



**ECOLOGICAL
ORGANIC
AGRICULTURE (EOA)
PRODUCT VALUE CHAIN
ANALYSIS FROM
AGRICULTURAL
SYSTEMS OF UGANDA**

BASELINE REPORT
ON SELECTED CROPS IN CENTRAL UGANDA

“ Pests and diseases, low prices, lack of capital, and climate change are the major hindrances to the adoption of ecological organic agriculture practices”

Table of Contents	
BACKGROUND	1
SURVEY DESIGN AND SAMPLING STRATEGY	2
SURVEY INSTRUMENTS	2
SURVEY IMPLEMENTATION	2
DATA MANAGEMENT	2
SURVEY FINDINGS	2
AWARENESS OF ECOLOGICAL ORGANIC AGRICULTURE PRACTICES	3
CROPS GROWN AND PURPOSE	4
COMPREHENSION AND CONSUMPTION OF ECOLOGICAL ORGANIC PRODUCTS	6
MARKET INFORMATION	7
SOURCE OF MARKET INFORMATION	7
IMPORTANCE OF REQUIRED INFORMATION	8
EXTENSION SERVICES	8
CHALLENGES TO ECOLOGICAL ORGANIC FARMING	10
FINANCIAL SERVICES	11
TRADING IN ORGANIC PRODUCTS	11
SOURCE OF FRUITS AND VEGETABLES	12
DIFFERENCE IN ATTRIBUTES FOR SUPPLIES	12
PRICE DETERMINATION	
CONCLUSIONS AND RECOMMENDATIONS	13
ACKNOWLEDGEMENT	14
REFERENCE	15

BACKGROUND

Value Chain Analysis (VCA) is a method through which [ecological organic agriculture] is making an effort to identify basic and support activities intended to add value to its final impact of mainstreaming EOA into agricultural production activities in Africa by 2023 to improve the quality of life for all households in EOA implementing countries. The activities are further analyzed to reduce costs or increase differentiation. Ecological organic agriculture initiative (EOA-I) is Undertaking a value chain analysis to identify gaps in the knowledge, needs and priorities of different actors, with particular focus on women, youth and marginalized groups along value chains selected in Africa.

In Uganda, PELUM, Uganda Martyrs University, ESAFF Uganda and KULIKA are implementing the EOA Phase II with an aim of:

- Improving the quality of life for all households in EOA implementing countries by mainstreaming ecological organic agriculture practices and technologies into the national agricultural systems.
- Availing information and knowledge needed by EOA value chain actors through demand-driven, multi-disciplinary, gender-sensitive, participatory research and repositories;
- Enhancing adoption of EOA technologies and practices through systematic dissemination of research and experience-based information, knowledge and training of value chain actors;
- The other objective is to substantially increase the share of quality organic products at local, national, regional and international markets through value chain development and market strengthening.
- Enhancing the structured management and governance of EOA through coordination, networking, advocacy, multi-stakeholder platforms and capacity building leading to positive changes in agricultural systems in Uganda and Africa in general.

To carry out these activities, a baseline was conducted in the districts of Mukono, Luwero, Masaka and Wakiso between November 2019 and January 2020 to establish the status quo of EOA practices along the entire commodity value chains of five selected crops.

SURVEY DESIGN AND SAMPLING STRATEGY

The sampling frame was drawn from a comprehensive list of farming villages identified during a familiarization phase. Our sample of villages included 38 communities/ villages of farmers in consortia with the umbrella body PELUM Uganda within the four selected districts. During the first stage of sampling, total of 123 respondents were sampled from 38 villages within the selected four districts.

In the second stage of the sampling design, households within each selected village were identified to participate in the study. Furthermore, random samples of 30 value chain actors (4 district production coordinators, 4 district agricultural officers, 2 processors per district, 2 retailers per district, 6 NGOs that operate across the four districts under the study) were selected for specialized interviews.

SURVEY INSTRUMENTS

The baseline survey consisted of a household-level study of individual farmers expected to grow selected crops, and a village-level study that gathered data from observations and interviews with village leaders, and various actors along value chains. The survey used a questionnaire, interview guides and data from recordings from direct observations.

SURVEY IMPLEMENTATION

The survey team was recruited, trained, and supervised by the project team at Uganda Martyrs University. The team followed a strict protocol to ensure sensitivity to the local context and confidentiality and conducted interviews in the local languages.

DATA MANAGEMENT

The study was conducted using a mixture of methods; qualitative and quantitative. Data obtained from the questionnaire was triangulated using focus group discussions and interviews from key informant persons. Data was analyzed using SPSS to obtain descriptive statistics.

SURVEY FINDINGS

The descriptive on gender indicates that 62% were male and 38% were female, of which 32% were youths below 35 years of age, and 68% are above 35 years of age. This is an indicator that the population involved in ecological organic agriculture activities is ageing. The households were relatively big, with 56% of the total households having above six (6) occupants. Of the 123 respondents, 48% had completed primary level, and 48% attended formal education but never completed primary level. Therefore, only 4% of the farmers who took part in the study have informal education.

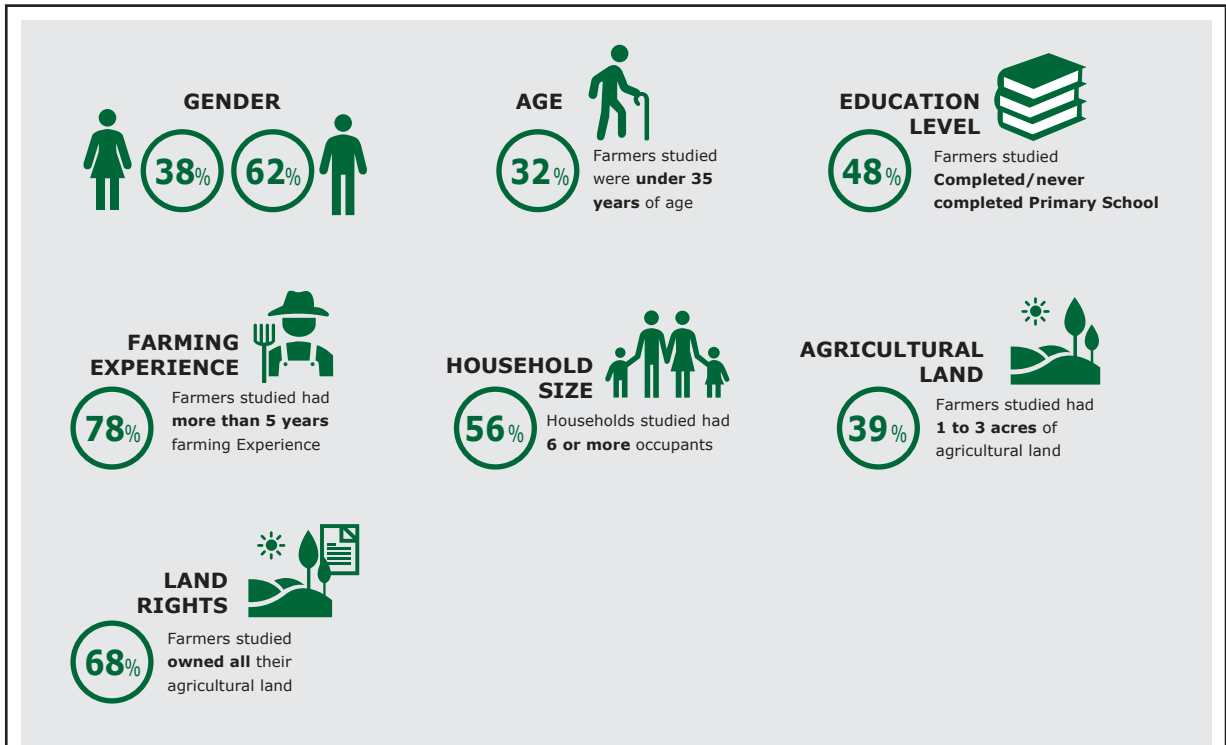
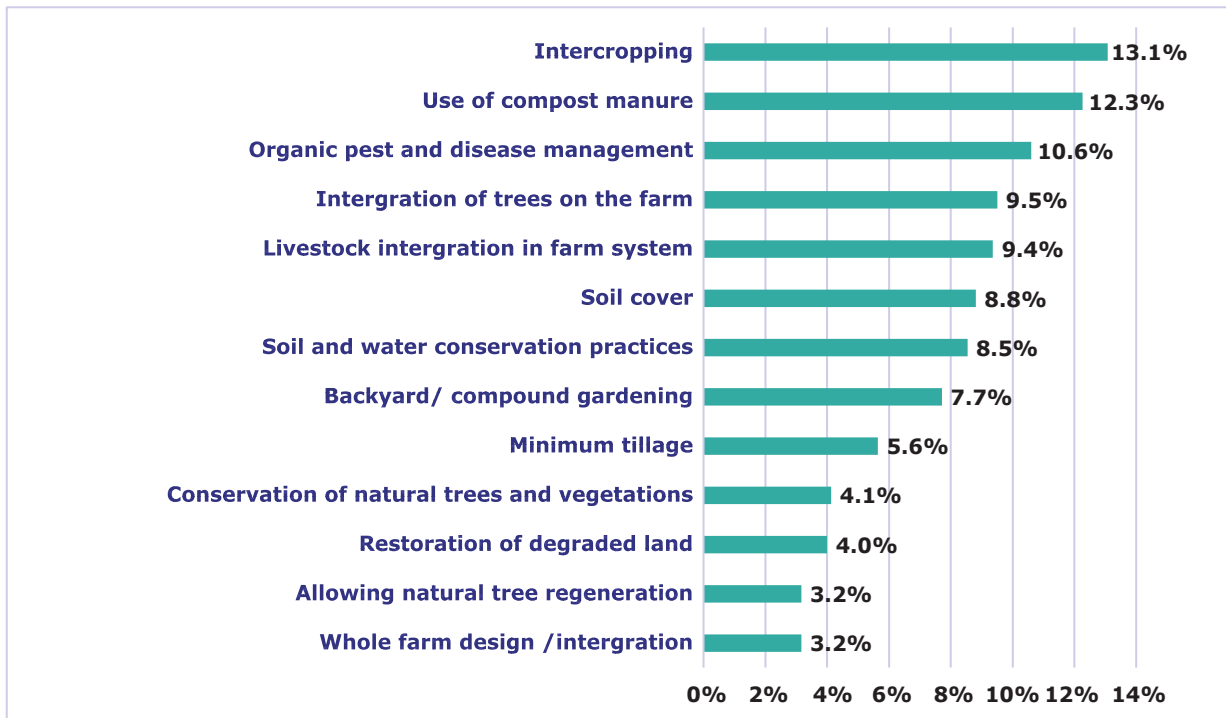


Figure 2; Summary of the demographic characteristics

Awareness of Ecological Organic Agriculture Practices



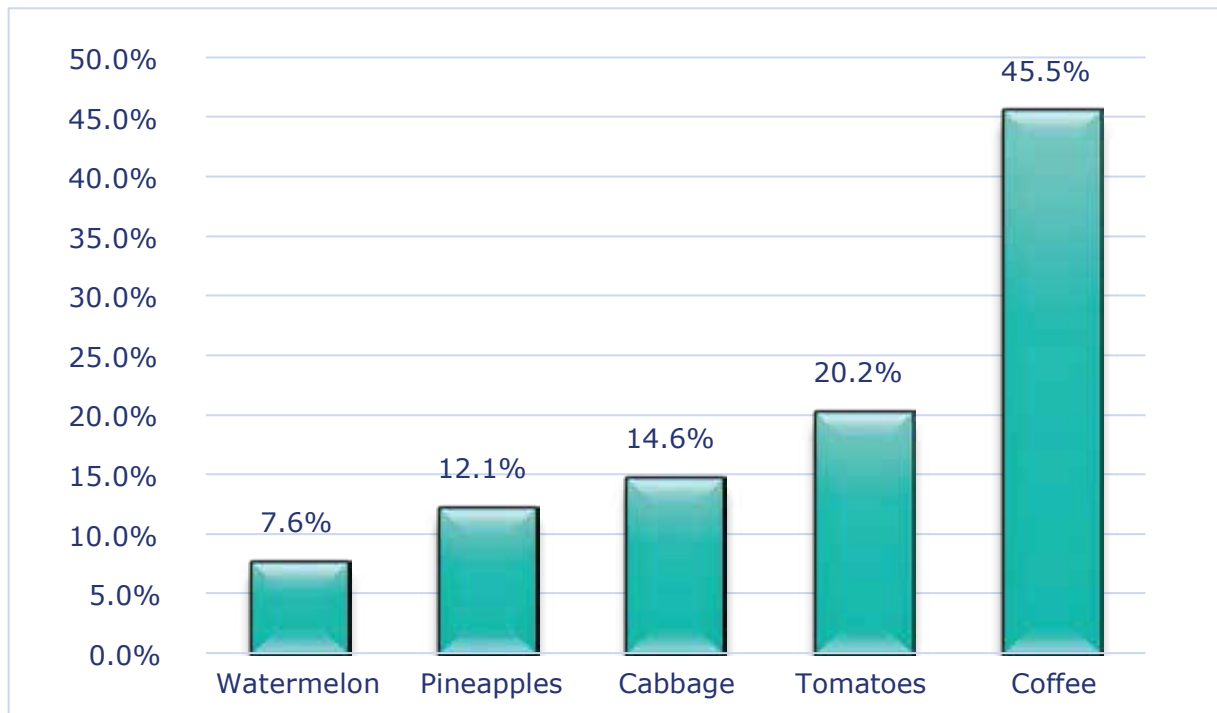
The most practice known and used by farmers was intercropping (figure 3), almost 13 out of every 14 farmers were cognizant of and practiced intercropping. This is about 94% of the farmers in the farming communities. Use of compost manure and the composting process were well known to the farmers. Actually, above 85% of the farmers use compost manure and can also compost their manure. Responses on most important practices mainly nutrient recycling were very low, [3.2% on a scale of 14%] comprising less than 20% of the farmers that were studied. There was however, an increase in the natural tree regeneration, and conservation of natural trees to restore degraded lands. These practices must be improved for a holistic ecological organic agriculture development.

Results from the study indicated that farmers used both organic and inorganic fertilizers. Other farmers produce in a natural environment. 35% of the farmers use organic manure, while, 30% of the farmers combine both organic and synthetic fertilizers. Those who use inorganic fertilizers alone were 32%. It was interesting to discover that 4.2 % of the farmers did not use any fertilizer.

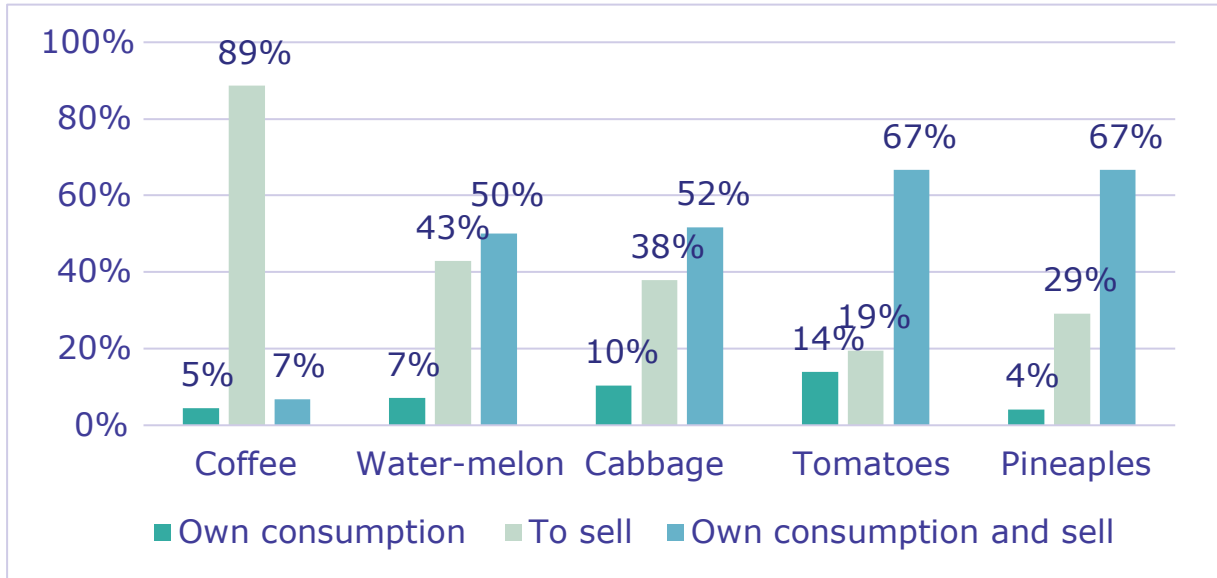
Animal agriculture is inseparable from crop agriculture, results of the study indicated that out of the 55% of farmers who use organic manure, 46% of this manure comes from livestock sources, 23% of the manure used comes from the crop plant sources. However, some farmers during the composting process, mix manure from the animal sources and crop sources to make a blend of organic manure. This source consists of 31% of the total sources of the fertilizers used in ecological organic production.

Crops Grown and Purpose

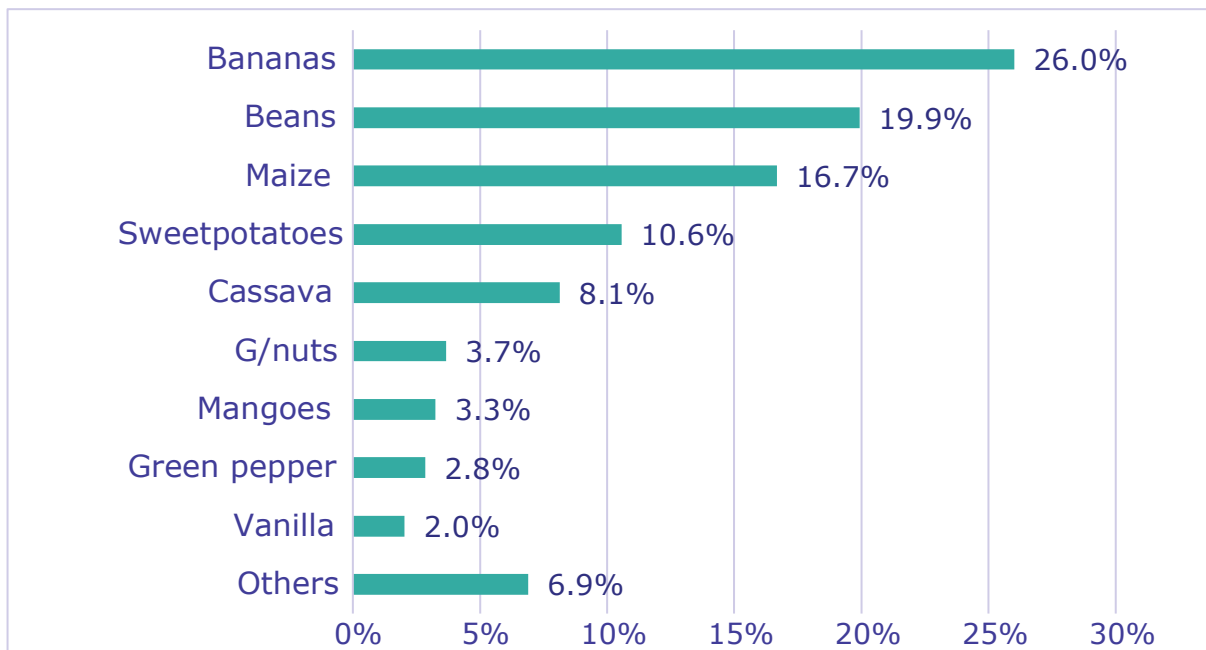
The survey undertook to identify the major crops farmers grow and the purpose for which the crops are grown. The crops grown were pre-determined by the research team and included, coffee, watermelon, tomatoes, and pineapples. The survey, therefore, was meant to establish the extent to which these crops are grown in the field.



Of the pre-determined value chain crops, coffee is grown by 46% of the farmers, tomatoes, by 20%, cabbage by 15% and the least grown is watermelon which is grown by 8% of the farmers surveyed. It should be noted that 46% of the farmers who grow coffee, 89% grow it for sale while, 7% and 5% grow it own consumption/sell, and purely for own consumption respectively.

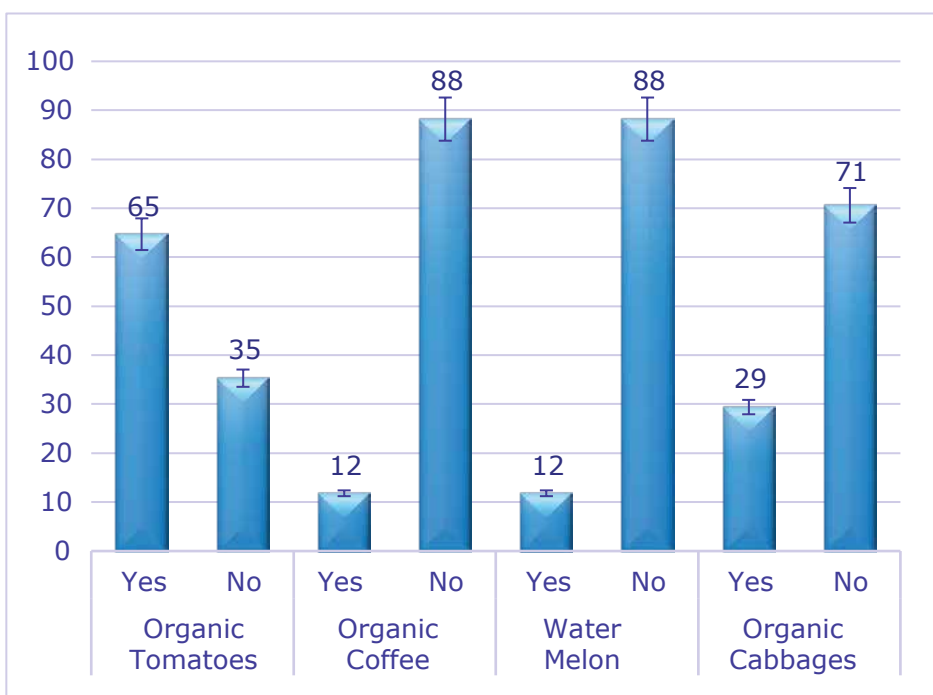
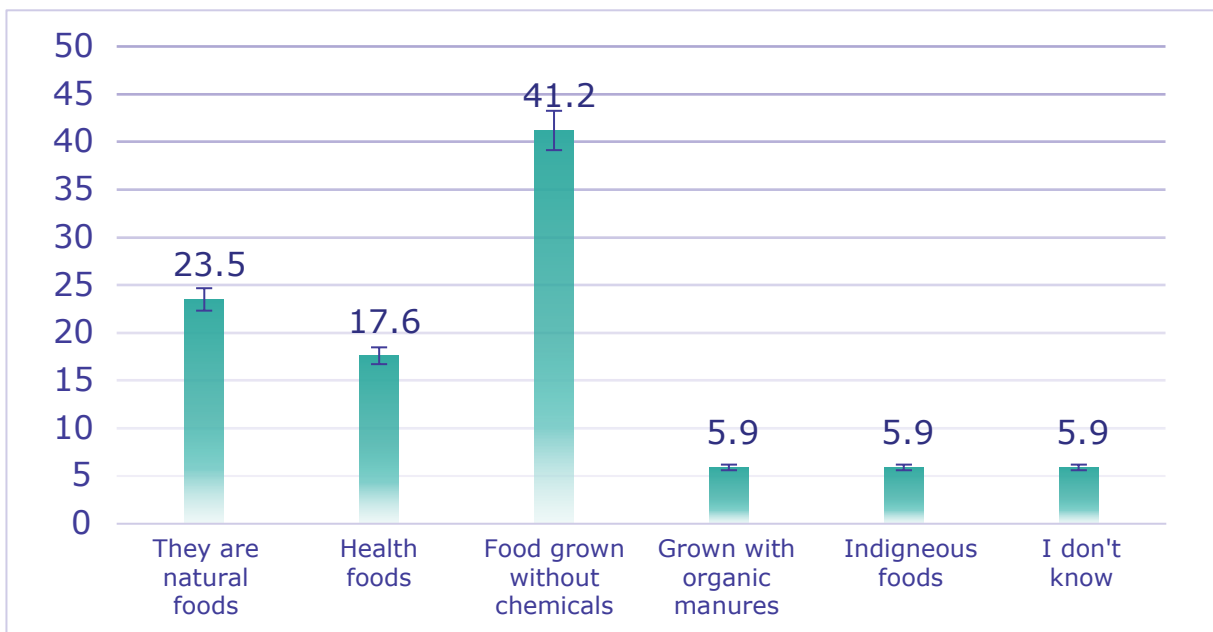


There is need for further study to establish the challenges farmers find in consuming their own crops, which they “should” consider healthy and nutritious. It can be noted that 67% of the produced tomatoes, 52% of the produced cabbage and 50% of the produced watermelon are consumed directly in the homestead Figure 7 shows that most farmers grow bananas, beans, maize and sweet potatoes. The percentage of farmers growing fruits (mangoes), cassava, green pepper, vanilla and various other crops is low. It can be assumed that these crops are grown for the same reasons as the preselected crops.



Comprehension and Consumption of Ecological Organic Products

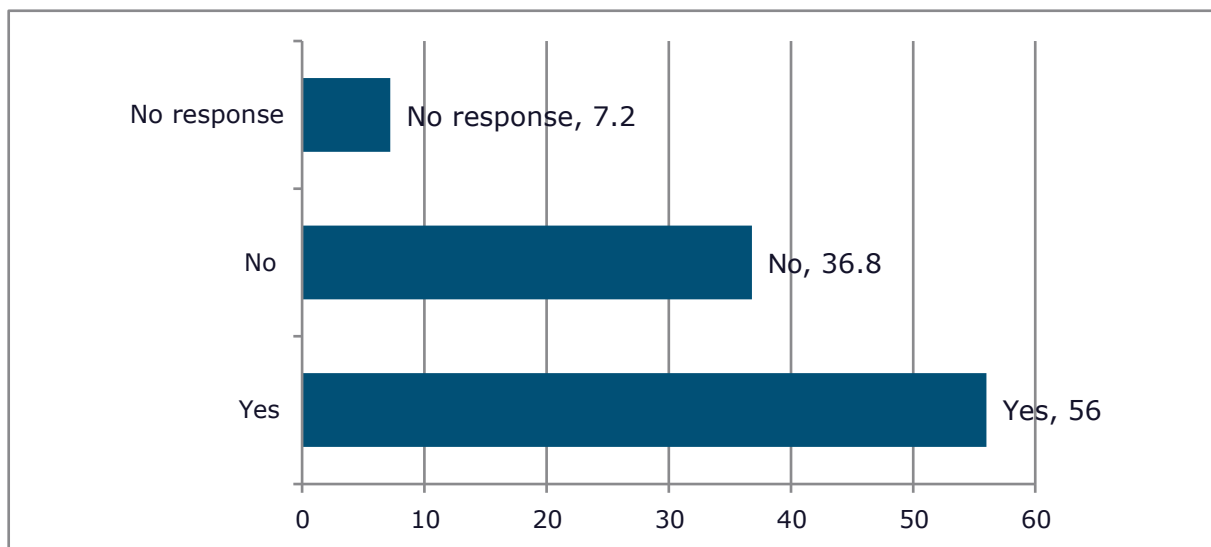
Figure 8 presents findings which indicate that 41% of the farmers comprehended organic food as that which is grown without using synthetic chemicals, 23.5% knew organic foods as foods that are natural 17.6% know organic foods just as healthy food. 5.9% comprehend organic food as food grown with organic manures. The same percentage, view organic food as indigenous food, while 6 % could not differentiate organic food from non-organic foods.



Meanwhile, the highest consumed crops from the priority enterprises were tomatoes. Respondents who consumed organic tomatoes were 65%, followed by cabbage, 29%, and least consumed crops (12%) were watermelon and coffee Figure 9. Note that this consumption combines both what is drawn from the market and those produced and consumed in homesteads.

Market Information

The survey aimed at establishing whether farmers belong to farmer organizations that would perhaps provide information on the market of organic products. It was found that 56% of all the respondents belonged to at least one farmer organizations and 37% had no farmer organization.



It is therefore, pertinent that follow up is done on whether the farmer organizations where the farmers belong carry on practices that are compatible with those acceptable by ecological organic agriculture guidelines, and organic produce standards.

The major farmer group activities were teaming up to access credit (34%) followed by collective marketing 32%, collective production at 16% and teaming up to access farm inputs at (14%). Primary processing and bulking are important group activities that were found to score as low as 9% and 3% respectively. The least activity done in groups was collective bulking.

Source of Market Information

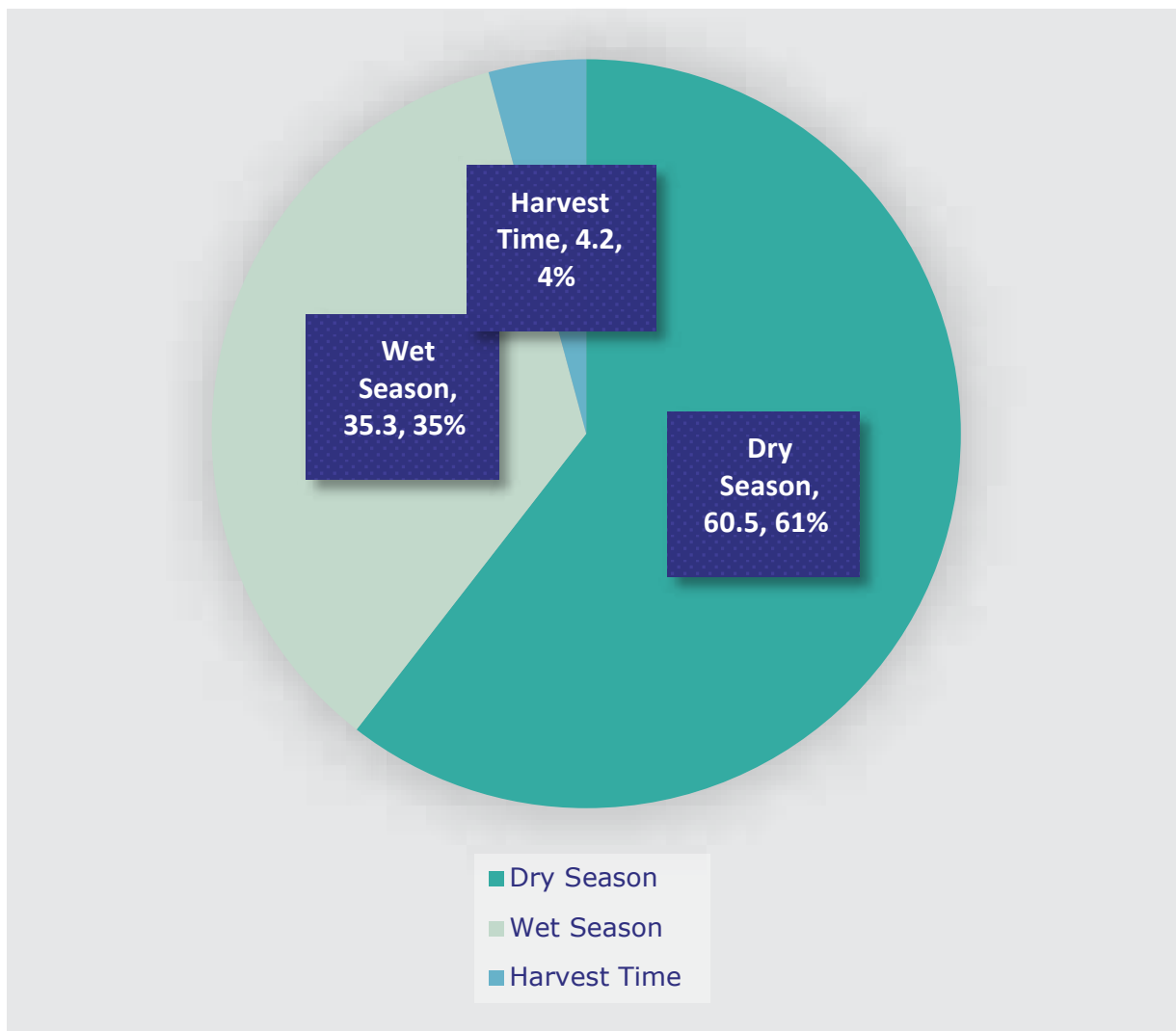
The major source of information for farmers was a farmer-to-farmer communication accounting for 52%. This was followed by information from radio at 17%, and television, 12%. The least used sources of information are traders, farmer groups and print media, all scoring below 10%. Other than the challenge of the cost of airtime, radio is becoming a major source of information. The farmers get information as they do other work on their farms. The study further examined the information needs of the smallholder farmers. Results returned indicated that forming and managing self-help groups was much more needed by smallholder farmers (61%), small business development (28%), managing finances (9%), and least was bookkeeping (2%).

Importance of Required Information

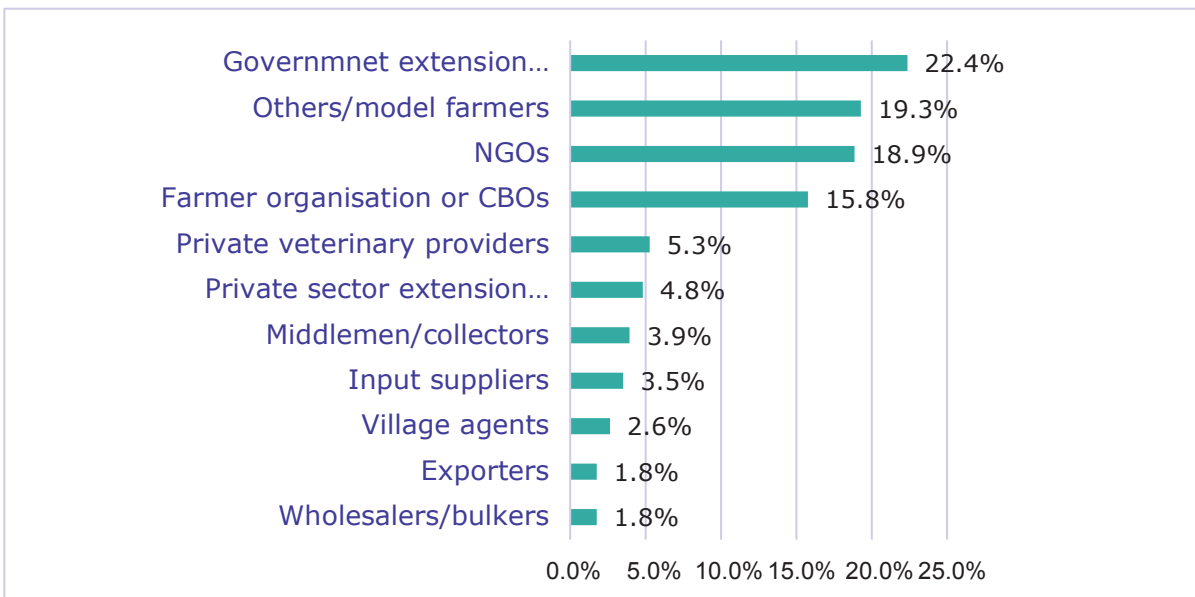
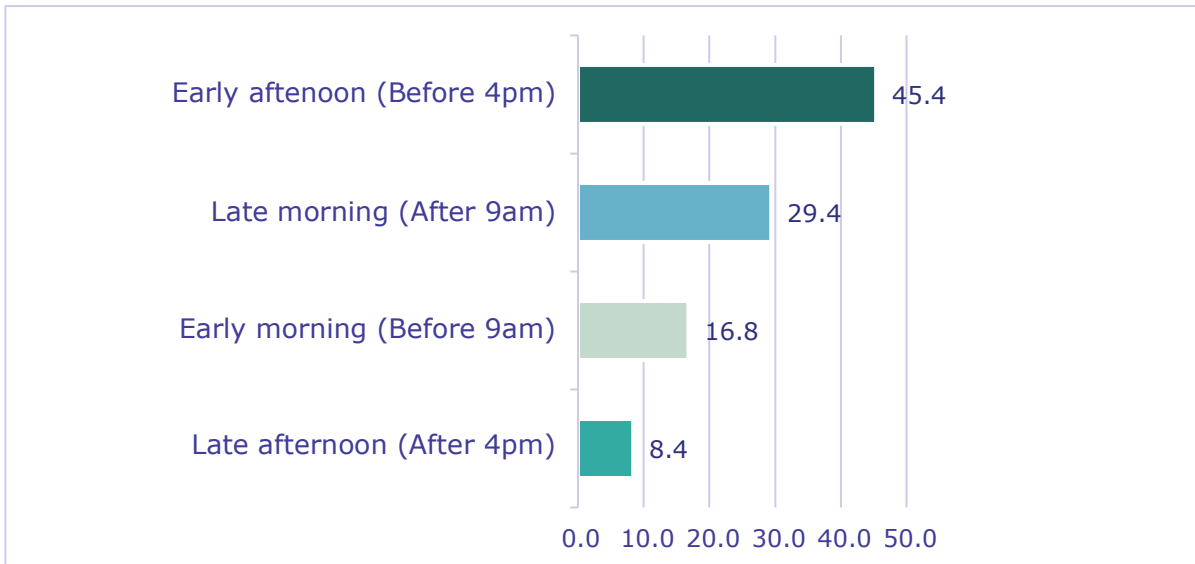
There was an observable variation between the information needed by the farmers, and the importance attached to the information needed, receiving information on smallholder business development and bookkeeping was envisaged as most important (71%), then managing finances (60%) and forming and managing self-help groups (53%)

Extension Services

Agricultural extension is the application of scientific research and new knowledge to agricultural practices through farmer education. The practice is meant to offer technical advice on agriculture to farmers and also supplies them with necessary inputs and services to support agricultural production. It was established that 61% of the farmers prefer extension services during the dry season, 35% during the wet season and a paltry 4% crave for extension services during harvest time.

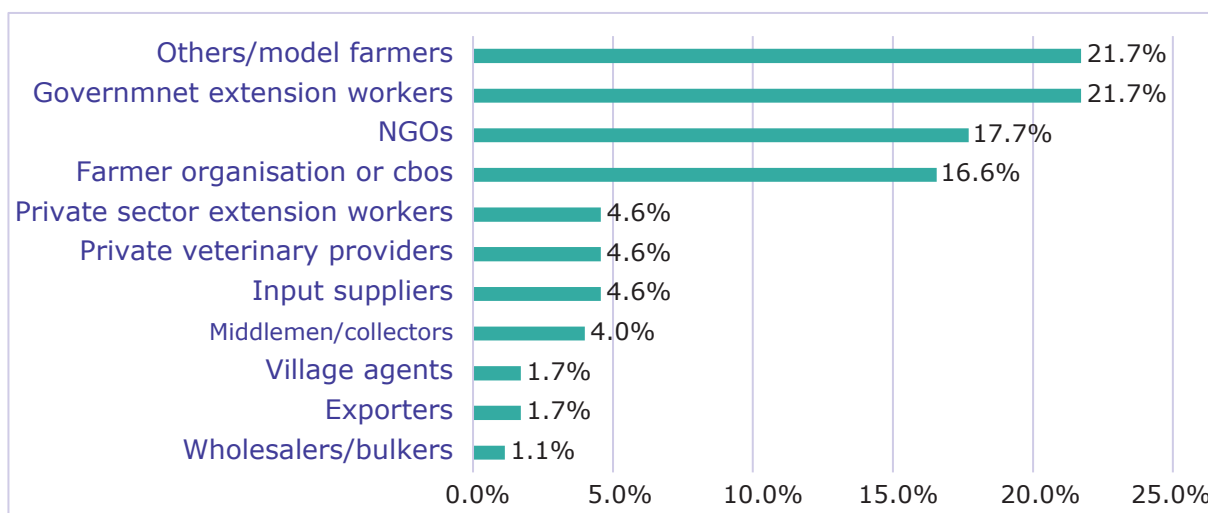


Uptake of extension knowledge by farmers may vary depending on the time of the day in which the information is delivered to the farmers. It was interesting to note that about 54% [45.4+8.4] of the farmers preferred to be taught in the afternoon, and 46% [16.8+29.4] prefer the services in the morning. The reasons for this preference are not known.



The survey further established that there are variations in preference for the type/model of extension delivery. The common mode of extension has been through farmers workshops; however, on-farm demonstrations were the most preferred. Interestingly, electronic media e.g. television, radios and socio-media websites were found to be gaining ground. Farmer to farmer mode, exposure and field excursions, exhibitions and food fairs were important mechanisms identified by farmers as a means to disseminate knowledge to the farmers. It should, however, be noted that print media was rated lowest as the mode of knowledge dissemination, at only about 2%.

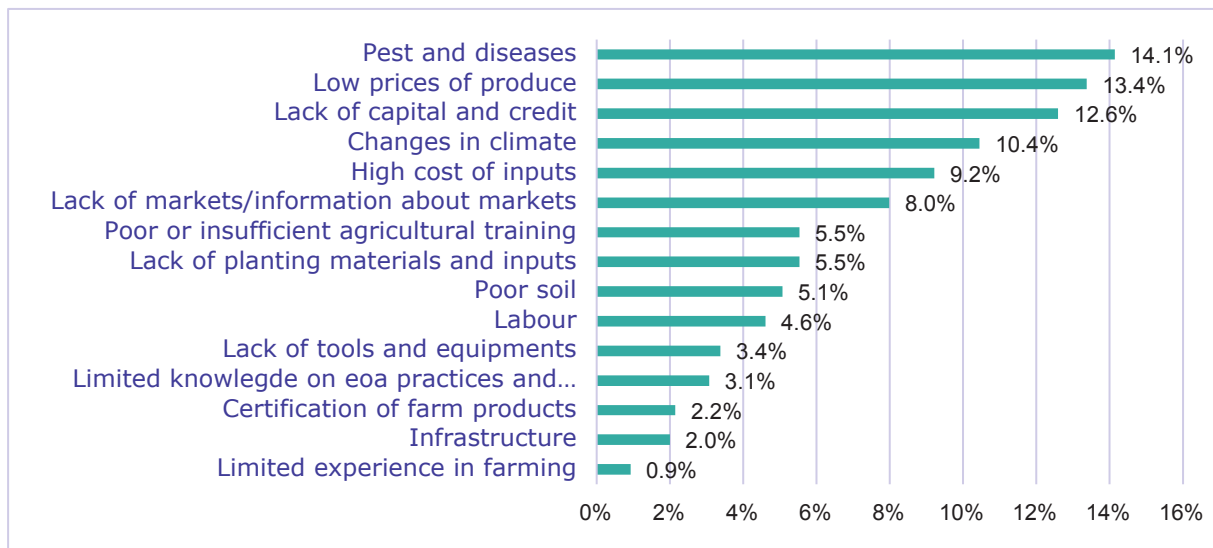
Government institutions/extension workers were well known for providing the much-needed extension services. Model farmers, NGOs and CBOs do substantial extension services. It was observed that private organizations especially, private veterinary service providers, private sector extension workers, middlemen, village agents, exporters and bulkers provide very minimal extension services. Whereas the above organizations provide extension services, farmers, have their preference for who should provide them with extension services. It was established that farmers prefer model farmers as extension agents at the same rate with government agents than any other agents. Details of other preferences are rated in figure 15 below;



Farmers prefer model farmers to extend the knowledge arising from the model practices to the other farmers. Actually, 22 out of every 25 farmers prefer extension from their fellow farmers who are model farmers. This preference is same as that for government extension workers. At least 18 and 17 farmers respectively for every 25 farmers in the region prefer NGOs and CBOs. The perception of the farmers towards private veterinary service, input dealers, and middle in providing extension services is not negative, but still low. The role of village agents, exporters, and wholesalers as extension agents should be supported to create a positive impression and impact on the smallholder farmers.

Challenges to Ecological Organic Farming

It should be observed that pests and diseases rank the highest challenge for ecological organic agriculture production. Low prices for organic produce and lack of capital and credit services bite hard the farmers engaged in ecological organic agriculture. Most farmers were able to recognize and affirm that climate change may be a force behind many challenges affecting productivity from EOA practices.



Financial Services

Smallholder farming communities benefit from SACCOs for their savings and accessing credit. The criteria for accessing loans from financial institutions vary with time and place, but at least the loan applicant must be a member of the institution with up to 20% saving on his account. Then one can access the loan at an average of 3% interest per month and /or (36%) per annum. The SACCOs however, find a challenge to recover loaned money from the farmers; some farmers die, migrate and evicted from their homes before they payback, some fail to pay back due to loan mismanagement. To ensure compliance by both farmers, some SACCOs train farmers in simple financial practices such as record keeping and also carry out regular monitoring of members who take loans.

Trading in Organic Products

Our interviews established that trading in organic products in the central region is at the level of retail trade. Traders say that they would be willing to sell products with an organic brand or mark. They further identified that there is a ready market for organic products as long as they don't perish fast while on the market. It was observed that Traders prefer to buy fruits and vegetables, which appear to have visible chemical spray on them.

Source of Fruits and Vegetables

Fruits and vegetable vendors mainly outsourced their produce from bigger markets in towns. The preference for big markets is that they get merchandise from a one-stop center. Other vendors buy fruits and vegetables directly from farmers.

Major information provided to product suppliers is the quantity and quality demanded by consumers' of specific products. Also, retailers provide advance to suppliers before they supply

Difference in Attributes for Supplies

The below table contrasts the attributes of quality price, time of delivery, volume, standards, marketing organization and risks between farmers and traders since there are variations in the understanding of the selected attributes.

Attribute	Farmers	Traders
Quality	Farmers don't select and sort the products. They deliver "as is" from the farm	Most time will select/sort and will provide produces in grades
Price	Farmers receive slightly low prices for their produce from all other traders. Where money is paid in advance, they are cheated	A trader usually gets a high price for the same product because they also add their margin
Delivery Time	They deliver the products in time if they have them because they are from within the district	The delivery will depend on where they get the produce. At times they move very long distance to source for products
Standards	Farmers mind less about the standards of the produce	Trader is usually very strict on standards because they want a higher profit margin
Volume	Farmers will bring the volume they produce.	Trader always want to deliver volumes based on market demand
Marketing Organization	For farmers, they don't consider the cost of delivering the products. They want to offload what they have produced	For trader, you always pay a deposit for commitment and pay the balance after delivery.
Risks	Supply low quality produce Low quantities	You pay deposit and trader don't pick phones, don't come back or don't provide agreed quantities

Price Determination

Price was mainly influenced by the quality of products, quantity at particular times, and also the availability of a given product. To a lesser extent, it also depended on customer's preference. It was further established that lack of awareness has a bearing on determining the price of a given product. For instance, in Wakiso district, the retailers were not aware of ecological organic agriculture products citing a lack of information about organic foods. Therefore, by implication, they could not offer a market price of organic products different from the conventional products. In Mukono, prices vary according to the price of inputs used to produce, transport and quality of the produce.

Conclusions *and* Recommendations

- Ecological organic agriculture value chains in Uganda are largely be shaped by females and all other actors along the value chain come from an ageing category of the farming population. If the young people are not intimately involved, sustainability of ecological organic agriculture practices is vain.
- Environmental care is the first treatment against challenges affecting ecological organic production and productivity. The Farmers who produce crops under default organic practices are a testimony to this 4.2% neither used neither organized organic manures nor inorganic fertilizer but they are able to survive. Practices that would restore ecosystems and revive them to near naturalness are greatly recommended for the purpose of stimulating nutrient recycling and natural regeneration of soil-plant support systems.
- Household organic food consumption is low with only 14% of the households able to access organic foods. Although the reasons for this situation are not clearly known, efforts should be made to encourage farmers to consume what they produce as organic foods.
- Pests and diseases in farmers' fields may be a result of climate changes due to several other factors. However, to alleviate the pest-disease nuisance, the actors need sufficient capital to research on appropriate and ecofriendly pest repellent inputs, plant nutrition inputs, and many other phytochemical based treatments. Absence of the above, the result is poor produce that gives low prices. Studies on phytochemical extracts, alternative use of weeds, and substitution of conventional agro-vet-medicine with a mix of ethno medicines are recommended.
- There is attitudinal disorientation of some value chain actors along the value chain such as consumers and Traders who prefer to buy fruits and vegetables with traces of chemicals on some products especially fruits and spices. Efforts to understand the perceptions of actors with a purpose of changing their attitudes are recommended. There is need to create awareness that even organic products can keep longer and that certain chemicals don't increase the shelf life of product.

Acknowledgement

Special thanks to the smallholder farmers in central Uganda who offered their time and field for the purpose of this baseline. Special acknowledgement to the Uganda Martyrs University and ESAFF Uganda, KULIKA, and PELUM UGANDA for their initial input in commissioning this baseline study. Bio vision Africa trust is acknowledged for financial support. This research was spearheaded by Uganda Martyrs University. The author also acknowledges the technical support offered by data collection assistants.

Reference

Muwanga, J. 2001. Informal food markets, household food provisioning and consumption patterns among the urban poor of Kampala. Thesis, Makerere University.

Atukunda, G. et al 2003. "Farming in the city: Participatory Appraisal of Urban and Per-urban Agriculture in Kampala, Uganda." CIAT Africa Occasional Publication Series, no. 42. Kampala, Uganda: CIAT.

Ballantyne, P. 2005. Managing agricultural information for sustainable food security and improved livelihoods in Africa. INASP Newsletter, No. 28 (March).



Uganda Bureau of Statistics—UBOS. 2002. The Population and Housing Census. Kampala, Uganda: Government of Uganda.



Eastern and Southern Africa Small Scale Farmers' Forum


ESAFF - UGANDA

"Small Scale Farmers Speaking For Themselves"

 | Plot 266, Muvule Avenue, Buye - Ntinda, Kampala  | +256 414 699 623

 | P.O Box 34420 Kampala  | coordinator@esaffuganda.org

 | www.esaffuganda.org

 | ESAFF Uganda  | @ESAFFUG  | ESAFF Uganda TV