



WEST NILE AGRICULTURE IMPROVEMENT AND CONSERVATION PROJECT

BASELINE SURVEY REPORT 2017

Agency for Accelerated Regional Development (AFARD)

Sall Family Foundation Uganda

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West Nile Agriculture Improvement and Conservation Project (WENAGIC Project)

Baseline Survey Report

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The Agency for Accelerated Regional Development (AFARD) signed a one-year contract with Sall Family Foundation for the implementation of West Nile Agricultural Improvement and Conservation Project (WENAGIC Project) in Yumbe district, West Nile region, Uganda. This baseline survey was therefore conducted as part of the project start-up activities.

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However, AFARD, the implementing partner, takes full responsibility for the views and errors expressed herein.

Dr. Alfred Lakwo Study Team Leader

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Acronyms

AFARD	=	Agency For Accelerated Regional Development
CDO	=	Community Development Officer
DAO	=	District Agricultural Officer
DLG	=	District Local Government
FGD	=	Focus Group Discussions
IGA	=	Income Generating Activity
KII	=	Key Informant
LLG	=	(Lower) Local Government
M+E	=	Monitoring and Evaluation
MoFPED	=	Ministry of Finance, Planning and Economic Development
NGO	=	Non Governmental Organization
OCA	=	Organizational Capacity Assessment
PDP	=	Personal Development Plan
PSE	=	Private Sector Enterprise
SACCO	=	Savings and Credit Cooperative
U BOS	=	Uganda Bureaus of Statistics
UGX	=	Uganda Shillings
US\$	=	United States Dollars
VSLA	=	Village Savings and Loan Association

Table of Contents

Acknow	/LEDGEMENTS	. 1			
ACRONYI	ACRONYMS				
LIST OF T	ABLES	. 5			
LIST OF F	IGURES	5			
Introdu	JCTION	6			
1.1 1.2 1.3 1.4	The Context The Project Summary Purpose of the study Objectives of the study	. 6 . 6 . 6			
The Stu	DY FOCUS AND METHODOLOGY	. 7			
2.1 2.2 2.3 2.4 2.5 2.6 2.7	Units of analysis Study sites, sampling methods and sample size Study phases Data collection methods Data analysis and Quality Control Limitation of the study Report structure	. 7 . 7 . 7 . 8 . 8 . 8			
Result 1	L: BENEFICIARY CHARACTERISTICS	. 9			
3.1 3.2 3.3 3.4	Distribution of respondents Demographic characteristics Household characteristics Sources of livelihoods	9 .9 10 11			
RESULTS	2: Agricultural Returns of Cassava and Beans	12			
4.1 4.2 4.3 4.4	Land ownership and use Varieties grown Yields and income Access to markets	12 12 13 13			
RESULTS	3: GOOD AGRICULTURAL PRACTICES	15			
5.1 5.2 5.3 5.4 5.5 5.6 5.7	Access to extension services: Skills, Inputs, and Finance Use of improved agricultural practices Use of recommended environment conservation practices Soil nutrient enhancement Farmers perception of soil fertility Soil fertility management Critical production challenges	15 16 17 17 18 20 20			
RESULTS	4: INCOME GENERATING ACTIVITIES	21			
6.1 6.2 6.3 6.4	Types of businesses Sources of business finance General business management practices Business growth status	21 21 22 22			

Table of Contents

RESULTS	5: FINANCIAL INCLUSION	
7.1	Financial literacy	
7.2	Financial management	

RESULTS	6: POVERTY STATUS	
8.1	Asset poverty explained	
8.2	Ownership of productive assets	
8.3	Asset poverty status	

RESULTS 7:	FOOD SECURITY STATUS	27
9.1 Fc	ood security	27
RESULTS 8:	Child Poverty Status	28
10.1 0	Child poverty explained	28
10.2 0	Child poverty status	28

RESULTS 9	: Women Empowerment	29
11.1 11.2 11.3	Women ownership of assets Women participation in decision-making Women exposure to gender based violence	29 29 30
11.4	Women's empowerment	30
RESULTS 1	0: PROJECT M+E PLAN	31
REFERENC	ES	34



List of Tables

Units of baseline analysis	7
Study respondents	9
Demographic characteristics	9
Household characteristics (%)	10
Sources of livelihoods (%)	11
Land utilization (%)	12
Selected mean production data	13
Marketing practices and challenges (%)	14
Farmers access to extension services (%)	15
Basic agronomic practices (%)	16
Use of good agronomic and environment conservation practices (%)	17
Soil fertility and water conservation practices (%)	18
Farmers perception of soil fertility (%)	19
Enterprise characteristics	21
Enterprise Growth	22
Per cent distribution of poverty	26
Selected food security indicators	27
	Units of baseline analysis

List of Figures

5

Types of crop varieties grown	. 13
Soil improvement measures	. 20
Production-related challenges (%)	. 20
Sources of business capital (%)	. 21
Selected business management practices (%)	. 22
Percentage of beneficiaries with key productive assets	. 26
Key deprivations of children's rights	. 28
Self and joint asset ownership rights (%)	. 29
Women participation in family decision-making	. 29
Women exposure to gender based violence	. 30
Women empowerment status	. 30
	Types of crop varieties grown Soil improvement measures Production-related challenges (%) Sources of business capital (%) Selected business management practices (%) Percentage of beneficiaries with key productive assets Key deprivations of children's rights Self and joint asset ownership rights (%) Women participation in family decision-making. Women exposure to gender based violence Women empowerment status

Introduction

This section provides an overview to the project; the challenges it seeks to address and its goal and objectives.

1.1 The Context

The World Bank 2016 Uganda Poverty assessment report shows that 35% of Uganda's population is poor. This figure was 44% for northern Uganda where Yumbe - the project district - is located.Two key drivers of such high extreme poverty status remains the 27 years of political instability (1979-2006) and the heavy reliance on subsistence agriculture. In West Nile region, 99% of its over 3 million people live on subsistence farming (UBoS, 2014). As a result, food and income insecurity has been on a steady increase since 1990. National statistics show that the mean monthly household consumption per capita is a dismal UGX 31,140 (about \$0.04 per person per day) (UBoS, 2016).

To address some of these poverty inducing drivers, the Agency For Accelerated Regional Development (AFARD), a Ugandan not-for-profit, non-denominational, nongovernmental organization signed a one-year contract with Sall Family Foundation a US based philanthropic organization for the implementation of West Nile Agricultural Improvement and Conservation (WENAGIC) Project. The project seeks to reduce extreme poverty among smallholder farmers through the Village Savings and Loans Association (VSLA) as a platform for improved agricultural productivity, income diversification, and environmental conservation.

1.2 The Project Summary

The goal of the project is, "To support a sustainable and equitable food and income security of 150 smallholder farmer households." The specific objectives are:

- To increase smallholder farmers' agricultural production and productivity by 85%;
- To improve the dietary intake of locally available foods in a gender sensitive manner;
- To support smallholder farmers to diversify their livelihood activities; and
- To build the capacity of smallholder farmer groups into viable village development groups able to meet their member's needs.

1.3 Purpose of the study

This study was conducted primarily to determine the baseline status for the project performance indicators in order to guide the project implementation processes (planning, monitoring and evaluations).

1.4 Objectives of the study

To achieve the above study goal, the study objectives were to:

- 1) Identify the beneficiary farmers' demographic and household characteristics;
- 2) Assess beneficiary engagements in income generating activities;
- 3) Assess the agriculture practices for cassava and beans production and marketing;
- 4) Assess beneficiary's financial inclusion and financial management practices;
- 5) Assess the access to productive assets and [asset] poverty status;
- 6) Assess the status of expected spillover effects on food security, child poverty, and women's empowerment; and
- 7) Develop a project log frame (using a standard M+E framework).

The study focus and Methodology

This section highlights the key focus of analysis for the study and the methodology used for data collection, analysis and quality control.

2.1 Units of analysis

The study purpose and objectives noted above points to the fact that the study sought to understand the pre-intervention status of the beneficiary farmers at an individual level. The baseline study therefore used a one- actor unit of analysis as is shown in table 1 below.

Table 1	Units	of	baseline	analysis
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Level of analysis	Key respondents	Focus of analysis
Individual level	Individual farmer group members	 Result 1: Beneficiary demographic and household characteristics; Result 2: Agricultural returns of cassava and beans; Result 3: Good agricultural practices; Result 4: Beneficiary engagement in income generating activities; Result 5: Financial inclusion; Result 6: Poverty status; Result 7: Food security status; Result 8: Child poverty; Result 9: Women's empowerment; and Result 10: Project M+E plan

2.2 Study sites, sampling methods and sample size

The baseline study was conducted in all the two project implementing Sub counties of Apo and Kei in Yumbe district. All the VSLA-farmer groups (Agonga youth, Mungufeni, Kidia, Nidro, and Garden Vulture) were covered. In each of the farmer group, 15 members were randomly sampled (using the register number lottery method). Overall, 75 respondents (50% of the total project beneficiaries) were randomly sampled and interviewed.

2.3 Study phases

In order to accomplish the various study results (see table 1), the team adopted a cross-sectional descriptive study approach and used mixed methods of quantitative and qualitative data collection and analysis. This was conducted as below:

- Phase 1 Study inception: At this stage, the team reviewed a number of documents both to clarify the critical indicators and to develop the study tools.
- Phase 2 Field data collection: Five research assistants who were selected by the Project Officer outside of the group membership conducted data collection. This team was trained by the Project Coordinator and supervised during the data collection period to ensure that all responses were valid.
- Phase 3 Study reporting: Once all the questionnaires were retrieved, a data entrant was hired to conduct data entry. The team leader supervised this process. Finally, all the data was cleaned of error, and analyzed into a draft report that was discussed internally before the final version was approved for production.

2.4 Data collection methods

The study team used the following methods of data collection:

- **Document review**: Literature review was conducted of a number of documents including the project proposal; AF-ARD's strategic plan and its monitoring framework. Also reviewed were sector indicators under the various project components agricultural production, nutrition, and VSLA.
- **Individual survey:** Research assistants randomly sampled farmer group members to whom they administered a quantitative individual survey using structured questionnaire. Daily, data collection questionnaires were reviewed by the Project Officer and corrected
- **Participant Observations:** The study team also conducted participant observations of the different agro-ecological areas the project is operating in especially to assess engagements in agriculture and microenterprise. These observations enabled the team to document the different agronomic, market and gender practices.

2.5 Data analysis and Quality Control

A Q² method was used to analyze the data collected from various sources. Quantitative (descriptive) data was analyzed using SPSS software and qualitative (narrative) data was transcribed using MS Office. The findings from each analysis were triangulated into a unified report.

However, to ensure high data quality control, the following were adhered to, the study team jointly developed the study instruments and tested and validated the questions. In addition, data collectors sought for consent from respondents. Finally, statement of confidentiality was provided to the respondents.

2.6 Limitation of the study

The baseline study had one main drawback. It was conducted one month after the project intervention had started. All the beneficiary group members were already saving in their VSLAs. This could possibly affect some of the responses under financial inclusion result. To reduce this bias effect, the baseline questions asked the respondents for information prior to VSLA membership.

2.7 Report structure

This report is divided into 12 parts as follows: Part 1 deals with the project context and profile. Part 2 explains the baseline study focus and methodology. Part 3 describes the project beneficiary characteristics. Part 5 analyzes the returns to cassava and beans against the national research potential yields. In part 6 the beneficiary engagement on alternative income generating activities is presented. Part 7 shows some financial inclusions status. Parts 8-11 analyses the status of envisaged project impacts, namely the status of poverty, food security, child poverty, and women's empowerment. Finally Part 12 shows the revised M+E framework.

WENAGIC Project Baseline Report, 2017

Result 1: Beneficiary Characteristics

This section provides an overview of the basic demographic and household characteristics of WENAGIC project beneficiaries as seen through the lens of the study respondents.

3.1 Distribution of respondents

Data was collected from a total of 75 respondents drawn equally from the five project farmer groups. As table 2 below shows, this number of respondents was 50% of the in the total number of each group. As is the composition of these groups, it is evident that more women (60%) participated in the study as compared to men (at 40%).

Table 2: Study requirements

Sub	Farmer Group	Group membership			Study respondents			Respondents
County		Male	Females	Total	Male	Females	Total	(%)
• Аро	Agonga Youth Association	14	16	30	4	11	15	-50
	Mungufeni Farmers Group	15	15	30	5	10	15	50
Kei	Kidia Women Dev't Assoc.	10	20	30	7	8	15	50
	Nidro Farmers' Assocotiation	14	16	30	8	7	15	50
	Garden Vulture	12	18	30	6	9	15	50
Total		65	85	150	30	45	75	50

3.2 Demographic characteristics

Table 3: Demographic Characteristics

Characteristics	Male	Female	Total
Total of respondents (Number)	30	45	75
Average household size (Number)	8.7	7.3	7.9
Average age of respondent (Number)	35.8	33.1	34.2
Sex (%)	40	60	100
Age group(%)			
Up to 30 years (Youth)	33.7	56.0	46.9
31-59 years (Young adults)	63.0	41.8	50.5
60 years and over (Elderly)	3.3	2.2	2.6
Marital Status (%)			
Single	3.3	8.9	6.7
Married	96.7	80.0	86.7
Divorced	0.0	4.4	2.7
Widowed	0.0	6.7	4.0
Highest Education Level (%)			
None	3.3	31.1	20.0
Primary	70.0	60.0	64.0
Secondary	20.0	8.9	13.3
Tertiary	6.7	0.0	2.7

The demographic characteristics of the beneficiary farmers are presented in table 3 and the following stands out:

- There are more females (57%) than males (43%) beneficiaries in WENAGIC project.
- While females dominate the youth category (56%), males are the majority (63%) in the young adult age group. This is because females marry early in these communities
- Majority of the beneficiaries are married (87%). To the contrary, it is only the females who are divorced and widowed (a status that shows the social soft-window for males to remarry easily after either marital breakups with or death of, a partner.)

- The average number of people (7.9) in both male (8.7) and female (7.3) households is higher than the national average of 5.4 people. This is because the 27-year post-war condition left many families with orphans to cater for. Such large family sizes have a bearing on family poverty status as many mouths to feed required considerably higher incomes, which luxury unfortunately many families lack.
- Although eight in every ten members have formal education (and mainly in primary education at 64%), at least 3 in 10 females have no formal education. This is an opportunity to ensure that farmers keep proper records for both the production and marketing ventures they are going to undertake.

3.3 Household characteristics

As table 4 shows, the household characteristic of the project beneficiaries include the following:

- Many males and females alike live in semi-permanent houses made of burnt brick walls with grass thatched roofs and mud floor.
- 51% depend on unsafe water sources that are shared with animals.
- All households have a pit latrine and so there is no open defecation in the communities.
- Majority of the households use local paraffin lamps (tadobaa) for lighting their homes (meaning that they incur high cost on fuel, have limited lighting to support effective children education, and are exposed to health risks from inhaling paraffin smoke). However, there is a considerable number using solar lamp (31%).
- Almost all households (96%) use the 3-stone stove as their cooking technology. Studies such as by Wiskerke et al. (2008) confirm the relative low efficiency (14%) of this technology with wood fuel use. The World Bank (2008) estimates that it is labor-intensive and takes up to 8 hours a day for women and children to engage in the collection of fuel-wood. That it requires more wood to cook a meal, this technology is a key driver of environmental degradation in rural areas through having more trees cut for wood fuel.

Table 4 : Household characteristics (%)

Characteristics	Male	Female	Total
Type of housing			
Permanent	6.7	2.2	4.0
Semi-Permanent	90.0	93.3	92.0
Temporary	3.3	4.4	4.0
Main water source for drinking			
Safe sources (Borehole & Protected springs)	40.0	55.6	49.3
Unsafe sources (Stream, lake, river)	60.0	44.4	50.7
Type of toilet used			
Pit latrine	100.0	100.0	100.0
Main source of lighting			
Paraffin lantern	13.3	4.4	8.0
Tadooba/others	46.7	52.2	58.0
Firewood	6.7	4.4	5.3
Solar	33.3	28.9	30.7
Cooking technology			
Local charcoal stove (sigiri)	0.0	6.7	4.0
3-stone stove	100.0	93.3	96.0

3.4 Sources of livelihoods

As table 5 shows, majority of WENAGIC project beneficiaries (95%), males and females alike, depends on agriculture for their livelihoods. While only 4% have business income and just 1% family support, equally 4% have no secondary source of income. More so, the beneficiaries practice subsistence agriculture that makes life too insecure to live.

Table 5: Sources of livelihoods (%)

Characteristics	Male	Female	Total
Primary Source of Income			
Farming	96.7	93.3	94.7
Business income	3.3	4.4	4.0
Family support	0.0	2.2	1.3
Secondary Source of Income			
None	10.0	0.0	4.0
Farming and fishing	6.7	24.4	17.3
Business	26.7	35.6	32.0
Employment income	6.7	0.0	2.7
Property income	10.0	15.6	13.3
Family support	13.3	6.7	9.3
Sale of labor	20.0	2.2	9.3
Others	6.7	15.6	12.0

Results 2: Agricultural returns of Cassava and Beans

Increasing smallholder farmers' agricultural production and productivity is one of the objectives of the WENAGIC project. Therefore, this section focuses on the current productivity status of WENAGIC project smallholder farmers. It presents the yields and market performance in the last season of 2016.

4.1 Land ownership

The key factor of production for every smallholder farmer is land. The more land a household has, the higher is its opportunity to increase its production since farm productivity in Uganda is a function of land acreage under cultivation.

Asked about how much land they owned and of that what proportion they used in Season B (July to December 2016) to plant cassava and beans, table 6 shows that on average the project beneficiaries have 3.7 acres. Men have 1.4 acres more of land than women. Yet only half (51%) of the land owned was used for the two project promoted commodities and women utilized more land than men by 7 percentage points.

Table 6: Land utilization (%)

Sex	Average acres of land owned	Acres planted with Cassava	Acres planted with Beans	Total land used	% of land used
Male	4.6	1.6	0.5	2.1	45.7%
Female	3.2	1.2	0.5	1.7	53.1%
Total	3.7	1.4	0.5	1.9	51.4%

4.2 Varieties grown

In light of the current need for sustainable agriculture intensification (Kelly et al., 1996), respondents were asked about the type of cassava and beans that they grew in 2016. Figure 1 shows that the common varieties of beans and cassava grown by the respondents are local varieties. While local crop varieties are well adapted to the local environment, they give low yields and may be susceptible to drought and emerging diseases of economic importance. About 5-10% more of men, however, grow improved varieties. This shows the existing market, political, and social discrimination women face in accessing improved planting materials. Finally, the figure also shows that in the season, some households were unable to grow these food and income security crops – 1% for cassava and 13% for beans mainly because of the locational variation in rainfall. It was reported that while some areas would have rain, others even in the neighboring villages would not receive rain. As such, growing of seasonal crops varied between villages that had rain and those that did not.

Figure 1: Types of crop varieties grown





4.3 Yields and Income

Table 7 shows the analysis of the status of the farmer's production of beans and cassava – the major crop commodities that the WENAGIC project promotes. It is evident that the current production levels for both crops are exceptionally below the regional potential yields for both males and females. Farmers experience a yield gap as high as 88% for cassava and 83% for beans.

More so, the quantities of produce that farmers take to the market are not big enough to bring in sufficient income to meet the myriad of household needs. For instance, only 10% and 51% of cassava and beans respectively were sold last seasons. Given the low volumes sold, it is therefore not surprising that the average income earned per farmer was a dismal US\$ 103. Noticeable is also that men earned US\$ 41 more than women.

Table 7: Selected mean production data

Sex	Yield of	Yield of	Yield	Yield	Sales of	Sales of	Share of	Share of	Income	Income
	Cassava	Beans	gap of	gap of	Cassava	beans	cassava	beans	from sales	from sales
	(Kgs)	(Kgs)	cassava	beans	(Kgs)	(Kgs)	sold (%)	sold (%)	(in UGX)	(in US\$)
			(%)	(%)						
Male	4,225	91.8	86.8	77.1	433.6	48.4	10.3	52.7	445,933	127.4
Female	2,789	52.4	90.7	86.9	275.1	26.0	9.9	49.6	304,267	86.9
Total	3,364	68.2	88.0	83.0	338.5	35.0	10.1	51.3	360,933	103.1

Note that the regional potential yield per acre for beans is 800 Kgs and cassava 20,000 Kgs.

4.4 Access to markets

The project beneficiaries were asked some basic marketing questions. Table 8 shows that the smallholder farmers:

- Majorly (79%) sell their produce individually. This weakens their ability to aggregate large volumes of produce from the small individual farmer and thus they lack the negotiation power (voice) in the market to secure better prices.
- Mainly (82.7% or 83%) in the local weekly markets within their sub counties.
- Sell mainly (65%) to local buyers. Big buyers who offer better prices are less attracted to small market environments with small trade volume of produce.
- Depend on market information from buyers and fellow farmers (72%). Lack of adequate market information or even having distorted market information (on time, place and price at which to sell their produce) predisposes farmers to selling at give away prices.
- Majorly face the constraints of low prices (49%) and high transaction costs (19%) in their produce trade.

Table 8: Marketing practices and challenges (%)

Characteristics	Male	Female	Total
Do you bulk and sell in a group?	24.4	21.3	21.3
Where do you mainly sell your produce?			
Did not sell	3.3	0.0	1.3
Local market	76.7	86.7	82.7
Distant market	20.0	13.3	16.0
To whom do you mainly sell your produce?			
Did not sell	6.7	2.2	4.0
Middlemen	13.3	13.3	13.3
Buyers from far away	20.0	6.7	12.0
Local buyers	50.0	75.6	65.3
Others	10.0	2.2	5.3
What is your main source of market information?			
None	6.7	2.2	4.0
Radio	6.7	8.9	8.0
Buyers	36.7	42.2	40.0
Other farmers	36.7	28.9	32.0
Extension Agents	6.7	4.4	5.3
Mobile phone	0.0	4.4	2.7
Others	6.7	8.9	8.0
What is your top most marketing challenge?			
Low prices	53.3	46.7	49.3
Poor weighing	6.7	11.1	9.3
Untimely market information	10.0	8.9	9.3
Storage	10.0	6.7	8.0
Unclear quality issues	3.3	6.7	5.3
High marketing costs	16.7	20.0	18.7

Results 3: Good Agricultural Practices

Increasing smallholder farmers' productivity requires awareness and utilization of good agricultural practices (GAP) in ways that promote resilience to climate change. Soil and water conservation therefore play a critical role in ensuring improved yields. This section explains the current use of GAPs among WENAGIC project beneficiaries.

5.1 Access to extension services: Skills, Inputs, and Finance

Respondents were asked their primary sources of agricultural skills, inputs, and finance. Table 9 shows that:

- About 3 in every 10 farmers have no access to extension services. For those who have access, farmer groups and fellow farmers remain their main sources of skills (24%) followed by the ever absent government extension staff (19%) and NGO (15%). This implies that farmers are largely in the dark about new agricultural information, practices and technologies thus impeding improved agricultural output for most farmers. However, access to extension services is more among women than men; partly due to the fact that more women are involved in agricultural activities (thus have more time and are more interested in receiving extension services) than men.
- With very few agro-inputs dealers (8%), many farmers access agro-inputs from own groups (32%) and NGOs and local markets (each at 23%). This finding reveals the limited outreach of government agricultural programmes to many rural communities, thereby making the cost of inputs sold by private dealers prohibitively high for most farmers in the rural setting; particularly women where only 4 out of 10 of them get their farm inputs from registered input dealers.
- Majority of the farmers (40%) have no access to agricultural finance thereby constraining their ability to engage in farming as a business. The few cases of access to agricultural finance are from input dealers (28%) and individual lending (17%). However, it is known that these sources charge exorbitant interest rates.

		Male	Female	Total
	None	36.7	24.4	29.3
	Own group	6.7	15.6	12.0
Where do you access	Government	13.3	22.2	18.7
extension services?	NGOs	16.7	13.3	14.7
	Fellow farmers	10.0	13.3	12.0
	Private extension service providers	16.7	11.1	13.3
	Own group	23.3	37.8	32.0
	Government	6.7	4.4	5.3
Where do you get farm	NGOs	20.0	24.4	22.7
inputs?	Fellow farmers	6.7	11.1	9.3
	Local market	30.0	17.8	22.7
	Registered input dealer	13.3	4.4	8.0
	None	46.7	35.6	40.0
Where do you access crop	Financial institutions	6.7	11.1	9.3
	Private individuals	16.7	17.8	17.3
initiance:	Input providers	20.0	33.3	28.0
	Neighbors	10.0	2.2	5.3

Table 9: Farmers access to extension services (%)

5.2 Use of Improved agricultural practices

To assess the use of basic agronomic practices, respondents were asked some questions and the answers shown in table 10 reveals that:

- Many farmers (35%) still use bush burning and tree cutting to clear land; with more women involved in these practices than men. This poses a threat to environmental stewardship and could in the long run lead to serious environmental challenges given that the rate at which the indigenous trees are being cut is not commensurate to the rate at which more trees are being planted.
- Many farmers (61%) open land late for viable crop planting. Firstly, this generally delays other subsequent cultivation activities thus failure to synchronize planting with the onset of rains. Secondly, the delay in land opening forces farmers to hurry up with field preparation activities that it curtails natural processes like decomposition that ameliorate soil fertility, for example.
- More than half of the farmers (56%) harrow their land late for crop planting.
- Only 37% use correct planting methods in line spacing for cassava and beans. With the majority of the farmers using incorrect planting methods and plant spacing, the tendency to use low seed rate is very common. This contributes to the high cost of crop production, and low crop yields.
- A quarter of the farmers (25%) still use multiple cropping method with many crops on the same piece of land that then limits the plant population per unit of land hence lowering yields of crops.

Some basic practices	Male	Female	Total
How do you clear land for digging?			
Slashing	66.7	60.0	62.7
Bush burning	10.0	20.0	16.0
Cutting trees	20.0	17.8	18.7
Others	3.3	2.2	2.7
When do you first dig your land?			
One and half months before rain	40.0	37.8	38.7
2-weeks before rain begins	26.7	17.8	21.3
After rain begins	33.3	44.4	40.0
When do you harrow/second digging?			
2-weeks before planting	53.3	37.8	44.0
1-week before planting	40.0	40.0	40.0
Others	6.7	22.2	16.0
When do you plant your crop?			
2-weeks before rain starts	23.3	15.6	18.7
Few days before rain starts	13.3	28.9	22.7
After the start of rain	63.3	55.6	58.7
What planting methods do you use?			
Line spacing alone	33.3	40.0	37.3
Line + broadcasting	50.0	35.6	41.3
Broadcasting + irregular pattern	16.7	24.4	21.3
What cultivation method do you use?			
Single cropping	43.3	35.6	38.7
Intercropping	30.0	40.0	36.0
Multiple cropping	26.7	24.4	25.3

Table 10: Basic agronomic practices (%)

5.3 Use of recommended environment consevation practices

In order to realize the good crop yield, use of the recommended agronomic, soil and water conservation practices is important. Table 11 presents the various practices farmers are employing in their agricultural activities in the project area. Key issues to note include the following:

- Many beneficiary farmers used good agronomic practices crop rotation (91%), intercropping (80%) and mulching (72%). All the three indicated practices are employed most by women than men.
- Apart from fallowing (64%) and mulching (72%), many soil conservation practices are not in use by many of the farmers. Given that population increase keeps mounting more pressure on land use, and that access to mulch material is becoming increasingly difficult due to uncontrolled bush burning, the opportunity to improve soil fertility using the said practices is becoming increasingly remote.
- Neither is environment conservation practices common. Only 36% of the farmers were involved in agroforestry practices. Therefore majority are losing out on the benefits this practice confers to agricultural production and environmental conservation such as soil erosion control, soil fertility replenishment, and carbon sequestration.
- Proper record keeping is still done by few farmers (34.7%). In the wake of promoting farming as a business, the need to keep proper records of both production and marketing of produce cannot be overemphasized.

Table 11: Use of good agronomic and environment conservation practices (%)¹

	Male	Female	Total
Integrated pest and disease control	20.0	4.4	10.7
Intercropping	76.7	82.2	80.0
Crop rotation	86.7	93.3	90.7
Zero/minimum Tillage	0.0	6.7	4.0
Mulching	70.0	73.3	72.0
Manure application	43.3	33.3	37.3
Terracing/contour digging	30.0	24.4	26.7
Water conservation	46.7	37.8	41.3
Agroforestry	46.7	28.9	36.0

5.4 Soil nutruient enhancement

Soil serves as a reservoir as well as a resource of plant nutrients. For plant to successfully undergo all its growth and reproduction processes, the ability of the soil to supply essential plant nutrients is a major factor. Table 12 indicates that farmers are not doing enough to enhance their soil fertility. For example, while only a dismal 16% of farmers use chemical fertilizers (due to limited awareness, access and high costs – Tables 9 & 12), less than half of the farmers (42.7%) use the known-to-be-freely-available organic fertilizers. Amongst farmers who at all use inorganic fertilizers, nitrogen fertilizers are commonly used (59%), mostly applied using placement method (44%). Use of soil and water conservation methods is also very low (less than 40%) amongst the farmers. For example, only 4% of the farmers did indicate that they use any three of soil and water conservation practices such as mulching, cover crops, contour planting and grass strips. In light of the fact that soil nutrient levels in West Nile region are on the decline (93% of the overall respondents acknowledged that they have observed declined soil fertility over the last 5-10 years), the focus of WENAGIC project to train farmers and engage them to conserve soil and water is timely.

¹With the visible effects of climate change, the focus of GAP is on climate smart agricultural (CSA) practices that can sustainably increase productivity and resilience (adaptation), reduce GHGs (mitigation), and enhance achievement of food security. This includes: a) Integrated soil fertility management by use of compost manure and crop residues; b) Water harvesting and retention for production by use of stone, grass or soil bunds; retention ditches etc.; c) conservation agriculture through minimal mechanical soil disturbance, mulching or cover cropping and crop rotation to allow for nitrogen fixation; d) Agroforestry practices; e) Use of drought and disease resistant crop varieties; and f) Integrated pest management practices.

Table 12. Som fertility and water conservation practices (76)					
	Male	Female	Total		
Common soil nutrients enhancing methods you applied					
Inorganic fertilizers	16.7	15.6	16.0		
Organic fertilizer/compost/manure	36.7	46.7	42.7		
Inorganic +organic fertilizers	3.3	2.2	2.7		
None	43.3	35.6	38.7		
Awareness of inorganic (Chemical) fertilizers	23.3	15.6	18.7		
Type of inorganic fertilizer you commonly use					
Nitrogen fertilizers	50.0	64.4	58.7		
Potassium fertilizers	10.0	8.9	9.3		
Phosphate fertilizers		2.2	1.3		
Fertilizers calcareous	13.3	8.9	10.7		
None	26.7	15.6	20.0		
Common methods of fertilizer application					
Placement	33.3	51.1	44.0		
Broadcasting	30.0	28.9	29.3		
Foliar(liquid)		2.2	1.3		
None	36.7	17.8	25.3		
Water and soil measures used					
Mulch alone	20.0	42.2	33.3		
Mulch and cover crops	26.7	26.7	26.7		
Cover crops alone	6.7	0.0	2.7		
Contour planting/grass strips	6.7	2.2	4.0		
Any three above	3.3	4.4	4.0		
None	36.7	24.4	29.3		

Table 12: Soil fertility and water conservation practices (%)

5.5 Farmers perception of soil fertility

Farmer's indigenous knowledge and perception on soil fertility assessment based on use and experience presents a wealth of knowledge that has yet to be fully tapped. When asked about what they use to tell that the soil is fertile or not, table 13 shows that:

- The vast majority of farmers (84%) consider their soils to be loam in type. Commonly associated with color black, loam soil is known to be the best soil type for crop production owing to its granular structure, high soil moisture and nutrient holding capacity, and high organic matter content.
- Farmers use crop yields (60%) as the most common indicator for soil health. While this indicator may be misleading in some cases, it is largely reflective of the soil fertility status given that the plant derives the largest portion of its nutrients directly from the soil.
- Apart from crop yield, farmers also use soil color and existing vegetation (grasses and shrubs) as indicators for soil nutrient status. For example, farmers associated witchweed (*Striga hermonthica*) and spear grass (*Imperata cylindrica*) most with low and high soil fertility, respectively.
- Most farmers (93%) have observed that soil fertility is on the decline over the past 5-10 years. The major causes of the observed decline were continuous cultivation (44%) and overgrazing (16%). This observation is strongly related to the relatively small land sizes that farmers open to undertake their agricultural activities; consequently putting the same pieces of land under use from one cropping season to the next without allowing it to rest.

Table 13: Farmers	perception	of soil	fertility	(%)
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	Male	Female	Total
How would you describe the type of your soil?			
Loam	90.0	80.0	84.0
Clay soil	3.3	4.4	4.0
Sandy		8.9	5.3
Rocky	6.7	6.7	6.7
What is your dominant soil color?			
Black	70.0	55.6	61.3
Red	3.3	4.4	4.0
Brown	16.7	26.7	22.7
Light grev	6.7	13.3	10.7
Others	3.3		1.3
What do you use to tell that the soil is infertile or fertile?	010		110
Existing vegetation	13 3	11 1	12.0
Soil color	16.7	22.2	20.0
Cron vields	66.7	55.6	60.0
Others	3.3	11 1	8.0
Which vegetation do you associate with low levels of soil	5.5	11.1	0.0
fortility?			
Strigg	22.2	17 0	20.0
	20.0	17.0	17.2
Lantana Camara	20.0	13.0	1.3
Lalilalla Calilala	EC 7	2.2	1.5 61.2
Not applicable	50.7	04.4	01.5
for tility 2			
Plack lack	2.2	A A	4.0
BIACK JACK	3.3	4.4	4.0
Lantana Camara		2.2	1.3
Love Grass	20.0	4.4	2.7
Uat Grass	30.0	17.8	22.7
Spear Grass	26.7	20.0	22.7
Not applicable	40.0	51.1	46.7
What color do you contribute to low soil fertility?			
Brown	10.0	11.1	10.7
Gray		2.2	1.3
Light Gray	26.7	17.8	21.3
Red	10.0	35.6	25.3
White	3.3	6.7	5.3
Not applicable	50.0	26.7	36.0
What color do you contribute to high soil fertility?			
Black	40.0	40.0	40.0
Brown	10.0	17.8	14.7
Red		2.2	1.3
Not applicable	50.0	40.0	44.0
Have observed changes in soil fertility over the last 5-10 years	96.7	91.1	93.3
What is the main cause of soil fertility loss?			
Continuous cultivation	30.0	53.3	44.0
Over grazing	26.7	8.9	16.0
Bush burning	6.7	8.9	8.0
Mono cropping	3.3	4.4	4.0
Soil erosion	10.0	4.4	6.7
Deforestation	20.0	8.9	13.3
Crop residue removal	3.3	4.4	4.0
Others		6.7	4.0

5.6 Soil fertility management

Respondents reported that only a few of them (14.7% - males 16.7% and females 13.3%) had received any training on soil fertility management before. Given that almost all the farmers derive their livelihood from agriculture, they are left with no choice but to come up with coping mechanisms to improve the declining soil fertility so as to realize better crop yields. When asked about the practices they employ to improve soil fertility, Figure 2 shows that the most number of farmers (38.7%) use crop rotation followed by land fallowing (30.7)%. Broadly speaking, the extent of using soil fertility improvement measures is very low amongst the farmers. While the opportunity for shifting cultivation keeps becoming remote due to increased population pressure, most farmers still have the luxury of leaving land to fallow for 2-3 years.



Figure 2: Soil improvement measures

5.7 Critical production challenges

The project beneficiaries were also asked what major production challenges they face. Figures 3 show that the major challenge for both males and females is inadequate skills. This is followed by high incidences of pest and diseases. For beans, it was noted that too much rain leads to flower abortion that eventually leads to low or no yield.

Figure 3: Production-related challenges (%)



Results 4: Income Generating Activities

Apart from farming, table 5 shows that business is another critical secondary source of livelihood for the project beneficiaries. This section interrogates the type, scale, and income these farmers earn by engaging in income generating activities.

6.1 Types of businesses

Asked about their engagement in non-farm income generating activities, the respondents pointed out that majority of them were engaged in general trade (39%) followed by services and other sectors (at 15% each). As table 11 shows, the businesses are also young (3 years on average). However, about two in every ten households also had no non-farm income generating activity. Aware that these project beneficiaries depends on subsistence farming, this data shows that these households rely purely on income from sale of their farm produce that in the event of low yields they are compelled to live at the brink.

Table 14: Enterprise characteristics

Characteristics	Males	Females	Total
Has an Income generating venture (%)	63.3	82.2	74.7
Average year of business (Number)	4.0	2.4	3.0
Main business sectors (%)			
Services	6.7	20.0	14.7
Trade	33.3	42.2	38.7
Manufacturing	6.7	4.4	5.3
Others	13.3	15.6	14.7
None	40.0	17.8	26.7

6.2 Sources of business finance

21

Further, the survey asked where households sourced their start up and working capital. Figure 4 below shows (and confirms the common business capital dilemma) that many rural households face. Many of the project beneficiaries rely predominantly on their own savings to start-up (40%) and or grow (38%) their enterprises. The next line of business capital comes from savings group and family/friends. Interestingly, it is more males who lack access to business finance.

Figure 4: Sources of business capital (%)



6.3 General business management practices

Asked about how they are managing their enterprises, Figure 5 reveals that many of the respondents lack prudent business management skills. Although many of the enterprises are informal: Not registered with local authorities; lack business plans; and are not insured, record keeping and sales promotion are not common practices.



Figure 5: Selected business management practices (%)

6.4 Business growth status

From Table 14 it is evident that the average years of the non-farm enterprises operated by the project beneficiaries was 3-years. An analysis of the growth of these enterprises is summarized in table 15 below. It is evident therein that these are microenterprises that started very small and have grown over the years by about 235%. The enterprises have very small monthly incomes, work sub optimally (5 hours a day), and largely employ the owners (1.1 person). Impressive to note is that there is a high savings to income ratio (44%) and an abnormally high wage to income ratio (50%).

Table 15: Enterprise Growth

Characteristics	Males	Females	Total
Average enterprise start-up capital (UGX)	74,500	152,633	121,380
Average current stock value (UGX)	479,683	358,544	407,000
Average monthly income (UGX)	49,808	61,125	56,921
Average monthly savings (UGX)	18,885	28,602	24,993
Average monthly employee wages (UGX)	29,759	27,534	28,380
Average persons employed	1.1	1.2	1.1
Average hours worked daily	5.3	5.3	5.3

Results 5: Financial Inclusion

Income generating activity can only positively impact on household welfare when the finance is managed well. This section explores how the beneficiary households manage their personal finances and their participation in saving groups.

7.1 Financial literacy

To assess level of financial literacy – i.e., their ability to understand and use effective personal financial management, respondents were asked some standard financial literacy questions covering interest rates, discount purchases, and risk management. Table 15 shows mixed results. Other than a better ability to comprehend compound savings, many of the beneficiaries were unable to compute interest rates, savings growth subject to interest rate factors, effects of inflation in money value, and risk management.

Table 15: Financial Literacy (%)

Res	ponded correctly to the below questions	Males	Females	Total
	If you saved 1,000 UGX every day, after one year, would you have more than 300,000 UGX or less than 300,000 UGX?	83.3	66.7	73.3
	If you were offered a loan with 5 monthly interest rate and a loan with 20 annual interest rate, which loan would offer you better value?	66.7	57.8	61.3
	If the same bicycle is on sale in two different shops at UGX 200,000 and one shop offered a discount of UGX 30,000 and anther a 10 discount: which one is the better bargain?	46.7	55.6	52.0
	You want to borrow UGX 500,000. Moneylender (M1) says that you can get it but you must pay him UGX 600.000 in a month and moneylender (M2) needs you to pay UGX 500,000	40.0	28.9	33.3
	back plus 15 interest in a month. Which loan do you take?			
	If you have some money, is it safer to put your money into one or many businesses?	43.3	64.4	56.0
	Over the next 2 years the prices of the things you buy double. If your income also doubles, will you be able to buy more, less, or same volume as you did?	33.3	26.7	29.3
	Suppose you need to borrow UGX 100. Which is the lower amount to pay back: UGX 105 or UGX 100 plus 3%?	56.7	53.3	54.7
	If you put money in the bank for two years and the bank agrees to add 15 per year to your account. Will the bank: Add more, add the same, don't know?	63.3	57.8	60.0
	Suppose you had UGX 100 in a savings account and the bank adds 10 per year. How much money would you have after five years if you did not remove any?	40.0	35.6	37.3

7.2 Financial management

23

Respondents were also asked about their financial management practices. Table 16 presents a summary of their key drivers:

- Majority of the respondents (55%) save in their saving groups where on average, they had been members of for 2.4 years. Still the practice of saving on one self is high (36%).
- They save a dismal average of \$1.1 weekly.
- While 65% reported that they mainly borrow from their saving groups, at the time of he study about 4 in 10 of the respondents had taken loans from their groups (about three times more for women than men).
- The primary reasons households save are for long-term investments (education and buying assets) 56% followed by meeting immediate needs (basic needs and emergencies) 35%. Only 9% save to raise income to start or expand a business.
- Likewise, the primary reasons households take loans are for meeting immediate needs (basic needs and emergencies) 44% followed by long-term investments (education and buying assets) 40%. Only 16% take loans to start or expand a business.

Table 16: Financial management practices

	Males	Females	Totals
Practice savings through (%):			
Putting money in a special place or account for the money to be safe	90.0	91.1	90.7
Putting money aside to stop it being spent immediately	86.7	82.2	84.0
Planning spending so that money lasts through the week or month	76.7	68.9	72.0
Putting money in an activity or somewhere so that it can yield profits or returns	70.0	80.0	76.0
Always develops a budget before engaging in any financial transaction	66.7	77.8	73.3
Knows how much money s/he, exactly, spent every week	63.3	55.6	58.7
Always keeps track of money s/he gets and spends	60.0	62.2	61.3
Participation in saving groups			
Is a member in a savings group (%)	100.0	100.0	100.0
Average year in saving group (Number)	1.8	2.8	2.4
Weekly savings value (UGX)	4,433	3,689	3,987
Has taken a group loan (%)	36.7	51.1	45.3
Current loan value (UGX)	13,333	46,111	33,000
Primary reasons for saving			
Meeting basic needs	16.7	17.8	17.3
Emergencies	23.3	13.3	17.3
Education of children/siblings	33.3	42.2	38.7
Buying assets	10.0	11.1	10.7
Start or expand business	6.7	11.1	9.3
Old age	10.0	4.4	6.7
Primary reasons for taking loans			
Meeting basic needs	36.7	17.8	25.3
Emergencies	13.3	22.2	18.7
Education of children/siblings	33.3	22.2	26.7
Buying assets	6.7	17.8	13.3
Start or expand business	10.0	20.0	16.0
Where people mainly save			
On self or home	40.0	33.3	36.0
With family/friends	0.0	4.4	2.7
Banks/SACCO	3.3	0.0	1.3
Savings group	53.3	55.6	54.7
Other informal groups	3.3	2.2	2.7
In livestock/assets	0.0	4.4	2.7
Primary sources of credit			
Self	3.3	6.7	5.3
Family/friends	26.7	17.8	21.3
Banks/SACCO	3.3	0.0	1.3
Money lenders	3.3	2.2	2.7
Gov't programs	0.0	2.2	1.3
Savings group	60.0	68.9	65.3
Other informal groups	0.0	2.2	1.3
Others	3.3	0.0	1.3
Regular spending areas	10.0	10.0	10.0
Food	13.3	13.3	13.3
Clothing	0.0	4.4	2.7
Family support	30.0	28.9	29.3
Agricultural inputs	10.0	b./	8.0
Education cost	30.0	22.2	25.3
Medical bills	6./	2.2	4.0
Asset acquisition	0.0	2.2	1.3
Business reinvestment	10.0	20.0	16.0

Results 6: Poverty Status

This section assesses the poverty status of the project beneficiary households by use of asset poverty measurement approach. It therefore starts by explaining the methodology then delves into analyzing the asset ownership status and finally showing how poor the households are.

8.1 Asset poverty explained

The WENAGIC project seeks to reduce extreme poverty among smallholder farmers. In order to ably account for the success or failure of the project attainment, the baseline study also assessed the poverty status of the project beneficiaries. This is done by use of the asset poverty measurement approach as proposed by Haveman and Wolff (2004). The preference for this approach is because asset poverty measures the economic ability, using productive assets, an individual or household has to sustain a basic needs level of consumption during temporary hard times for a period of 3 months. Leonard and Di (2012: 1-4) stretched this period to 9 months because asset accumulation at levels equal to ninemonths' worth of income at the international income poverty level or greater ably improves a family's odd of permanently escaping poverty. By use of this method, a household is asset poor if its financial net worth is unable to meet its consumption needs over a 3-month period. It is considered non-poor if its net worth is able to meet its 9-month consumption needs.

To compute a household's net worth first, all its productive assets are valued at the current market price. Second, the asset value is added to the current cash savings (i.e., cash at hand, bank, and debt lent to others). Third, the current value of debts taken from others is deducted from the asset and cash savings value to get a financial net worth. Finally, the financial net worth is subjected to the required household consumption at the international poverty line of US\$ 1.90 (or UGX 6,640 – 2015 price of US\$ 1 = UGX 3,400) per person per day. While a single person household would need UGX 2,357,900 per annum to live at the poverty line, this value would increase by the number of people a household has. A household with many people to support would therefore require more financial net worth to sustain their livelihoods.

8.1 Ownership of productive assets

The respondents were asked about their ownership of productive assets. Figure 6 below shows that:

- Women and men represented households alike have ownership of land that is a critical resources for their key livelihood activity – farming.
- Regardless of the types, men own more assets than females.
- Low cost assets such as poultry, mattresses, and goats, sheep and pigs are the most commonly owned assets.
- Mobile phones are available in the study area (even when men (90%) own more of it than females (49%)). This asset presents an opportunity for exploring ICT integration in the operations of the farer groups. The VSLAs can be linked to the banks using e-wallet system. Market information can also be accessed through on-line market platforms. In addition, the Project Officer can use it for effective mobilization of members for meetings and trainings.
- Very few households own expensive assets such as cattle and motorcycles that required millions of Uganda shillings to procure.



Figure 6: Percentage of beneficiaries with key productive assets.

8.3 Asset poverty status

Table 17 presents the asset poverty status of the youth in the project areas. It is evident that more than half of the households are poor (59%). This figure is 12% point above the national figure of 47%. Women beneficiary households are 14% point poorer than men households. In addition, high poverty incidences are among married beneficiaries (84%) and those engaged in farming (96%),

Table 17: Percentage distribution of poverty

	Males	Females	Total
Poor youth (Unable to meet 3-months consumption)	50.0	64.4	58.7
Poverty status by marital status:			
Single	6.7	13.8	11.4
Married	93.3	79.3	84.1
Divorced	0.0	3.4	2.3
Widow(ed)	0.0	3.4	2.3
Poverty status by primary source of livelihoods:			
Farming	93.3	96.6	95.5
Business	6.7	3.4	4.5
Poverty status by sub county:			
Аро	37.0	63.0	100.0
Кеі	29.4	70.6	100.0

Results 7: Food Security Status

The primary goal of WENAGIC project is to support a sustainable and equitable food and income security of targeted smallholder farmer households. Herein, food security is seen to accrue when all household members, at all times, have access to adequate nutritious foods that are socially acceptable. Thus, food security is measured using adapted FAO indicators for food availability, adequacy, diversity, and equity in food sharing practices. This section explains this assessment.

9.1 Food security

The responses to the various questions related to food security assessment as are summarized in table 18 below reveals that among the project beneficiaries:

- Majorly (97%) of the households depend on own food production even when it is known that households have production limitation to ably produce all their food needs.
- Nine in ten households have a kitchen garden where they grow local vegetables. The main challenge with this gardening was the production of only limited varieties of vegetables in spite of the presence of different varieties.
- Only 6 in 10 households know about balanced diet that is critically for ensuring that different social groups in a given households are served with the right food types required for their growth and development.
- On food security status, 74% of the households were food secure although indicators for food availability and adequacy were low.

Female Male Total Own production as a source of food 97.8 96.7 97.3 Have kitchen garden 96.7 88.9 92.0 Know about balance diet 66.7 64.4 65.3 Know about safe food preparation methods 76.7 80.0 78.7 Know about safe food preservation methods 66.7 86.7 78.7 Did you in the last 7 days eat the following foods? Cereals (wheat, rice, maize, sorghum, millet etc.) 93.3 82.2 86.7 Roots/tubers/plantain (potatoes, cassava, matoke) 96.7 95.6 96.0 77.8 Vegetable (fresh. drv) 83.3 80.0 Fruits/fruit juices (fresh and dry) 73.3 62.2 66.7 Pulse/Legumes/Nuts (Beans, peas, G.nuts, simsim) 100.0 91.1 94.7 Eggs 83.3 75.6 78.7 Dairy products (milk, cheese, yoghurt) 50.0 44.4 46.7 Meat (goat, beef, lamb, pork, chicken, duck, pigeon, offal) 83.3 73.3 77.3 Fish (fresh, smoked and sun dried) 83.3 84.4 84.0 Oil/fats (ghee, butter, cooking oil) 80.0 77.8 78.7 Sugar, Honey 86.7 82.2 84.0 Condiments (spices, ketchup) 40.0 46.7 44.0 Alcohol and tobacco 16.7 8.9 12.0 Food security status Have food all year round 53.3 57.3 63.3 70.0 57.8 Eat at least 3 meals daily 62.7 Eat as a family/share food equally 86.7 82.2 84.0 Dietary diversity status 93.3 91.1 92.0 Consumption of Vitamin A foods 86.7 80.0 82.7 Consumption of livestock products 96.7 86.7 90.7

Table 18: Selected food security indicators

Results 8: Child poverty Status

AFARD is mainstreaming children's issues in its works. As such, its projects are expected to contribute to the reduction of child poverty. This section explores child poverty status in the beneficiary households.

10.1 Child poverty explained

The baseline study also assessed the child poverty status. According to the *Situation Analysis of Child Poverty and Deprivation in Uganda 2014* report, contrary to income poverty measures, children worry of how: Lack of education erodes their futures; Poor health destroys family livelihoods; Hunger can be devastating; and Experience of violence evaporates hope. The negative lifetime effects of such deprivation that is based on the Convention on the Rights of the Child. Thus, in the Ugandan context, extreme child poverty refers to the level of exposure to deprivation of children in two or more dimensions highly likely to have serious adverse consequences for their health, wellbeing and development. These dimensions include: (i) Nutrition; (ii) Water; (iii) Sanitation; (iv) Health; (v) Shelter; (vi) Education; and (vii) Information.

10.2 Child poverty status

Figure 7 below shows that extreme child poverty is pronounced in the beneficiary households. Overall, 9 in 10 children suffered deprivations in at least two dimensions necessary for their growth and development. The primary dimensions of deprivations included limited access to information necessary for child development (64%), poor health given that many children were highly susceptible to falling sick (50%) and the inability to access and use safe water (44%).



Figure7 Key deprivations of children's rights

Results 9: Women Empowerment

The WENAGIC project targets both men and women headed households. Aware that in a number of communities women face unequal position to men in decision-making, access to and ownership of resources, as well as exposure to gender based violence, the project seeks to ensure empower women beneficiaries so that they can claim gender equality in their households and communities. This section assesses the extent to which participating women are empowered using a simple empowerment index.

11.1 Women ownership of assets

To asses the extent to which women just as men have ownership rights over assets, respondents were asked whether they individually or jointly had ownership of selected assets that are critical for a household wellbeing. Figure 8 show that there is a small difference in ownership of assets between males and females. Men have more ownership rights than women over mobile phones (47%), cattle (35%), bicycles (21%), and credit/debt and motorcycle (15% each). Seen critically, these are high valued family assets that are expensive to acquire so many men who produce cash crops compared to women who only sell part of their food crops can afford.





11.2 Women participation in decision - making

Figure 9: Women participation in family decision-making



Many communities use gender norms to set limits for the participation of women in decision-making processes even when the issues of concerns affects then negatively. Such discrimination especially in agriculture is noted to negatively affect effective resource use - female labour. Often when women feel that they are denied space they respond by withholding their labour that is critical for peak farming activities. Therefore, any project that seeks to ensure that women and men gain equally from the fruits of their labour should target an inclusive approach. It is in this outlook that respondents were ask whether or not they participate in the decision-making processes of selected household topical issues.

Figure 9 shows mixed results. Overall, women actively participate in family decision-making in almost all the areas of household management. For instance, all female respondents reported that they participate in the sale of farm harvest (100%) and use of family income (98%).

11.3 Women exposure to gender based violence

Gender-based violence is another area that promotes female discrimination in the market place. Asked about their exposure to violence, Figure 10 shows that within the project both men and women face area gender based violence albeit at different degree. The most common forms of violence for women are verbal abuse (44%) and denial of access to resources or community groups (40%).



Figure 10: Women exposure to gender based violence

11.4 Women's empowerment

We assessed women empowerment status using a simplified women empowerment index. This index is built on 3-core areas: Owning assets (alone/jointly); Exposure to gender based violence; and participation in decision-making (alone/jointly). Figure 11 shows that overall, only 5 in every 10 women beneficiaries are empowered to live the lives they deserve.



Figure 11: Women empowerment status

Results: Project M+E Plan Below is the project's M+E plan with key indicators that will be monitored and evaluated.

Intervention logic	Objectively verifiable indicators of achievement	Description	Unit of measure	Baseline	End target	Frequency	Data source	Responsible for data collection
Overall objectives: To support a sustainable and equitable food and income security of 150	OO Indicator 1: 25% reduction in extreme poverty (living below US\$ 1.90/day)	% of beneficiary households with financial net worth able to meet their 3- month consumption needs	Per cent	58.7	44.0	Annually	Survey	Project Coordinator
smallholder farmer households	OO Indicator 2 65% increase in food security status	% of beneficiary households that eats 3 meals daily, eats at least 5 food types weekly, eats as a family, and have food all year round	Per cent	74.0	90.9	Annually	Survey	Project Coordinator
	OO Indicator 3: 50% increase in the empowerment of women	% of beneficiary women who individually or joint with their spouses participates in family decision-making and own	Index	57.5	86.3	Annually	Survey	Project Coordinator
		productive assets, and are not exposed to gender based violence						
	OO Indicator 4 25% reduction in child poverty	% of children deprived in any 2 basic needs necessary for their growth and development	Per cent	73.2	54.9	Annually	Survey	Project Coordinator
<u>Specific objectives</u> 1: To increase smallholder farmers' agricultural production and productivity by	SO1 Indicator 1:Acreage under project crop increased from 0.5 – 1 acre each	Average size of land planted with project promoted crops per season	Acres	1.9	2	Annually	Survey	Project Coordinator
80 20 20	SO1 Indicator 2:% of targeted smallholder farmers adopted recommended good agronomic practices	% of households reporting use of recommended climate smart, crop husbandry, and soil and water conservation practices	Index	43.1	75	Annually	Survey	Project Coordinator
	SO1 Indicator 3: Each targeted smallholder farmers have at least 7 surviving trees planted	Number of surviving trees from project supply per targeted households	Number	0	7	Annually	Survey	Project Coordinator

Responsible for data collection	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project
/ Data source	y Survey	y Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey
Frequency	Bi-annuall	Bi-annuall	Annually	Annually	Annually	Annually	Annually	Annually	Annually	Annually
End target	6,223 500	85	541,400	95	95	95	25	95	95	50
Baseline	3,364 68.2	21.3	360,933	65.3	92	78.7	0	45.3	74.7	22.7
Unit of measure	Kgs Kgs	Per cent	NGX	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Description	Average yield per acre project promoted crop per season -Cassava -Beans	% of farmers in project supported groups who bulk their produce and sell together	% increase in income from sales of produce of project supported crops	% of beneficiaries who report that they are awareness of the benefits of balance diet	% of beneficiaries who have kitchen gardens of local vegetables all year round	% of beneficiary households who use recommended food preparation and preservation methods	% of beneficiaries who monthly save in their VSLA at least \$20	% of beneficiaries who took loans from VSLA	% of beneficiaries who had non- farm income generating activities	% of beneficiaries with IGAs who
Objectively verifiable indicators of achievement	SO1 Indicator & 85% increase in yields of targeted smallholder farmers	SO1 Indicator 5 % of targeted smallholder farmers who practice collective marketing	SO1 Indicator & 50% increase in income of targeted smallholder farmers	SO2 Indicator 1: % of targeted smallholder farmers reporting awareness of safe nutrition	SO2 Indicator 2 % of targeted smallholder farmers with kitchen gardens of local vegetables	SO2 Indicator3: % of targeted smallholder farmers using improved food preparation and preservation methods	SO3 Indicator 1: % of targeted smallholder farmers save at least \$20 per month	SO3 Indicator 2: % of targeted smallholder farmers access loans from their VSLAs	SO3 Indicator3: % of targeted smallholder farmers have off-farm income generating activities	SO3 Indicator 4: % of targeted
Intervention logic				<u>Specific objectives</u> 2: To improve the dietary intake of locally available foods in a gender			<u>Specific objectives</u> 3: To support smallholder farmers to diversify their livelihood activities			

WENAGIC Project Baseline Report, 2017

Responsible for data collection	Coordinator	Project Coordinator	Project Coordinator	Project Coordinator	Project Coordinator
Data source		Survey	OCA	OCA	OCA
Frequency		Annually	Annually	Annually	Annually
End target		65	Ŋ	Ŋ	1
Baseline		31.4	ъ	ъ	0
Unit of measure		Per cent	Number	Number	Number
Description	have registered businesses, written business plans, keeps business records, insured their businesses, conducts sales promotion, and separates business and personal finances	% of beneficiaries with IGAs who earn a monthly alternative income of at least UGX 50,000 (US\$ 15)	Number of groups with a constitution and leaders elected according to their constitutions	Number of project supported groups using participatory governance practices to manage their operations	Number of project supported groups with an IGA that generate at least UGX 2,000,000 (US\$ 571) per season
Objectively verifiable indicators of achievement	households using recommended business management practices	SO3 Indicator 5: % of targeted smallholder farmers with a monthly alternative income of at least UGX 50,000 (US\$ 15)	SO4 Indicator 1: Number of targeted farmer groups with rotational elected leaders based on their constitutions	SO4 Indicator 2 Number of targeted farmer groups using participatory governance practices	SO4 Indicator3: Number of targeted farmer groups with at least UGX 2,000,000 (US\$ 571) per season
Intervention logic			<u>Specific objectives</u> 4: To build the capacity of smallholder farmer groups into viable village	development groups able to meet their member's needs.	

WENAGIC Project Baseline Report, 2017

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