For effective cassava value chain, farmers acquired postharvest handling and value addition skills and this resulted to improved quality and quantity of cassava products in the market. Based on the observed benefits of the project in the communities, local governments have committed to sustain project activities after its closure.

Research Findings

The research finding indicate that, there has been a decrease in Cassava Mosaic Disease (CMD) incidence from 3 to 0.9%, however there is a significant increase in Cassava Brown Streak Disease (CBSD) incidence as a result of uncontrolled movement of cassava planting materials distributed by the different stakeholders. The indigenous varieties are 4 times more susceptible to diseases than the introduced varieties and district wise, occurrence of virulent cassava viruses was a higher in Oyam than in Pader. This implies that Oyam is good for testing near-release varieties, while Pader is suitable for seed multiplication.

As a result of the project, there is an increase in the prevalence of newly introduced cassava varieties in communities for farmers to multiply, and these varieties (27.1-33.7 tones /hectare) give a yield advantage of approx. 1.5 times more than the indigenous varieties (17.4-21.7 tones/hectare). Out of the many varieties, farmers preferred cassava that branch early and form canopy to smoother the weeds, are disease resistant, high yielding, have sweet roots and are mealy when cooked. Male farmers preferred varieties that form canopy early because it reduces weeding regimes while female preferred varieties with less canopy because it allows them to intercrop with legumes twice a year, leading to increased food and nutrition security.

The newly supplied chippers had efficiency ranging from 61-99.5% compared to the rudimentary equipment used by farmers (7-19.9%). The machine-chipped cassava attracted higher prices compared to the locally hand-chipped cassava.

Outcomes achieved

Through the participatory approaches used, farmers now have knowledge on cassava agronomy, are able to tell the types of pests or diseases infecting their crop and can manage them adequately. This has promoted the use of clean planting materials in the control of diseases and pests and has increased cassava production and productivity within the communities. In addition, farmers have acquired new knowledge on handling cassava and producing quality cassava products to attract more and better markets.

According to the chairperson of Gen Badi Farmer group, cassava has addressed the concerns of food and income security of households in the community. She herself was able to build a permanent house for her family from the sold cassava. The chairperson of the Pader district confirmed that cassava is a food security crop and he is convinced that the district council will use the project findings to inform the formulation and passing of an ordinance on the movement of planting materials to limit the spread of diseases. He aims to ensure that every household will have cassava crops to produce for food security purposes.

Project messages to

A) Actors from private sector:

- Ensure that the value chains are inclusive to benefit both the farmers and the higher end actors. This involves offering fair prices in the input-output markets.
- There is a lot of potential for business in the cassava value chain, because the industrial potential of cassava is not yet fully exploited. Cassava products with significant investment opportunities include starch, high quality cassava flour and chips to use as raw materials in bakeries, breweries, bio-ethanol, paperboards, biodegradable plastics, animal feed and the textile industry.

B) Civil society and practitioners organizations:

- Advocating for favourable policy environment such as the formulation of the cassava policy and strengthening of the national cassava multi-stake holder platform.
- Scaling up the best practices and learnings of the project to other areas and needy communities.

C) Policy makers:

- There is a need to put in place favourable tax regimes and incentives to strengthen public-private partnerships for the transformation of the cassava industry in Uganda.
- The government needs to enact, review and/or implement phytosanitary laws. This will help control the movement of cassava planting materials, and would check the spread of cassava diseases.

Knowledge products

- Cassava Applied Research For Food Security Project. YouTube video, 2018
- Tubers for Business. Project booklet, 2018
- Cassava agronomy in brief. Brochure, 2018
- Opportunities for investment in commercial use of cassava in Uganda. Brochure, 2018
- Facts about Cassava Brown Streak Disease. Brochure, 2018.

Knowledge networks

- NaCRRI is part of the National Cassava Platform.
- Oxfam is part of Food Rights Alliance (FRA), Climate Smart Agriculture (CSA) NGO Alliance and Climate Action Network Uganda (CAN-U).
- A2N and Oxfam are part Participatory Ecologically Land Use Management (PELUM),
- The project initiated district Cassava Multi-stakeholder platforms that brought together the district agricultural officers, buyers, farmers and input dealers. This was aimed at strengthening business along the cassava value chain.

Knowledge co-creation

- Consultative proposal development, involving farmers, consortium members and district local governments, was used to identify and define problems, suggest solutions and design methods to deliver results. Project inception meetings with district local governments, consortium members, cassava farmers and traders were an opportunity to refine the problems, suggest interventions and to have a common understanding of the project objectives, roles and responsibilities. Project review meetings (internal and external) were held regularly to reflect and monitor progress, strategize and streamline implementation. The theory of change was developed in one of these meetings and has been regularly reviewed. Joint monitoring visits to the project area was an opportunity to interact with the project beneficiaries and the local governments.

Consortium Partners

- Oxfam Novib Uganda
- NaCRRI - National Crops Resources Research Institute
- A2N – Africa 2000 Network

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Project website

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