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PROMOTING SKILLS DEVELOPMENT AND MARKET ACCESS FOR CASSAVA, MAIZE AND MILLET IN KARAMOJA, LANGO AND TESO SUB-REGIONS: *THE CASE OF SMALL SCALE FARMERS IN ABIM, LIRA AND SOROTI DISTRICTS*

A study Conducted by Advance Afrika for ICCO



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1.0. BACKGROUND

The Civic Engagement Alliance seeks to reclaim space for civil society through constructive dialogue concerning pro-poor food security and inclusive markets and implementation. In Uganda, the program is intended to support the improvement of access to markets for small scale farmers especially for Women, Youth and Disabled farmers. These farmers are producing various products such as Cassava, Maize and Millet but many farmers act as producers solely form a subsistence point of view.

1.1. Purpose of the Research

The purpose of this research study is to deepen understanding into the nature of and role of skills development to enable small scale farmers in Uganda to engage in effective and evidence-based dialogue with value chain stakeholders to improve their access to skills services and markets.

1.2. Objectives of the Study

Specifically, this study addressed the following objectives:

- a) To assess the nature of skills possessed by farmers, skill gaps, skills demanded for the maize, millet and cassava value chains, the training opportunities available, the quality and suitability of the training provided by both public and private sector players and general access to skilling opportunities
- b) To identify the learning needs and expectations of the largely illiterate and semi-illiterate farmers
- c) To assess, identify and select stakeholders who have an interest to improve their capacity to engage in dialogue for skills development
- d) To analyze policies related to access to skills and training development and identification of gaps and opportunities in the (implementation of) these policies for an inclusive value chain
- e) To assess level of access to skills training that seek to generate evidence on best practices and entry points for dialogue
- f) To identify the strengths and weaknesses of the current skills development systems as well as causes for these strengths and weaknesses and how it has failed to meet the needs of small scale often illiterate farmers
- g) To assess the appropriateness of the institutional and systems design for skills delivery including the manner in which it facilitates access to skills, knowledge and promotes quality, relevance, mobility and adaptability
- h) To assess the nature and style of the training and knowledge transfer methods in communities and the suitability of such (knowledge transfer) methods to learning needs and expectations of different farmer categories especially the illiterate and semi-illiterate
- i) To evaluate and assess the suitability of farmer trainers and change agents for transfer knowledge to adult, illiterate and disabled farmers

1.3. Study Methodology

The study was conducted in three districts of Abim, Lira and Teso and data was collected during the period June 12-24, 2017. With the assistance of farmer-support organizations in the study areas, a total of 75 farmers, 25 from each district were identified and interviewed using a questionnaire. Of the total respondents, 42% were youth, 37% were women, 10% were persons with disabilities, 3% were youth and disabled while 8% were female youth. Of the disabled respondents, 67% were blind while 33% had physical disabilities. At least 60% of the farmers interviewed were involved in cassava, maize and millet value chains while 40% were not involved in the production of the three crops. All the farmers targeted comprised women, youth and the disabled. Staff of different organizations and government agencies involved in farmer-support, advocacy and lobbying were interviewed to ascertain the nature of technical and logistical support extended to farmers. A total of 26 respondents including NGO staff, staff from National Agricultural Advisory Services (NAADS), Operation Wealth Creation (OWC) and Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) headquarters in Entebbe were reached. The study also involved Uganda National Farmers Federation (UNFFE), a national network involved in farmer advocacy and support. To

assess the market and quality requirements of cassava, maize and millet, consumers (12) and traders in the commodities (15) were interviewed.

2.0. STUDY FINDINGS

2.1. Farming activities

Over 76 % of the respondents practiced farming, both crop and animal husbandry. The benefits of having both animals and plants included provision of milk and food for local people. Animals provided manure in form of cow dung while crops provided fodder for animals, hence forming a mutually beneficial relationship. Over 61% of respondents observed that wind often carries away top soil from their gardens, reducing fertility. Although parts of the study areas like Abim district are more prone to severe droughts, only 4% of the respondents had applied irrigation on their farms, mainly using drip irrigation. The majority farmers (96%) depended on precipitation water for their crop water needs. Majority farmers (60%) practiced no fallowing and continuously cultivated their pieces of land while 40% allowed fallowing. Over 90% of the farmers practiced crop rotation but for many, alternation of crops followed no systematic pattern as cereals were followed by cereals in many cases, limiting nutrient replenishments.

2.2. Crop production

Cassava, maize and millet occupied many of the crop fields, accounting for close to 90% of cultivated land. Many farmers preferred these crops because they are staple foods and have ready markets. They were also said to be performing fairly in soils with low nutrient levels. Cassava appeared to be the most yielding crop followed by maize. Millet, beans and sorghum were also yielding fairly. This was an indicator of why farmers mostly preferred cassava, maize and millet. However, all farmers had registered declining farm yields, attributed to soil fertility declines and unstable rainfall patterns.

2.3. Farm labor characteristics

Agricultural activities right from production to harvesting were mainly manual with no farmer practicing mechanization. Less than 12% of the farmers employed ox for ploughing. The remaining activities including sowing, planting, weeding, harvesting, threshing of millet, peeling of cassava and removal of maize grains from the cob were manually done by mainly the women, their children and in some cases youth.

2.4. Crop losses

Over 91% of the respondents suffered crop losses due to pests and disease attacks, vermin and weevils. Maize appeared to be the most affected by weevils, pests and vermin followed by cassava. Millet was the least affected of the three value chains. Measures taken by different farmers to address pests and disease crop attacks were varied, but mainly involved use of agro chemicals which were reported to be

2.5. Access to agricultural skills and knowledge

2.5.1. Capacity building institutions

A number of organizations were involved in capacity building programs for farmers in Abim, Lira and Soroti districts. Over 90% of farmers' trainers reached by the study were NGOs while 10% were faith-based organizations. To participate in training, farmers were mobilized in different ways. Majority of farmers (57%) were selected in their groups rather than as individuals, 36% were selected in community meetings while 7% were selected by their community leaders. The trainers equipped farmers with skills in crop husbandry, animal husbandry, tree growing and horticulture. Most of the training sessions were conducted by extension officers and community development officers. During training sessions, farmers were provided with booklets, posters, handouts but in 15% of the training, no learning aids or materials were given to the farmers. Discussions and field visits were reported to be the most effective teaching methods because they enabled farmers share experience and observe agricultural practices in progress. Lectures in classrooms were revealed to be least effective in ensuring learning especially among the illiterate farmers.

Majority of the training providers appeared to support maize, cassava, ground nuts and beans value chains and a considerable number targeted soya beans, chilli, mangoes and oranges. There was no training organization that specifically targeted millet growers. Over 86% of the capacity building institutions charged fees for training farmers which ranged between UGX 7,000 to 15,000,000 for different farmer groups and training packages. The farmers who attended training sessions reported improvements in planting practices, crop spacing, crop rotation and some gained a number of skills in animal and crop husbandry. However, not all farmers realized their expectations from training courses they attended. More than 87% of the farmers interviewed revealed that many of the skills including marketing skills, agricultural produce quality maintenance and soil fertility maintenance which they hoped to acquire from the training sessions were not focused on.

2.5.2. The business case for skills development

Farmers who participated in different training programs acquired skills that enabled them to improve their agricultural practices and produce marketing. Through capacity building programs, farmers are better positioned to thrive on agriculture which has enhanced livelihoods through improved food security and farm incomes. Based on the findings, the positive correlation between the skills imparted and the improvements reported strengthens the case for building the capacity of farmers.

2.6. NGO support to farmers

Over 89% of respondents reported existence of non-governmental organizations (NGOs) operating within their areas of residence while 11% reported no NGOs operations. ADP, World Vision and GOAL appeared to be the dominant NGOs supporting farmers in the study areas while others like PEP, CIDI and government programs like NUSAF were reported to be also actively involved in farmer support. Over 57% of the respondents revealed that many NGOs were specifically targeting farmers while 43% said that the NGOs they knew were generally supporting all people in need. The benefits to farmers from NGOs included skilling, provision of agricultural inputs and availing marketing information. Many NGOs targeted farmers but also a significant number supported every member in the community.

2.7. Government interventions

Through interviews with political leaders and technical staff in the different districts, it was established that there are farmer-support programs. Over 44% of the farmer respondents reported that they had not seen any government program in their area supporting farmers while 56% knew of government programs such as NUSAF, NAADS and Operation Wealth Creation which helped farmers improve their production capacity. From the study responses, Northern Uganda Social Action Fund (NUSAF) stood out as the most dominant government program which benefits many farmers, closely followed by Operation Wealth Creation.

The Northern Uganda Social Action Fund (NUSAF) is a World Bank funded \$100m Government of Uganda project established as a transitory tool and funding mechanism to assist the North to catch up with rest of the country in matters of development (NUSAF 2008). Although respondents recognized that NUSAF had contributed towards community capacity development, qualitative evidence showed that its reach and impact was generally thought to be limited. Concerns were also raised with regard to a lack of community ownership over and therefore sustainability of the services and products provided to them (International Alert, 2013).

Operation Wealth Creation (OWC) is a presidential initiative aimed at improving the livelihoods of the rural farmers through a partnership between NAADS and Uganda Peoples Defence Forces (UPDF). The OWC officers work in close collaboration with the district local governments to distribute planting and breeding inputs, post-harvest and bulking equipment and processing equipment to farmers. An often heard criticism of this strategy is that the military lacks the expertise to carry out effective extension in the sector (ACODE, 2015).

2.8. Government direct support to farmers

Government programs were reported to be mainly providing agricultural inputs and equipment like seeds, seedlings, hoes, pangas. Some farmers, however, revealed having benefited from financial support in form of grants and loans to improve on their farming practices. Majority farmers felt that government was not doing enough in aiding farmers during periods of disasters such as crop failure. Many farming communities had also asked for equipment like tractors but it was not forthcoming. Some farmers had applied for loans but they were not successful. Provision of marketing skills also featured as a failure of government programs because many farmers were stuck with their produce due to lower prices and high costs of transport. Other farmers reported that they could not access market information and depended on middle men who exploited their ignorance.

2.9. Farmers' associations

Over 54% of the farmers belonged to farmer associations and groups whereas 46% were not associated with any farming group. Through associations and groupings, farmers accessed training and were able to receive group loans and could easily market their produce as groups hence attracting higher prices. Farmers that did not belong to any group were more likely to miss out on credit facilities and better produce prices through bulk sales that were only possible in groups.

2.10. Marketing of farm produce

Over 93% of the farmers reported to have sold some of their agricultural produce to generate income because they produced in excess of what they needed for consumption. Other farmers produced little but still sold it to raise income for other household needs. However, 7% of the farmers could not sell anything they produce because they did not even have enough for consumption. Over 59% of the farmers were selling their produce in markets while 41% sold to local business men and brokers. Farmers lacked essential logistics for production and marketing. Transport facilities were poor and in some cases lacking, with many villages inaccessible by vehicles. Storage facilities were reported to be poor, leading to produce quality loss which resulted into lower market prices. Price fluctuations and limited markets were also cited as challenges by many farmers mainly attributed to seasons when there is over supply of food, especially perishables.

2.11. Commodity supply and demand

Over 56% of local people consumed maize while 22% were dependent on millet and cassava for their household food requirements. Maize was the most demanded by both traders and consumers although cassava and millet also have a large number of consumers. Maize was mainly sold as grain which was convenient to store and sell when prices stabilize. All consumers and traders purchased millet mainly as dried millet grains ready for milling while cassava was demanded in its fresh and dried form. Fresh cassava topped the list of foods that most consumers were reluctant to buy and this was attributed to quick perishability. Fresh maize cobs and fresh millet fingers were also least demanded because fresh maize was said to lose taste very fast while fresh millet was found to demand a lot of time and labor to process it to a consumable state.

2.12. Commodity prices

A kilogram of maize seeds ranged between UGX 800 to UGX 1800 with the mean price at UGX 1400 while maize flour ranged between UGX 1300 per kg to UGX 1500. The price of dried cassava pieces was UGX 1200 per kilogram while a basin of cassava went for UGX 25,000. The cost of processed cassava flour ranged between UGX 1500 to UGX 1800. Dried millet seeds cost between UGX 1200-1500 while millet flour was quoted at 2500 per kilogram. It would therefore appear that in terms of price quoted per kilogram, millet was the most expensive crop of the three value chains followed by cassava and maize.

2.13. Value-addition

Majority farmers (86%) sold their farm produce in raw form which attracted lower prices. Raw products also tended to have short shelf lives which limited the bargaining power of farmers as they rushed to sell before the produce perished. Only 14% of the farmers had processed their farm produce and they revealed

that they received better market prices and could even store their produce for a much longer period compared with raw products. Millet, maize and cassava were both converted to flour and sold at higher prices. Other farmers were selling millet, cassava and maize as ready food products in their restaurants and markets hence fetching the highest possible prices.

2.14. Challenges facing the small-scale farmers

Majority farmers (82%) faced land preparation challenges mainly due to limited manpower and absence of mechanization. This limited extensive farming even among farmers who owned large chunks of land. Access to quality seeds affected close to 90% of the farmers who relied on local suppliers for their seed purchases. In many cases, the seeds supplied were of poor quality affecting germination, survival and yields. Crop protection from vermin, pests and diseases was a challenge for over 83% of the farmers mainly due to limited capital and lack of knowledge. Consequently, farmers experienced crop losses right from sowing or plant stage, during growth, at harvest and post-harvest. Soil fertility decline was cited by 72% of the farmers. Farmers who had continuously cultivated their land were registering periodical declines in crop harvests compared to those who practiced fallow. Harvesting, storage and preservation of food crops was found to cause significant losses to over 60% of farmers through rotting of harvested foods like cassava and maize as well as pests attacks on maize and cassava during storage. Post-harvest crop losses were attributed to low produce prices because farmers could not store foods for a long time until prices stabilized. Marketing farm produce was a challenge to 72% of farmers, mainly attributed to lack of markets, lack of market information and limited access to transport facilities. Many farmers also realized that venturing into transportation of their farm produce would not make economic sense because transport costs would erode their profits. Value-addition was reported as a challenge to over 77% of the farmers who resorted to selling their produce in raw and unprocessed forms hence attracting lower prices. Lower levels of value-addition were attributed lack of technology and equipment, lack of knowledge on the importance and mechanisms of value-addition.

3.0. THE POLICY ENVIRONMENT

3.1. National Agricultural Policy (2011)

The National Agricultural Policy of 2011 clearly identified the major challenges facing the agricultural sector in Uganda as low production and productivity, limited post-harvest handling and value addition. Other constraints were cited as lack of access to sustainable input and output markets, insufficient agricultural manpower and skills and disease burden in the agricultural sector. However, the policy itself was not adequately implemented and many of the provisions in the policy cannot be traced on ground.

3.2. The National Agriculture Policy (2013)

The policy observes that increasing household food and nutrition security is dependent on enhanced storage capacity and improved access to key markets and market information, among others. This study's analysis shows that the National Agricultural Policy of 2013 if implemented in tandem with the National Agricultural Policy of 2011 would address most of the challenges faced by farmers in Abim, Lira and Soroti. However, field data indicated that policy implementation remains weak, characterized by poor funding to the agricultural sector, existence of a number of government agencies involved in agricultural sector which are poorly facilitated and less coordinated. There is also a lack of a monitoring and evaluation strategy for the different policies.

3.3. The National Agricultural Extension Policy (2016)

The extension policy is very clear on strategies for improvement of extension services in the country. However, the strategy falls short of streamlining the extension services and bringing together the key players to harmonize their plans and activities. The issue of limited funding to the agricultural sector continues to thwart any planned interventions with no extension staff recruited and facilitated.

4.0. OTHER GOVERNMENT FARMER-SUPPORT INITIATIVES

4.1. Skilling Uganda

According to the Strategic Plan (2012), Skilling Uganda denotes a paradigm shift for skills development in Uganda. The BTNET system will be transformed from an educational sub-sector into a comprehensive system of skills development for employment, enhanced productivity and growth. Some progress has been achieved with the Uganda Vocational Qualifications Framework (UVQF) to ensure that training contents are aligned with the skill demands in the labour market and that training is re-focused to practical competencies. However, the UVQF requires more vigorous implementation (Government of Uganda, 2012). According to the 2012/13-2021/22 BTNET Strategic Plan, the major issues of relevance for skills provision include:

- a) BTNET programs for agri-business development and informal sector employment are strikingly insufficient in enrolment, content and training methodologies
- b) Employers assert that BTNET graduates often lack practical competencies

4.2. Youth Livelihoods Program

The Youth Livelihoods Program is a Government of Uganda flagship five-year development program (2013/14 -2017/18) targeting the poor and unemployed youth aged between 18 and 30 years. It covers all the 112 districts of Uganda including Kampala, the capital with a projected total budget of UGX 265 billion. The Youth Livelihoods Program is managed by the Ministry of Gender Labour and Social Development and implemented through district and lower local governments. A 2016 process evaluation of the program found that project selection by the youth themselves increases their feeling/sense of ownership of the enterprises by the youth and hence, sustainability of the program in the long run. Besides, the nature of implementation through local governments is a good signal that the program can be sustained as local governments enjoy proximity to the potential beneficiaries and are better suited to deliver training services, monitoring and evaluation of the projects among others. However, the current capacity of local governments to manage the implementation process is limited due to gross understaffing and under funding of the critical departments (Government of Uganda, 2016). The program's evaluation also observed that some aspects of the Youth Livelihood Program were underperforming as only 36% of the expected recoveries had been made by March 2016. Stakeholders attributed the slow progress to factors including:

- a) Inadequate operational funds which constrains orientation of youths, provision of technical support to the funded youth groups as well as monitoring and evaluation
- b) Misconceptions of the program as a "political gift" for supporting the regime. Consequently, some groups channeled the program resources into unproductive activities as they did not expect to pay back.

5.0. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The findings of this study can be boiled down into the following conclusions:

Knowledge and skills gaps: For small scale farmers in Abim, Lira and Soroti to significantly improve the market prospects of their products, they need to enhance their capacity in a number of areas. It is absolutely necessary to empower these farmers with knowledge and skills in: erosion control measures; soil fertility maintenance; soil conservation techniques; crop protection as well as water harvesting and irrigation.

Effectiveness of capacity building: Access to opportunities for capacity building will only impact small scale farmers' practices if it takes into consideration variations in the target group. Thus, capacity development will need to proceed from an appreciation of age thereby calling for adult learning techniques, individual learning abilities including language, ability to pay for training, awareness of training opportunities. As findings indicated, developing skills to improve market access will also need to ensure that small scale farmers are very well grounded in the concept of value-addition so that it is sufficiently appreciated as a key factor in accessing profitable markets.

5.2 . Recommendations

Recommendations relating to specific skill gaps

a) Mitigating soil erosion

Tailored training interventions are recommended for all farmers to enable them mitigate and control soil erosion on their land holdings. Alleviating soil erosion will help in reducing nutrient losses as well as protecting crops from water and wind damage.

b) Soil fertility maintenance

The need for skills in soil fertility maintenance and water conservation is apparent. This study recommends public and private investment and support for water harvesting, manure use, agro forestry, fertilizer application and irrigation.

c) Climate change adaptation

Mitigating climate change effects will require training providers and farmers to mainstream climate change adaptation in all training interventions for farmers in Northern Uganda, Karamoja and Teso regions.

d) Pest and disease control

A component on pests and disease control and management is recommended for the training packages delivered to small scale farmers. Logistical support through provision of agro-chemicals and integrated pest management approaches for poor farmers is also recommended.

Recommendation relating to government policy

Knowledge generation

Comprehensive research is required on agricultural issues such as suitable varieties, post-harvest management, value addition and marketing. There is also need for specific research on millet value chain.

Recommendation for farmer training

A more effective approach to capacity development should employ more of discussions, field visits, use of local languages and audio-visual materials during training. It is also imperative to conduct training needs assessment for farmers before designing and implementing capacity development packages.

Recommendation relating to fostering dialogue

Partnerships between public and privately funded training interventions

Strengthening links between public and private capacity building interventions will broaden support for farmers as well as avoid duplication of farmer support activities.