Increasing Cassava Production through Improved Technology in Nakasongola District, Uganda

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Project Area
The project was carried out in Wabinyonyi and Lwampanga sub-counties of Nakasongola District in Uganda. Ten parishes were marked with a targeted beneficiary group of 500 farmers, comprising 200 women and 300 men. Low cassava yield is a major problem in the district, which was once a food basket. Key production problems are pests, especially the African cassava mosaic virus. Thus, the yields have decreased tremendously from an estimated 8 tons per acre to about 1 ton per acre. There is insufficient supply of clean and resistant cassava planning materials, creating food insecurity and low incomes. Nakasongola District Farmers Association (NADIFA) has attempted to reverse this trend through the Maendeleo Agricultural Technology Fund (MATF) supported project.

Project Development Objective
The overall objective of the project was to contribute to improved food security and increased income from cassava cultivation with special focus on poverty alleviation and gender responsiveness at household levels in Nakasongola District.

Immediate Objectives
The immediate objectives of the project were to:
- build capacity of farmers to sustain cassava production
- train farmers and special interest groups (SIGs) on how to increase cassava yield
- increase cassava yield from 1 ton to 8 tons/acre
- train trainer of trainers (ToT), extension link farmers (ELFs) and contact farmers (CFs)
- procure improved cassava cultivars and distribution to selected farmers
- produce and distribute educational materials
- monitor and evaluate the cassava project

Innovative Aspects of the Technology
The project introduced and distributed the following cassava cultivars varieties bred from Namulonge Research Institute (NAARI) that were resistant to cassava mosaic virus: NASE 1, NASE 4, NASE 9, NASE 10, NASE 12, SS8, TME 14 to the selected farmers.

Partnership and contributions
The project was implemented through the following partners with specific contributions:

<table>
<thead>
<tr>
<th>Partners</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Farmers (SIGs, CFs, ELF) and local government</td>
<td>mobilized groups and took charge of administration, demonstrations and monitoring cassava growing and logistics</td>
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<tr>
<td>Extension advisors (SMS)</td>
<td>trained cassava farmers</td>
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<tr>
<td>NADIFA (Production Dept)</td>
<td>organized training</td>
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<tr>
<td>NAARI</td>
<td>developed improved cassava varieties resistant to cassava mosaic and new technologies for dissemination to farmers, identified farmers with improved cassava for sale</td>
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<tr>
<td>FOS/DANIDA</td>
<td>participated in development, capacity building and paid staff salaries</td>
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<td>UNFFE</td>
<td>initiated capacity building</td>
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Nakasongola District Farmers Association extension structure

The association has a six tier structure in the following descending order:

- District Executive Committee (DEC)
- Sub-county Executive Committee (SEC)
- Parish Executive Committee (PEC)
- Special Interest Group (SIG)
- Contact Farmer (CF)
- Extension Link Farmer (ELF)

Methodology (Activities)

The team adopted the following approaches to implement the project:

- used the already established NADIFA extension structure – DEC-SEC-PEC-SIG - CF-ELFs to reach the targets
- held meetings to select target parishes and farmers for cassava project
- selected farmers based on gender concerns and grouped them into cassava SIGs per parish
- mobilized and sensitized farmers and leaders about the project
- planned and held strategic planning workshops
- trained farmers
- purchased improved cassava varieties
- established demonstrations/multiplication sites at household levels

Achievements

The project achieved the following:

- The cassava steering committee has been formed
- Over 500 farmers were mobilized and sensitized
- Two strategic planning workshops were held
- Training in improved cassava production and post harvest handling were done and 1,500 farmers trained
- One thousand bags of improved cassava stems (TME14, NASE 1, 12, SS4, SS8, NASE 9) were purchased and distributed to 500 farmers in all 10 parishes and planted
- Follow-ups were done and are on-going
- Monitoring of the project was done and is continuing
- With the help of ELFs and CFs, cassava project technologies have been replicated to more than 500 farmers and 500 bags of improved cassava stems cut and planted
- The number of acreage under cassava cultivation has increased from 200 acres to 400 acres of improved cassava cultivars in about one and half years
- The improved cassava planted is resistant to cassava mosaic virus and high yielding compared to local varieties, yield has increased from one to more than 9 tons/acre
- The target beneficiary have adequate cassava and are food secure
- Some farmers have started selling cassava to build better houses, buy cattle, pay school fees and domestic necessities and also expand the cassava acreage
- Farmers prefer TME 14 and NASE 12 varieties from the basket and they are demanding for the expansion of the project to areas outside the target sectors

Reasons for the Success

The project was successful because it:

- addressed the need/problem of farmers in the target area, such as, cassava mosaic virus, leading to food insecurity
- mobilized and sensitized local and farmers’ leaders in the sub counties and at the district level
- adopted participatory planning and implementation of the project activities with District Executive Committee (DEC), partners and beneficiaries
- collaborated with DEC, staff, partners, funders and beneficiaries
- used existing NADIFA extension structure
- held meetings of local leaders, farmers’ leaders and cassava SIGs at parish levels that made them to own the project
Cassava Project in Nakasongola, Uganda

- made strategic planning and review workshops at district levels
- conducted relevant training of farmers at farm level
- established cassava demonstrations/multiplication sites at household levels
- formed the Cassava Steering Committee to check on the progress and performance of the project and reporting
- made periodic follow-ups and monitoring of the project

Vision on Sustainability after the Grant Period
The following steps and activities are planned to ensure project sustainability beyond the grant period:

- Farmers within SIGs are expected to continue the transfer of the technologies to other farmers with help of ELFs and CFs
- Cost recovery approach will continue to be used
- More project proposals will be written for cassava production and marketing, as emerging issues are realized
- The existing cassava groups will be strengthened to become self-sustaining
- NADIFA will link cassava farmers to the business practitioners to market their cassava jointly after adding value

Lessons Learnt
The following lessons have been learnt from implementing the project:

- Cassava is the staple food in the district and needs to be commercialized to improve food security and generate income
- Cassava can be consumed in different forms, and there is need to process it to add value
- To expand and commercialize cassava production, it is necessary to introduce tractor-hire services instead of using hand hoes
- Graters and solar dryers should be introduced to reduce the drying period and improve the quality of cassava chips
- Cassava marketing is still poor, hence the need to build the capacity of the cassava groups
- Using improved cassava cultivars is the remedy to mosaic virus
- More women than men participated in the project because women are in the front line of food production and are concerned with food security at household levels
- Uprooting cassava planted on flat ground is difficult, hence the need to plant the crop on ridges to ease harvesting during dry season

Challenges
The following challenges were faced during the implementation of the project:

- invasion by termites, drought and damage from livestock
- delayed disbursement of funds
- poor attendance of meetings at times due to social and political programmes/activities

Recommendations and Suggestions for Future Projects
The following approach should be adopted to make similar future projects more successful:

- consolidate cassava production activities in the target areas and expand to other areas
- introduce cassava processing machines for chips, cassava flour, gari, starch and drying - value addition activities
- strengthen cassava groups through capacity building, and market cassava jointly
- encourage farmers’ study and exchange visits
- introduce tractor hire services to expand and commercialize cassava production
- train farmers on cassava production, processing, utilization and marketing to increase production