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## **EVALUATION OF THE aBi FINANCE LINE OF CREDIT AND GUARANTEE PROGRAMS**

### **FINAL STUDY REPORT**

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## Executive Summary

### 1. Introduction

The Agribusiness Initiative (aBi) is one of the three components of the U-Growth Programme aimed at supporting agribusiness development in the private and agricultural sector to achieve the objective of the Government of Uganda's (GOU) Competitive and Investment Climate Strategy (CICS). This component is managed by the Agricultural Business Initiative Trust (aBi Trust), a registered corporate body under the Trustees Incorporation Act, Caption 165, founded jointly by the governments of Uganda and Denmark in 2010. The primary objective of the aBi component is building a self-sustaining export-led economy in which the benefits are shared by all Ugandans. This component has three interrelated sub-components, namely; (1) Value Chain Development (VCD), (2) Financial Service Development (FSD), and (3) Cross cutting Gender for Growth (G4G), Green Growth, Social Responsibility and Rights based approaches. Through these three sub-components, aBi Trust is mandated to support the private sector actors to increase their contribution to the agricultural sector by increasing market competitiveness, and land and labor productivity; and by so doing contribute to poverty reduction through economic growth, wealth and employment creation.

aBi Finance Limited (originally known as Agribusiness Loan Guarantee Company—ALGC) is the investment arm of aBi Trust and supports the same development objectives as aBi Trust. It is a company limited by guarantee and its Memorandum of Association allows it, among other things to: (1) Provide funding to aBi Trust to enable it meet a portion of its operational costs in a sustainable manner; (2) Promote the provision of credit facilities to agricultural based small and medium sized enterprises through availing Guarantee schemes and Lines of Credit to financial institutions for on lending to Agribusiness Enterprises; and (3) Manage funds including but not limited to endowment funds and funds to indemnify guarantee risks.

In fulfillment of the mandate to promote the provision of credit facilities to agricultural SMEs, aBi Finance collaborates with the sub-components of aBi Trust to increase the availability and use of financial services needed for wealth creation through wider and deeper delivery mechanisms. aBi Finance provides cross-cutting support to FSD through a non-profit loan guarantee scheme (LGS) and Line of Credit (LOC) for on-lending to agribusiness enterprises. The specific targets of aBi Finance's LGS and LOC programs are to: (1) Double agriculture's share of the participating banks loan portfolio; (2) Increase term lending to SME agribusinesses threefold; (3) Create an efficiently run loan guarantee company where the loss rate is within international good practice; and (4) Create Employment.

### 2. Objectives and Scope of the Evaluation Study of aBi Finance Programs

The main objective of the Evaluation Study (ES) was to evaluate the performance of aBi Finance programs (LGS and LOC) over the past 3 years (September 2010 to September 2013) against set objectives and determine the extent to which intended goals have been achieved; and to recommend corrective or other measures that may be deemed necessary to achieve the main objectives. The ES undertook to evaluate performance at two levels; namely, the participating Financial Institution (FI) and the Beneficiary or Bank Clients level. At the FI level, the ES undertook to conduct an overall assessment of the program in general on (1) How has it helped the participating FI's and their clients; (2) The program's limitations and how the programs can be improved; (3) The strategy of using the guarantee and line of credit programs by the bank; and (4) How if at all, the programs have impacted FI's attitude to agriculture lending as evidenced by change in culture and operations. At the Beneficiary/Bank clients' level, the ES undertook to determine (1) What the client used the loan for; (2) Volume and value of loans enjoyed by clients from the bank prior to the current one; (3) How easy it was for the client to access these loans; (4) Whether and to what extent this has contributed to increased income for the clients.

At the FI level, participating banks were purposively sampled by program (i.e., LGS and LOC credit) in the first stage. These include FINCA and Centenary Bank for the LGS program; and Opportunity Bank, Centenary Bank and UGAFODE for the LOC Program. The guiding principle as defined by aBi Finance was to sample FIs that had implemented the programs for a long-enough period to create measurable impact of the programs on beneficiary performance. Each of the selected FIs was then requested to provide a list of their beneficiaries of agricultural loans, detailing the enterprises against which that the beneficiaries applied for loans from the FIs. It is from these lists that the enterprises with the highest number of beneficiaries were purposively selected as the focus of the ES, to ensure sufficiently large numbers of beneficiaries from which to randomly draw a large-enough sample for meaningful statistical analysis. The selected enterprises include Dairy, Banana and Sugarcane for the LOC program; and Beef Cattle fattening and Coffee for the LGS program. The associated FIs are Centenary Bank, UGAFODE and Opportunity Bank for Dairy, Banana and Sugarcane enterprises, respectively under the LOC

program; and FINCA and Centenary Bank for the Beef Cattle and Coffee enterprises, respectively under the LGS program.

The final stage of sampling involved random selection of 30 loan beneficiaries from each of the enterprise-specific list of beneficiaries to serve as Treatment farmers. In addition to Treatment (beneficiary) farmers, 10-15 non-beneficiary farmers were randomly sampled for each enterprise to serve as the Control group, for effective assessment of the impact of the loan programs **attributed** to aBi Finance. The Control farmers are basically those engaged in the same enterprises as beneficiary farmers in the same geographical location and production system; the only difference being that the Control farmers did not receive loans from partner FIs or any other FI for investing in the target enterprise. Control farmers were sampled from village-level household lists received from the LC1 Chairmen of the study villages. Determination of the sample size of FIs to participate in the study, as well as the corresponding sample sizes for Treatment (loan beneficiary) and Control (non-beneficiary) farmers was guided by time and budget constraints to the study. The plan was to have at least twice as many Treatment as Control farmers across the 5 enterprises and 2 loan programs. A total of 214 farmers (154 Treatment and 60 Control) and 5 FIs were surveyed. Out of these, 92 were under the loan guarantee program (63 Treatment and 29 Control) and 122 were under the line of credit program (91 Treatment and 31 Control). Out of the 214 sampled farmers, 46 are farmers of Coffee (31 Treatment and 15 Control); 42 are Sugarcane farmers (31 Treatment and 11 Control); 40 are for Banana (30 Treatment and 10 Control); 40 for Dairy (30 Treatment and 10 Control); and 46 are for Beef Cattle (32 Treatment and 14 Control). **Although aBi Finance is promoting expansion of financial service delivery to support agribusiness development along the entire value chain, focus of the ES was limited to farming (primary producer) enterprises to make it easier to define and find an appropriate Control group of non-beneficiaries against which to estimate the impact of the LGS and LOC programs attributed to the intervention by aBi Finance.**

### 3.0 Methodology

The ES was conducted at the FI and Bank Clients levels, using Key Informant Interviews (KII) and Household Survey (HS) methods, respectively, to gather data. The gathered data from KIIs with FIs was analyzed using descriptive methods (means, frequencies, proportions); while the HS data was analyzed using a two-pronged methodology involving descriptive analysis and quasi experimental design. Descriptive methods were used to characterize the study sample in terms of demographic composition of the sampled farmers, asset endowment (human, natural, physical, and other assets) and employment creation; and to assess beneficiary perceptions of the impact of the LGS and LOC programs on the performance of their agribusiness enterprises. Gross Margin analysis was used to estimate farmers' income from the enterprises in which they invested the loan money received under the LGS and LOC programs. The cost of borrowing was in addition to production and marketing costs was deducted from the total earning to estimate net income from the different enterprises. The quasi experimental design involved comparison of loan beneficiaries and non-beneficiaries along their "before" and "after" intervention status, using the difference-in-difference (DID) or double difference method to show evidence of impact of aBi Finance-supported intervention(attribution) on the outcomes of interest, including income (gross margins), wealth and job creation as outlined in the study objectives.

The DID method compares participants and non-participants of development interventions in terms of changes in desired outcome indicators over time, before and after the interventions. Treatment and Control farmers were asked to answer questions about the "before" aBi Finance support scenario (which requires recall) and "after" (current situation). Farmers were first asked the last time (*Season and Year*) when they produced the target crop before aBi Finance-supported interventions and after; that is in 2010 or before ("*before*"), and between 2011 and 2013 ("*after*"). These farmer-reported seasons and years then became the reference for detailed interviews on area planted to the crop, quantities and costs of inputs, quantities harvested and sold, etc., before and after aBi Finance-supported interventions. To estimate the attributable changes to aBi Finance support, the difference between the before and after scenarios for an outcome indicator (e.g., income) was computed separately for the Treatment and Control farmers. This is the first difference. The second difference (attributable change) was obtained by subtracting the first difference for the Control farmers from the first difference for the Treatment farmers. Difference of mean tests (T-tests) were conducted on income, asset holding and value of loans received to determine if these differ significantly between the before and after scenarios.

### 4.0 Study Findings at the Participating Financial Institutions (FI) Level

At the FI level, evaluation of the impact the aBi Finance programs was undertaken in four FIs, namely; Centenary Bank, Opportunity Bank, FINCA and UGAFODE. The corresponding enterprises against which farmers received

loans from these FIs are Dairy and Coffee; Sugarcane; Beef Cattle Fattening; and Banana, respectively.

#### *4.1 Centenary Bank (CB)*

CB has a deliberate strategy to grow its focus on the agriculture sector. The sector has a target allocation of 20% of the bank's total loan portfolio, and CB has specially tailored agriculture loan products. CB operates both the LGS and LGS programs supported by aBi Finance; and aBi Finance-supported loans account for about 22% of the total agriculture portfolio.

Agriculture lending has continued to grow over the years, more than doubling, from Ush 55bn in 2009 to over Ush 114bn in 2013, which accounts for about 17% of the total bank lending portfolio. The significant growth notwithstanding, the portfolio quality has remained low (below 3%), which is a testimony of low risk and prudent credit appraisal process. With the LOC and LGS programs in place, CB has been able to manage its risk, maintaining the portfolio at risk (PAR)<sup>1</sup> within acceptable levels. The hitherto assumed fears of high risk associated with agricultural lending have been allayed, and there has been an increased appetite for agriculture lending.

At CB, the loan period and repayment plan is dependent on the nature and season of the agricultural activity to be financed. Key features of agriculture loan offerings include: (1) The loan period for working capital purpose is up to a maximum of 12 months, but development/investment loans may exceed 12 months;(2) There are no principal loan repayments during the grace period except for the interest: and; (3) The loan is repayable through equal installment payments whose amounts are dependent on the projected cash flow of the agricultural activity.

#### *4.2 UGAFODE*

UGAFODE has specially tailored agricultural loan products, designed to finance active rural farmers and SMEs in beef cattle fattening, crop production, dairy, poultry, livestock breeding, produce-marketing, processing, and transportation. The minimum loan amount is Ush 100,000 with subsidized interest rate of 25% p.a. compared to other products with average rates of 30% p.a.

UGAFODE only operates the LOC and not the LGS program of aBi Finance, and because of aBi Finance's support, agriculture lending at UGAFODE has continued to grow over the years. The total outstanding portfolio for agriculture is now over Ush 6.9bn, which accounts for about 39% of the total bank lending portfolio. aBi Finance-supported loans account for about 20% of the total agriculture loan portfolio. Agriculture lending has been significant in the western region branches of UGAFODE (along the cattle corridor), and the agriculture loan portfolio has increased by close to 700% from Ush 900m in 2009 to over Ush 6.9bn in 2013.

UGAFODE provides flexible financing terms to its clients in the agricultural sector. For loan advances below Ush 2m, UGAFODE can accept land sales agreements. Inherited land can be used with consent from LCs and family members. In case of loan default and need for loan recovery, the company encourages other family members to buy the said land especially when they are co-guarantors. Farmers are also encouraged to form groups to co-guarantee each other.

UGAFODE structures its loan repayments on a selective basis, depending on the respective farmers' cash-flow requirements and purpose of the loan, but agriculture lending is predominantly short-term (loan tenure of 12 months and below). There are 3 major repayment plans monthly, quarterly and termly (3 times a year). Despite the seven-fold increase in the agriculture loan portfolio cited earlier, the portfolio risk has remained low, with PAR standing at 3.5% (compared to 6% of the overall portfolio), which is a testimony of low risk and prudent credit appraisal process. However, threats and risk associated with agricultural production mainly due to unpredictable weather patterns has continued to hurt farmers especially in the absence of affordable crop insurance policies. The region has recently been badly hit by the bacterial banana wilt (BBW) and hailstones that affected tea production.

#### *4.3 Opportunity Bank Limited (OBL)*

OBL initially hinged its agriculture portfolio to supporting sugarcane growing in the Busoga region. The initial plan was to form a linkage with Bugiri Sugar Factory, however, due to delay in the factory take-off, linkage was finalized with Kaliro Sugar. OBL is considering pioneering another linkage with sorghum growers. Agricultural lending accounts for 19% of the total bank portfolio of Ush 35.5bn. Agricultural lending suffered slowed growth

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<sup>1</sup> PAR based on 30 day basis

between 2012 and 2013 largely due to the delayed take-off of the sugar project. Nevertheless, OBL was able to achieve significant growth in its agriculture portfolio from Ush 0.371bn (1.7% of the total bank portfolio) in 2010 to Ush 6.8bn in 2013 (19% of the total bank portfolio).

OBL offers flexible terms to borrowers in the agricultural sector, which include (1) Lending to farmers and other actors along the agribusiness value chains; (2) Lending to groups, individuals or SMEs; (3) Scheduling repayments according to the client's cash-flow; (4) Allowing grace periods especially during the gestation period; and (5) Accepting loan repayment to be made from other non-agriculture income sources. Due to the initial challenges faced by OBL in managing its portfolio (e.g., the delayed take-off of the sugar project), the bank's PAR rose to a high of 16%. However, with support from aBi Finance, the risk has progressively reduced to 12.1% as at end of 2013. Currently the bank pays the whole guarantee fee charge without onwards transfer to the farmers, however, to ensure sustainability it would be prudent for this charge to be lowered or shared with the farmers. Accessibility to credit by farmers has been improved since the OBL is now able to provide lending for both individuals and groups through cross guarantees; and to accept Kibanja collateral with a maximum loan of up to Ush 10m.

#### 4.4 FINCA

FINCA Uganda operates only the LGS program of aBi Finance, and has a portfolio guarantee limit of Ush 4bn. FINCA has witnessed rapid growth in its agriculture portfolio, which more than doubled from Ush 6.1bn in 2010 to Ush 14bn as at end of 2013. However the sectors share of the total portfolio increased only marginally during this period from 21% to 23%. FINCA was originally not keen on lending to agriculture due to the perceived high risk, however, support from aBi Finance enabled FINCA to expand lending to agriculture. FINCA loan tenures are tailored to the customer's cash-flow projections, including monthly loan repayment or a structured repayment where the customer can pay on a quarterly basis (every 3 months) or termly (every 4 months). However the objective is to keep the repayment period short (i.e., loans are predominantly short-term) and coincident with the harvesting period. The overall risk profile for the agriculture portfolio has been within the acceptable levels; but the PAR for agriculture is at 3.1%, which is slightly above the overall portfolio for FINCA of 2.58%.

#### 4.5 aBi Finance Program Efficiency

Evaluation of program efficiency was intended to determine if aBi Finance has through its LOC and LGS programs been able to provide the intended services to the stakeholders within acceptable means and best practice.

##### 4.5.1. Line of Credit (LOC)

Under the LOC program, funds are provided by aBi Finance to partner FIs for onward lending to clients across the selected value chains. As at end of 2013 there were 11 partner FIs implementing the LOC program, and the total outstanding amount was Ush 35bn, which is 59% above the target of Ush 22bn. Total loan disbursements by the LOC program as at end of 2013 were Ush 88bn spread across 32,788 clients, with an average loan size of about Ush 2.7m. However, this fell short of the Line of Program (LOP) target of 35,000 beneficiaries. Majority (66%) of LOC program beneficiaries are male, and the proportion of female beneficiaries is below the LOP target of 40%. Despite the partner FIs having branches spread across the whole country, over three quarters (78.1%) of the LOC program beneficiaries are from Western and Central regions of Uganda, with the Northern region accounting for only 7.4% of the beneficiaries.

##### 4.5.2. Agribusiness Loan Guarantee Scheme (LGS)

The volume of loans disbursed under the LGS program has grown significantly over the past 4 years, with outstanding loans totaling Ush 40bn and the claims settled are less than 1%. As at end of 2013 the leverage ratio<sup>2</sup> was at 99%, which suggests more room for growth within the scheme. The total amount outstanding significantly grew from about Ush 8.3bn (2010) to Ush 40.9bn as at end of 2013. Between 2010 and 2013, a total of 63,026 new agribusiness loans were underwritten, falling slightly short of the LOP target of 64,000, which had been revised upwards from 30,000 mid way the program. The number of new beneficiaries per year grew from about 4,000 in 2010 to about 10,000 new beneficiaries in 2013. This is despite a drop in the number of new loans being disbursed which has been declining since 2011, although the average loan size has more than doubled from Ush 2.2m to Ush 4.6m due to the bigger sizes of loans being offered. The claims settled over the LOP period amounted to USh 355m which was only 0.4% of the fund as at 31<sup>st</sup> December 2013. The guarantees at risk ratio as at 31<sup>st</sup> December 2013 was 3.3%, which is within the 10% limit.

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<sup>2</sup> Leverage ratio is value of credit generated per unit value of the guarantee fund



This epic performance notwithstanding, the FIs implementing aBi Finance’s programs raised a few points of concern, which include:

- (1) **Insufficient Limits:** FIs running the loan guarantee scheme have often exhausted their guarantee limits, which causes delays in loan disbursements by the FIs as they use loan repayments to get around the utilization limits.
- (2) **Reporting Requirements:** Some of the FIs have found it a challenge to ensure that data sent to aBi Finance is accurate and timely, requiring back and forth communication and delays in reporting.
- (3) Noted during the ES visits to the FIs was the paucity of technical skills in the field of agricultural financing especially at the branch level, which causes delays in designing appropriate loan products for different agribusiness value chains.

#### 4.6 Loan Additionality

There are varying perceptions by the various FIs on the impact of aBi Finance’s programs on loan additionality.

For large FIs (CB and FINCA) with a big customer base, deposits and funding from various stakeholders, loan approval is based on the strength of the projected customer cash-flow, and the LGS and LOC is treated as a secondary/additional risk mitigating factor. Although Full Additionality is not explicitly tracked and analyzed by the FIs, the general impression is that majority of the small loan applications (below Ush 5m) without registered securities have been granted because of aBi Finance’s programs. Partial additionality is also not tracked on a regular basis, and the FIs expressed preference for espousing the full additionality principle in practice.

For small FIs (UGAFODE and OBL) with insufficient funding and small customer deposits, the LGS and LOC programs have critically influenced the credit approval process. Majority of the smaller loans without registered security have been given based on aBi Finance’s programs; while registered security is required even with the guarantee in place for bigger loan amounts usually above Ush 5m. Similar to large FIs, the preferred practice by smaller FIs is to operate on the full additionality principle as opposed to partial additionality.

### 5.0 Study Findings at the Farmer Level

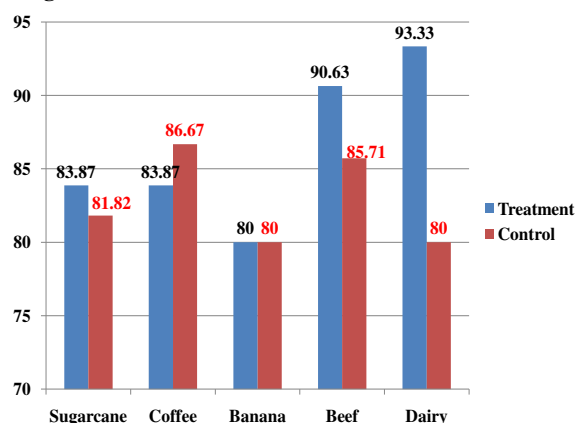
#### 5.1 Gender Profile of the Sampled Farmers

-Majority (80% and above) of the sampled farmers, both Treatment and Control are male (see Figure E1), indicating that the enterprises targeted by the evaluation study are male dominated, likely because of their commercial value.

-Because of the male dominance of the studied enterprises, agricultural lending to these enterprises is also male-dominated, as reflected in the large proportions of male borrowers (Treatment farmers) for all enterprises.

-On top of striving to meet the LOP target of 40% female beneficiaries, it appears that more needs to be done to ensure that female smallholders do not miss out on the welfare-improving opportunities created by the LOC and LGS programs.

**FigE1: % Male Farmers/Male-Headed Households**

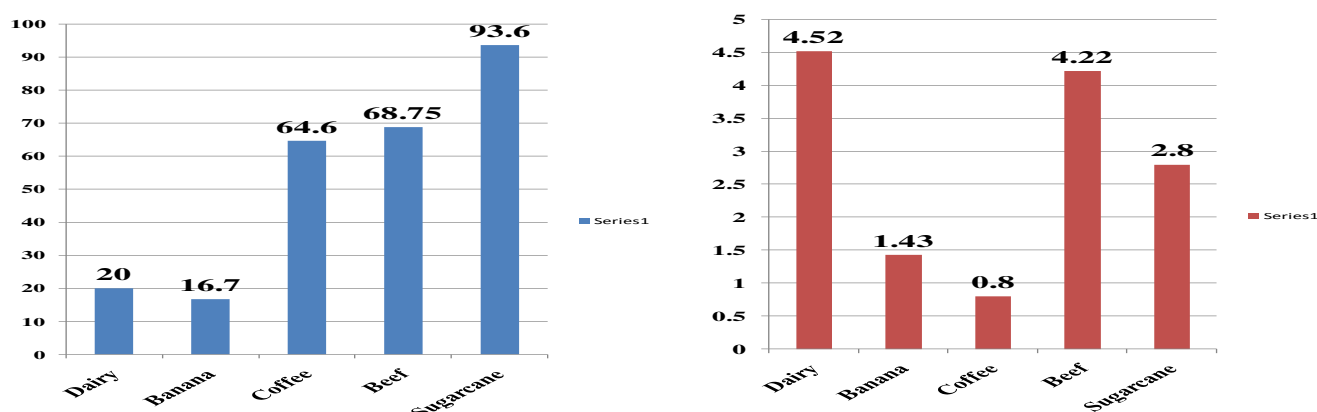


#### 5.2. Volume and Value of loans and Tenure for Loans Received Between 2010 and 2013

Figure E2 below shows that the proportion of Treatment farmers (borrowers) receiving agricultural loans from FIs operating aBi Finance-supported LOC and LGS programs increased by between 16.7 percentage points for banana (UGAFODE) to 93.6 percentage points for sugarcane (Opportunity Bank) between 2010 and 2013. With the exception of sugarcane, 2013 is the year when the largest proportion of borrowers (66.7% to 93.6%) received their most previous loan from the participating FI. For sugarcane, 96.77% of the borrowers received their last loan from Opportunity Bank in 2011, and the proportion dropped to 3.23% thereafter in 2012 and 2013 because of the failed plan to link farmers with Bugiri Sugar. The average value of agricultural loans received by the borrowers between 2010 and 2013 also increased by between Ush 0.8 million for Coffee and Ush 4.52 Million for the Dairy enterprise (Fig. E2). **This apparent annual increase in the number of farmers taking agricultural loans and the size of loans taken suggest a positive impact of aBi Finance’s loan guarantee and line of credit programs on agricultural lending and borrowing.**

The size of loans given to majority of farmers (above 80%) in the surveyed crop enterprises were in the range of Ush 5million and below; while majority (close to 90%) of their cohorts in the livestock enterprises took bigger loans in the range of Ush 2-10million (see Table E1). On average, loan tenure decreased by half a month for Centenary Bank borrowers (Coffee and Dairy enterprises), but increased by an average of 2.3 months for UGAFODE, 2.8 months for FINCA; and 6.2 months for Opportunity Bank(see Table E2). Futher analysis of loan tenure shows that majority (80% and above) of loan beneficiaries in the coffee, beef, dairy and banana enterprises received short-term loans (12 months and below)(see Table E1). It is only in the sugarcane enterprise for which majority of farmers (83.3%) received mid-term loans (12-24 months); and for which the majority of farmers (96.77%) are first time borrowers from Opportunity Bank. For the rest of the enterprises and their respective FIs, majority of the farmers (62.25% to 93.33%) are repeat borrowers.

**Fig. E2 Changes in Credit Use and Loan Values Received by Farmers**  
**Change in % Farmers Receiving Loans**      **Change in Value of Loans (000'000 Ush)**



**Table E1: Most Prevalent Loan Values and Loan Periods**

Enterprise	Most Prevalent Loan Value Range (000'000 Ush)	% Borrowers whose loan value is in the range	Most Prevalent Loan Period Range (Months)	% Borrowers in loan period range
Sugarcane	≤ 5	86.0	12 - 24	83.3
Beef Cattle	2 – 10	88.0	≤ 12	84.0
Coffee	≤ 2	96.5	≤ 10	80.0
Dairy	3 -10	86.7	10 - 12	88.46
Banana	≤ 5	90.0	6-12	85.0

**Table E2. Tenure of Loans (Months) on loans given by partner FIs between 2010 and 2013**

Enterprise	2013	2012	2011	2010	Change in Loan Tenure 2010-2013
Centenary Bank for Coffee	8.64 (2.28)	9.10 (2.39)	8.71 (2.76)	9.11 (2.15)	-0.5
Centenary Bank for Dairy	12.89 (2.74)	13.55 (3.46)	11.95 (2.06)	13.5 (4.72)	-0.6
FINCA for Beef-Cattle Fattening	12.32 (4.29)	16.02 (5.29)	10.44 (4.10)	9.50 (4.33)	2.8
Opportunity Bank for Sugarcane	24.00	-	17.77 (4.44)	-	6.2 <sup>3</sup>
UGAFODE for Banana	12.38 (2.46)	10.85 (1.98)	10.60 (2.26)	10.13(2.45)	2.3

### 5.3 Accessibility to Financial Services and Interest Rates Charged by Partner FIs

With the exception of Sugarcane in 2011, the majority of the respondents (over 80%) said it was easy or very easy to access loans(see Table E3). For Sugarcane, the percentage of borrowers claiming to have easily orvery easily

**Table E3: Borrowers' Perceptions on Ease of Accessing Loans**

Enterprise	% Borrowers Claiming Easy or Very Easy Access to Loans			
	2013	2012	2011	2010
Coffee	87.1	90.48	85.72	100
Dairy	85.18	86.2	100	95
Beef-Cattle Fattening	83.87	92.6	88.24	88.88
Sugarcane	50.0 (N=2)	-	34.38	83.3
Banana	92.31	87.5	81.48	73.68

accessed loans decreased from 83.3% in 2010 to 34.38% in 2011, the year when the majority of the borrowers received loans from Opportunity Bank (96.77%) for investing in Sugarcane production. This is attributed to the

<sup>3</sup> For Sugarcane, the change in loan tenure is for the years 2011 and 2013.

failed plan by Opportunity Bank to link farmers with Bugiri Sugar, led to slowed growth of the bank’s agricultural portfolio.

Distance from the homes of the sampled farmers to the nearest banking institution decreased for all enterprises except Coffee(see Table E4), but by a bigger margin among loan beneficiaries than non-beneficiaries, **implying that financial services were brought closer to the farmers between 2010 and 2013—thanks to aBi Finance’s support to financial institutions operating its LOC and LGS programs.**

**Table E4. Average distance (km) from home to nearest banking institution**

Enterprise	Distance (km) among Beneficiaries			Distance (km) among Non-Beneficiaries			Attributable Change to aBi Finance’s Programs (DID) in Km
	2013	2010	Change in Distance (km)	2013	2010	Change in Distance (km)	
<b>Coffee</b>	35.39(14.61)	35.03(15.58)	0.36	36.16 (14.25)	33.63 (16.02)	2.53	-2.17
<b>Dairy</b>	13.94(12.95)	15.44(13.91)	-1.5	11.80 (9.98)	12.10 (9.79)	-0.3	-1.20
<b>Beef Cattle</b>	22.70(19.47)	41.75(34.42)	-19.05	33.41(25.34)	51.13 (34.98)	-17.72	-1.33
<b>Sugarcane</b>	8.11 (6.31)	13.38 (8.99)	-5.27	12.31 (7.90)	12.40 (8.30)	-0.09	-5.18
<b>Banana</b>	5.18 (5.21)	6.31 (6.81)	-1.13	5.43 (6.05)	6.28(5.99)	-0.85	-0.28

All partner FIs reduced the interest rates charged, with UGAFODE reducing by the highest margin of 8.3 percentage points; followed by FINCA at 6.4 percentage points; Centenary Bank (for the Dairy enterprise) at 4.2 percentage points; Opportunity Bank at 1.97 percentage points; and Centenary Bank (for the Coffee enterprise) at 0.5 percentage points.

**Table E5. Interest Rates (%) on loans given by partner FIs in aBi Finance’s Programs between 2010 and 2013**

Enterprise	2013	2012	2011	2010	Change in Interest Rates 2010-2013
<b>Centenary Bank for Coffee</b>	22.43 (5.37)	24.76 (4.65)	20.57 (4.70)	22.89 (7.29)	-0.5
<b>Centenary Bank for Dairy</b>	29.89 (1.76)	30.93 (3.29)	31.81(3.94)	34.05(5.47)	-4.2
<b>FINCA for Beef-Cattle Fattening</b>	25.64 (8.26)	24.57 (4.61)	26.00 (4.24)	32.00 (6.93)	-6.4
<b>Opportunity Bank for Sugarcane</b>	34	-	35.97 (3.41)	-	-1.97 <sup>4</sup>
<b>UGAFODE for Banana</b>	27.3 (3.06)	28.8 (5.00)	35.4 (1.85)	35.6 (1.55)	-8.3

#### 5.4 Employment Creation at the Farmer Level.

-Very large proportions of loan beneficiaries in the Coffee (100%) and Sugarcane enterprises (96.78%) spent part of the loan money on hiring labor and, thus, creating employment. However, much smaller proportions of loan beneficiaries in the Dairy (23.3%), Banana (20%) and Beef-Cattle (9.38%) enterprises used the loan money on employment creation.

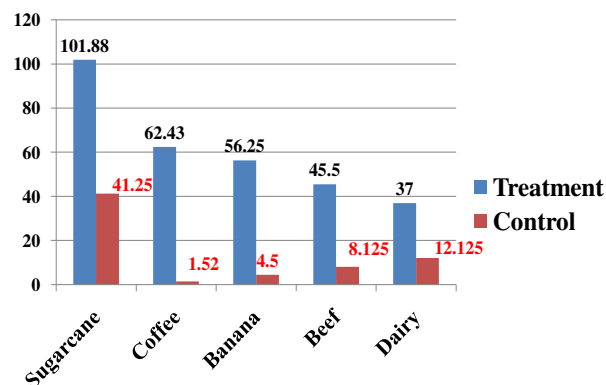
-Both permanent and short-term workers were employed by the sampled farmers in all enterprises, but the farmers employed more short-term than permanent workers; and on average, Treatment farmers employed more workers than Control farmers

-Short-term jobs/employment were converted to fulltime equivalents (FTEs) by summing up the total number of days worked by the short-term workers and dividing it by 240—the number of days one must have worked to be considered fulltime.

-The total number of FTE jobs created by the sampled farmers was 303 for Treatment and 67.5 for Control farmers.

-Figure E3 shows that Treatment farmers in non-crop enterprises (dairy and beef) created fewer jobs than their cohorts in the crop enterprises (banana, coffee and sugarcane), because additional stock in the livestock enterprises doesn’t directly translate into additional labor requirement

**Fig E3. No. FullTime Equivalent (FTEs) Jobs Created at Farm level**



#### 5.5 Average income (GM per farmer) and income growth by Enterprise

For all enterprises, sales increased by a bigger magnitude among Treatment than Control farmers, for whom sales actually dropped in the milk and sugarcane enterprises (Fig. E4d). This led to a large net increment in sales for all enterprises attributed to aBi Finance. Selling prices dropped significantly for coffee, but by a bigger margin among

<sup>4</sup> For Sugarcane, the change in interest rates is for the years 2011 and 2013.

Treatment than Control farmers; while prices rose for the rest of the enterprises by a bigger margin among Treatment farmers, save for milk.

Fig E4c. Sales and Selling Price of supported Enterprises



Fig. E4d. Change in Sales and Selling Price of supported Enterprises

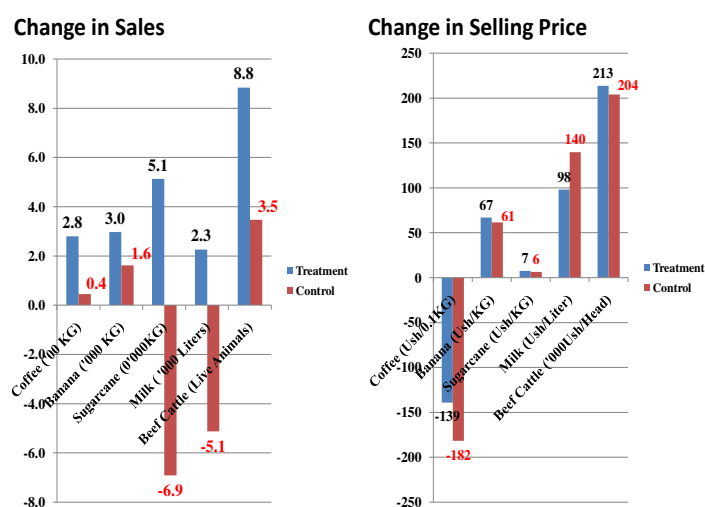


Fig 5a. Average Income in Millions USH (GM Per Farmer) by Enterprise

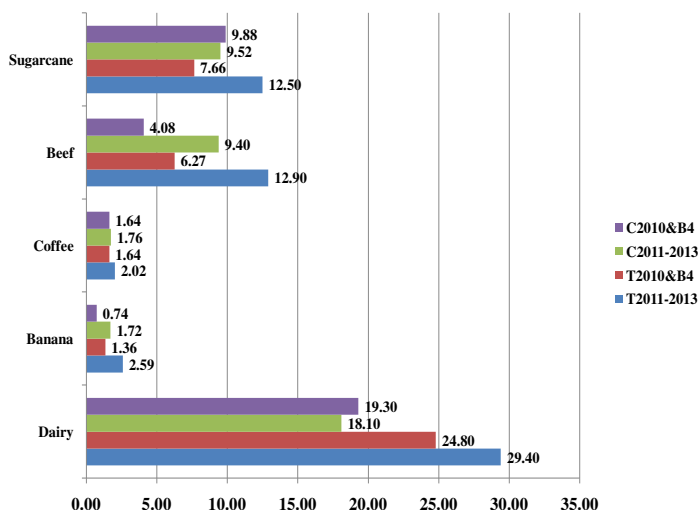
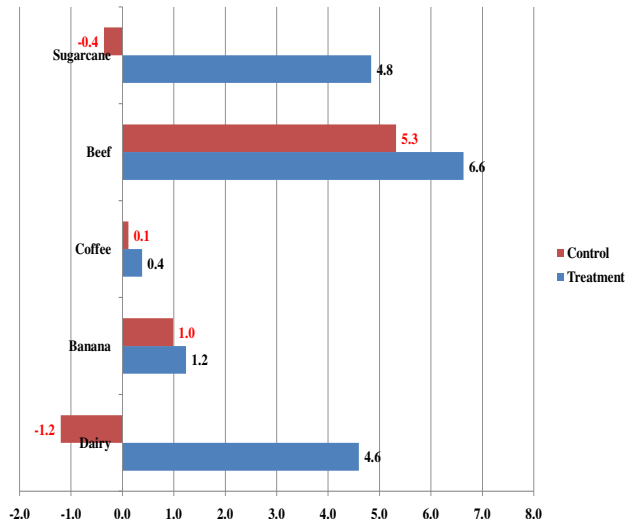


Fig 5b. Change in Average Income in Millions of USH (GM Per Farmer) by Enterprise



The findings on income (measured as Gross Margin) show that average income (GM) per farmer increased significantly among Treatment farmers following receipt and use of agricultural loans from partner FIs. (Fig E5b). Among Control farmers, however, income either increased by a lower margin than for Treatment farmers (in banana, coffee and beef enterprises) or dropped in the dairy and sugarcane enterprises. **Thus, there was a significant increase in farmer income in all enterprises attributed to aBi Finance's support.**

Fig 5c. % Farmers Showing Income Growth by Enterprise

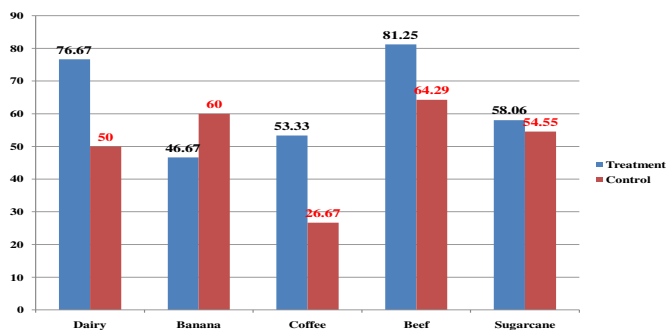
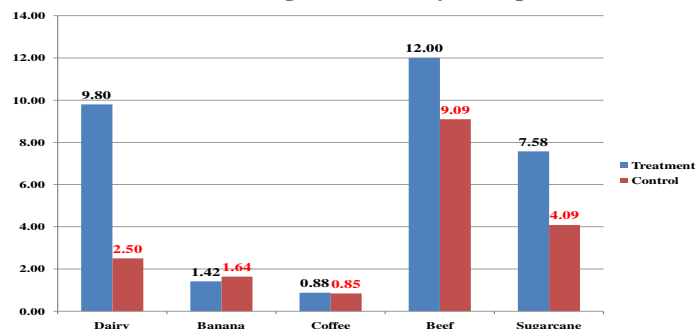


Fig 5d. Average Income Growth in Millions of USH for Farmers with Positive Change in Income by Enterprise

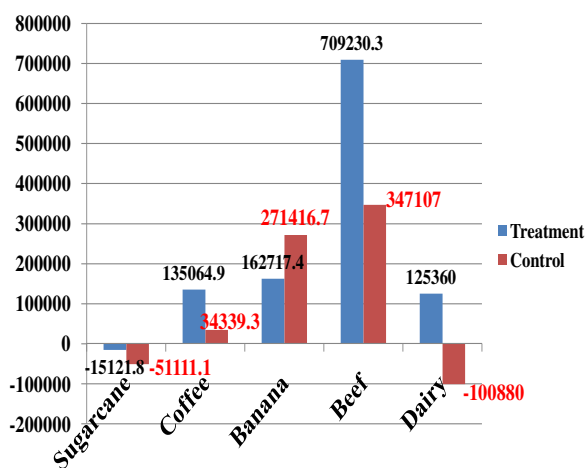


As indicated in *Figure E5c* above, the proportion of farmers showing income growth following support from aBi Finance was higher among farmers in the Treatment than Control category, except for banana. *Figure E5d* shows that the average income growth for those whose income grew (*Fig E5c*) was significantly higher among Treatment than Control farmers.

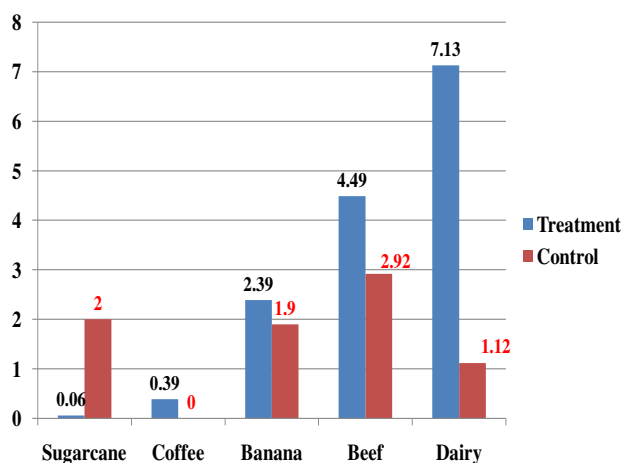
### 5.6. Wealth Creation at the Farm-level

To determine the impact of aBi Finance programs on wealth creation among loan beneficiaries, the sampled farmers were interviewed on the number and value of various assets held in 2011 (at the onset of aBi Finance programs) and 2013, when the ES was conducted. The ES findings show that sampled farmers accumulated various forms of assets (farm equipment, transport and communication equipment, land and livestock), but with Treatment farmers (*borrowers*) out-performing their cohorts in the Control category (*non-borrowers*) for all agribusiness enterprises, except Sugarcane.

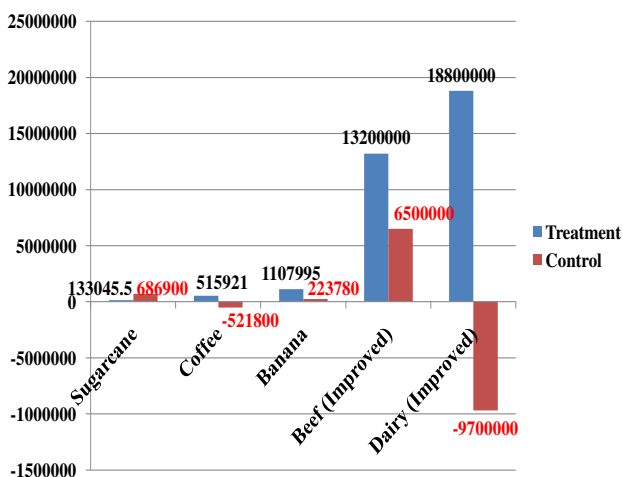
**FigE6a. Change in Value (Ush) of farm equipment (2011-2013)**



**FigE6b. Change in landholding in Acres (2011-2013)**



**Fig E6c. Change in Value of Livestock (2011-2013)**



-With the exception of sugarcane, the value of farm equipment held by the sampled farmers increased by a greater magnitude among Treatment than Control farmers. For sugarcane, the value of farm equipment dropped in both farmer categories but by a greater magnitude among Control than Treatment farmers.

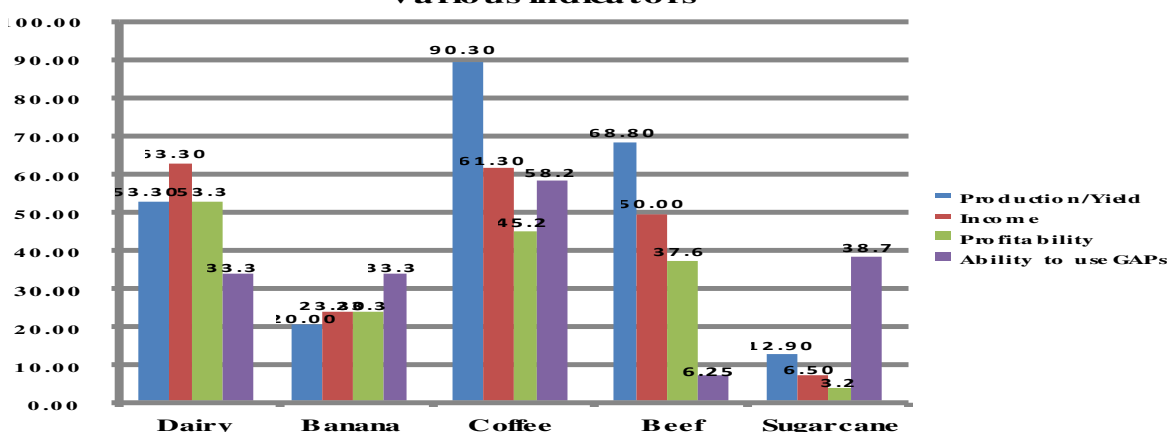
-Again, with the exception of sugarcane, landholding and value of livestock held by sampled farmers increased by a greater magnitude among Treatment than Control farmers, for whom value of livestock actually dropped in the dairy and coffee enterprises. For sugarcane, the value of livestock and landholding increased in both farmer categories but by a bigger magnitude among Control than Treatment farmers

-As a result, there was a net increase in asset holding and value of assets held during the intervention period directly attributed to aBi Finance’s support in financial service delivery

### 5.7 Farmer Perceptions on Borrowing for Farming

Loan beneficiaries (Treatment farmers) were further probed for their perception on how and to what extent loans from the participating FIs had benefited their enterprises in terms of production, income, profitability and ability to use good agricultural practices (GAPs), among other things. This was done to gain insight on how they felt about borrowing money for farming; if they think it is beneficial or not.

**Fig E7. % Farmers Reporting Positive Impact of Borrowing on various indicators**



Large proportions of Dairy, Beef and Coffee farmers said borrowing had significantly increased production, income, profitability and ability to apply better farming practices (see Fig. E7) because the loan money was used to purchase modern inputs and technologies, animals, land and equipment, as hiring additional labor to sustain their growing enterprises. Lower proportions of banana and sugarcane farmers felt agricultural borrowing was beneficial. For banana, this is likely because of the problem of banana wilt, which has compelled many banana farmers to borrow for Tea and Coffee enterprises instead of banana, as shall be shown later. For sugarcane, this is likely because of the failed plan by Opportunity Bank to link farmers with Bugiri Sugar, which made aBi Finance-funded portfolio to register 100% NPA at the initial stages; leading to slowed growth of Opportunity Bank's agricultural portfolio in 2012 and 2013.

## 6.0. Concluding Remarks and Recommendations

This study depended on recall for information on respondents' farming activities, investments and outcomes before intervention by aBi Finance (2010 or before). Although various means were used to help farmers to recall the events as they happened before intervention (for example by using the last presidential election period as a reference for the pre-intervention period), the memories of some could have been stretched beyond their capacity to recall. **It is important therefore, that future evaluation efforts of aBi Finance programs review clients' files at the partner FIs to pick any information that can be used as baseline data for impact assessment. aBi Finance also needs to emphasize to partner FIs the importance of collecting such information from all loan applicants; and to guide them on how to do this to ensure collection of usable information.**

Some of the visited FIs during the ES, particularly at the branch level seemed to be lacking knowledge on how the Agribusiness loan guarantee programs operate. While the aBi Trust clearly articulates its three inter-related sub-components (VCD, G4G and FSD) and the subsequent expected outputs of each subcomponent, there is lack of clear understanding of the operation of LOC and LGS programs of aBi Finance.. This was mainly observed at the lower branch level, and can be attributed to the paucity of technical skills in agriculture lending and operation of credit guarantee schemes, **hence the need for technical capacity strengthening at the branch level.**

The study findings show that majority (80% and above) of the sampled farmers, both Treatment and Control are male, indicating that the enterprises targeted by the evaluation study are male dominated, likely because of their commercial value. Because of the male dominance of the studied enterprises, agricultural lending to these enterprises is also male-dominated, as reflected in the large proportions of male borrowers (Treatment farmers) for all enterprises. **On top of striving to meet the LOP target of 40% female beneficiaries, it appears that aBi Finance needs to do more to ensure that female smallholders do not miss out on the welfare-improving opportunities created by the LOC and LGS programs.**

For all surveyed enterprises, commodity sales increased by a bigger magnitude among Treatment than Control farmers, and this led to a large net increment in sales for all enterprises attributed to aBi Finance. **However, selling prices dropped significantly for coffee, but by a bigger margin among Treatment than Control farmers; while prices rose for the rest of the enterprises by a bigger margin among Treatment farmers, save for milk. The significant fall in coffee prices had a significant negative effect on the impact of the aBi Finance programs on the borrowing farmers.**



Average income per farmer from the surveyed enterprises for which loans were given by FIs increased significantly among Treatment farmers (borrowers) after receiving aBi Finance-guaranteed loans. Among Control farmers (non-borrowers), however, income either increased by a lower margin than for borrowers (in banana, coffee and beef enterprises) or dropped in the dairy and sugarcane enterprises. **Thus, there was a significant increase in farmer income in majority of the enterprises attributed to aBi Finance's support. The proportion of farmers showing income growth after taking aBi Finance-guaranteed loans was higher among farmers in the Treatment than Control category, except for banana; and the average income growth for those whose income grew was significantly higher among borrowers than non-borrowers, except for banana. This underscores the need for expanding the aBi Finance programs to increase geographical coverage and the number of supported commodities, as a way of achieving the development objective of aBi Trust and aBi Finance of building a self-sustaining export-led economy in which the benefits are shared by all Ugandans.**

Large proportions of the sampled borrowers in the Dairy, Beef and Coffee enterprises said borrowing had significantly increased their production, income, profitability and ability to apply better farming practices because the loan money was used to purchase modern inputs and technologies, animals, land and equipment, as hiring additional labor to sustain their growing enterprises. Lower proportions of banana and sugarcane farmers felt agricultural borrowing was beneficial. For banana, this is likely because of the problem of the bacterial banana wilt (BBW), which has compelled many banana farmers to borrow for Tea and Coffee enterprises instead of banana. **This underscores the need for availing affordable crop insurance services to farmers to increase their confidence to borrow for investing in agriculture.** For sugarcane, this is likely because of the failed plan by Opportunity Bank to link farmers with Bugiri Sugar, which led to slowed growth of Opportunity Bank's agricultural portfolio in 2012 and 2013.

The proportion of Treatment farmers (borrowers) receiving agricultural loans from FIs operating aBi Finance-supported LOC and LGS programs increased by between 16.7 percentage points for banana (UGAFODE) to 93.6 percentage points for sugarcane (Opportunity Bank) between 2010 and 2013. The average value of agricultural loans received by the borrowers between 2010 and 2013 also increased by between Ush 0.8 million for Coffee and Ush 4.52 Million for the Dairy enterprise. **This apparent annual increase in the number of farmers taking agricultural loans and the size of loans taken suggest a positive impact of aBi Finance's loan guarantee and line of credit programs on agricultural lending and borrowing.**

The size of loans given to majority of farmers (above 80%) in the surveyed crop enterprises were in the range of Ush 5million and below; while majority (close to 90%) of their cohorts in the livestock enterprises took bigger loans in the range of Ush 2-10million. Also, majority (80% and above) of loan beneficiaries in the coffee, beef, dairy and banana enterprises received short-term loans (12 months and below). It is only in the sugarcane enterprise for which majority of the borrowers (83.3%) received mid-term loans (12-24 months); and for which the majority (96.77%) were first time borrowers from Opportunity Bank. For the rest of the enterprises and their respective FIs, majority of the sampled farmers (62.25% to 93.33%) are repeat borrowers. **The ES didn't ask about the adequacy of the borrowed funds, but these figures seem to suggest that agricultural lending currently favors non-crop enterprises, yet majority of the smallholders depend on crop farming for their livelihood. Future aBi Finance programs may need to investigate and attempt to address this disparity.**

The average distance from the homes of the sampled farmers to the nearest banking institution decreased by a bigger magnitude among Treatment farmers, **implying that financial services were brought closer to the farmers during this period—thanks to aBi Finance's support to financial institutions. Also, with the exception of Sugarcane in 2011, the majority of the respondents (over 80%) said it was easy or very easy to access agricultural loans from the partner FIs, which is further evidence of increased accessibility to financial services.**

**At the FI level, the study findings show that agricultural lending has continued to grow, doubling or more than doubling between 2009 and 2013 for all the surveyed FIs except Opportunity Bank, where agricultural lending slowed down in 2012 and 2013 because of delayed take-off of the planned linkage program with Bugiri sugar. The significant growth notwithstanding, the portfolio quality has remained low, which is a testimony of low risk and prudent credit appraisal process. With the credit guarantee scheme in place, the FIs have managed their risk, to the extent that NPAs for agriculture are utmost half of the branch-level averages. This has changed the perception of agriculture as being high risk, leading to an increased appetite for agricultural**

**lending. *The general perception and fears of high risk in agriculture lending has been allayed since in most FIs, the agriculture sector has a lower NPA than the overall portfolio average. Also, due to the informal nature of most borrowers, FIs have relaxed their collateral requirements and this has improved credit accessibility to farmers as the FIs are now able to provide lending without registered securities.***

However, challenges still remain in form of limited capacity at the branch level to efficiently operate credit guarantee schemes; over utilization of the current limits which results in reduced lending capacity as the bank waits for loan repayments to provide further lending capacity; threats and risk associated with unpredictable weather patterns and crop diseases and pests in the absence of affordable crop insurance policies. Also, while the partnering FIs have country wide coverage, the actual loan disbursements have been skewed with a lower proportion of funds disbursed in Northern Uganda. Although our field assessment only covered the Central, Western and Eastern regions, there is a felt need to actively encourage more credit disbursement in Northern Uganda.



## **1.0 Introduction**

The Agribusiness Initiative (aBi) is one of the three components of the U-Growth Programme aimed at supporting agribusiness development in the private and agricultural sector to achieve the objective of the Government of Uganda's (GOU) Competitive and Investment Climate Strategy (CICS). This component is managed by the Agricultural Business Initiative Trust (aBi Trust), a registered corporate body under the Trustees Incorporation Act, Caption 165, founded jointly by the governments of Uganda and Denmark in 2010. The primary objective of the aBi component is building a self-sustaining export-led economy in which the benefits are shared by all Ugandans. This component has three interrelated sub-components, namely;

- (1) Value Chains Development (VCD), designed to make selected value chains more competitive and profitable, through increased production and marketing of coffee, dairy, cereals, oilseeds, pulses, horticulture products, for example;
- (2) Financial Services Development (FSD), designed to support selected financial institutions to expand and strengthen rural outreach through increased outreach and development of new financial products;
- (3) Cross cutting Gender for Growth (G4G), Green Growth, Social Responsibility and Rights based approaches.

Through these three sub-components, aBi Trust is mandated to support the private sector actors to increase their contribution to the agricultural sector by increasing market competitiveness and land and labor productivity; and by so doing contribute to poverty reduction through economic growth, wealth and employment creation.

aBi Finance Limited (originally known as Agribusiness Loan Guarantee Company—ALGC) is the investment arm of aBi Trust and supports the same development objectives as aBi Trust. It is a company limited by guarantee and its Memorandum of Association allows it, among other things to:

- (1) Provide funding to aBi Trust to enable it meet a portion of its operational costs in a sustainable manner;
- (2) Promote the provision of credit facilities to agricultural based small and medium sized enterprises through availing Guarantee schemes and Lines of Credit to financial institutions for on lending to Agribusiness Enterprises;
- (3) Manage funds including but not limited to endowment funds and funds to indemnify guarantee risks.

aBi Finance defines an Agribusiness Enterprise to be one that has more than 50% of its sales turnover in the agricultural sector and falls within one of the categories listed in Table 1 below:

**Table 1: Categories of Agribusiness Enterprises qualifying for aBi Finance’s support**

Type of Agribusiness	Examples / other comments
Individual Farmers	Primary producers (both crop & livestock)
Farmers Associations or groups	Registered as a legal entity
Traders in agricultural products	e.g. maize, coffee, milk, cattle
Transporters of agricultural products	e.g. grains, livestock
Dealers in agricultural inputs	e.g. seed, fertilizer, pesticides, planting material
Suppliers of agricultural equipment	Dealer or producer
Processors of agricultural products	e.g. dairy, slaughterhouse, grain mills
Service providers	e.g. extension work, repair of farm equipment, MFIs, Training, veterinary services

In fulfilment of the mandate to promote the provision of credit facilities to agricultural SMEs, aBi Finance collaborates with VCD and FSD sub-components of aBi Trust to increase the availability and use of financial services needed for wealth creation through wider and deeper delivery mechanisms. Its strategy is to underpin the development of the value chains supported by aBi Trust with appropriate financial services offered by aBi Finance-supported financial institutions. aBi Finance provides cross-cutting support to FSD through a non-profit loan guarantee scheme (LGS) and Line of Credit (LOC) for on-lending to agribusiness enterprises. The specific targets of aBi Finance’s LGS and LOC programs are to:

- (1) Double agriculture’s share of the participating banks loan portfolio,
- (2) Increase term lending to SME agribusinesses threefold
- (3) Create an efficiently run loan guarantee company where the loss rate is within international good practice.
- (4) Create Employment

These targets are to be achieved in the form of new additional lending defined as:

- (i) Full additionality, where a loan that would not have been granted without the support of the guarantee is made.
- (ii) Partial additionality, where the size of the loan would have been significantly reduced had there not been the guarantee.

## **2.0 Objectives and Scope of the Evaluation Study (ES) of aBi Finance's Loan Guarantee Scheme (LGS) and Line of Credit (LOC) Programs**

To ensure that aBi Finance is achieving its intended goals, it is important to perform a review of the LGS and LOC programs over the past 3 years since inception (September 2010 to September 2013), with the view to evaluate performance against set objectives; and to recommend corrective or other measures that may be deemed necessary to achieve the main objectives. The Evaluation Study (ES) undertook to evaluate performance at two levels; namely, the participating Financial Institution (FI) and the Beneficiary or Bank Clients level. At the FI level, the ES undertook to conduct an overall assessment of the program in general on:

- (i) How has it helped the participating FI's and their clients,
- (ii) The programs' limitations and how the programs can be improved,
- (iii) The strategy of using the guarantee and line of credit programs by the bank,
- (iv) How if at all, the programs have impacted FI's attitude to agriculture lending as evidenced by change in culture and operations

At the Beneficiary/Bank clients' level, the ES undertook to determine:

- (i) What the client used the loan for
- (ii) Volume and value of loans enjoyed by clients from the bank prior to the current one
- (iii) How easy it was for the client to access this loan
- (iv) How or whether this has contributed to increase in clients' income

## **3.0 Sampling of Participating Financial Institutions (FI) and Program Beneficiaries**

At the FI level, participating banks were purposively selected by program (i.e., loan guarantee scheme and line of credit) in the first stage. These include FINCA and Centenary Bank for the Loan Guarantee Program; and Opportunity Bank, Centenary Bank and UGAFODE for the Line of Credit Program. The guiding principle as defined by aBi Finance was to choose FIs that had implemented the programs for a long-enough period to create measurable impact of the programs on beneficiary performance. Each of the selected FIs was then requested to provide a list of their beneficiaries of agricultural loans, detailing the enterprises that the beneficiaries purposed to invest the loan money received from the FIs. It is from these FI-supplied beneficiary lists that the enterprises with the highest number of beneficiaries were purposively selected as the focus of the evaluation study, to ensure sufficiently large numbers of beneficiaries from which to randomly draw a large-enough sample for meaningful statistical analysis. The selected enterprises include Dairy, Banana and

Sugarcane for the line of credit program; and Beef Cattle fattening and Coffee for the loan guarantee program. The associated FIs are Centenary Bank, UGAFODE and Opportunity Bank for Dairy, Banana and Sugarcane enterprises, respectively under the line of credit program; and FINCA and Centenary Bank for the Beef Cattle and Coffee enterprises, respectively under the loan guarantee program.

The final stage of sampling involved random selection of thirty (30) loan beneficiaries from each of the enterprise-specific FI-supplied list of beneficiaries to serve as Treatment farmers (see Table 2 below). In addition to Treatment farmers (loan beneficiaries), 10-15 non-beneficiaries were randomly sampled for each enterprise to serve as the Control group, for effective assessment of the impact of the LGS and LOC programs on beneficiary performance attributed to aBi Finance-supported interventions. The Control farmers are basically those engaged in the same enterprises as beneficiary farmers in the same geographical location and production system; the only difference being that the Control farmers did not receive loans from the sampled FIs or any other FI for investing in the target enterprise. While the FI-supplied beneficiary lists formed the sampling frames for the Treatment farmers, Control farmers were sampled from village-level household lists received from the LC1 Chairmen of the study villages.

**Table 2: Regions, Districts and Households covered by the Evaluation Study**

Region	District	Name of Participating FI	Enterprise	Program	Number of Sampled Households (N)	
					Treatment	Control
<u>Eastern</u>	<u>Mbale/Bududa/Sironko</u>	Centenary Bank	Coffee	LGS	31	15
<u>Eastern</u>	<u>Iganga/Mayuge</u>	Opportunity Bank	Sugarcane	LOC	31	11
<u>Western</u>	<u>Mbarara/Bushenyi</u>	UGAFODE	Banana	LOC	30	10
<u>Western</u>	<u>Kiruhura</u>	Centenary Bank	Dairy	LOC	30	10
<u>Central</u>	<u>Sembabule</u>	<u>FINCA</u>	Beef Cattle	LGS	32	14
Total Number of <b>Loan Beneficiaries</b>					<b>154</b>	
Total Number of <b>Non-Beneficiaries</b>						<b>60</b>
<b>Total Number of All Surveyed Households (Loan Beneficiaries + Non-Beneficiaries)</b>						<b>214</b>
<b>Number of Partner Financial Institutions</b>						<b>05</b>

Determination of the sample size of FIs to participate in the study under each aBi Finance's programs, as well as the corresponding sample sizes for loan beneficiaries and non-beneficiaries was guided by time and budget constraints to the study. The plan was to have at least twice as many loan beneficiaries as non-beneficiaries across the 5 enterprises and 2 aBi Finance programs. A total of 214 farmers (154 loan beneficiaries and 60 non-beneficiaries) and 5 FIs were surveyed. Out of these, 92 were under the LGS program (63 beneficiaries and 29 non-beneficiaries) and 122 were under the LOC program (91 beneficiaries and 31 non-

beneficiaries). Out of the 214 sampled farmers, 46 are farmers of Coffee (31 beneficiaries and 15 non-beneficiaries); 42 are Sugarcane farmers (31 beneficiaries and 11 non-beneficiaries); 40 are for Banana (30 beneficiaries and 10 non-beneficiaries); 40 for Dairy (30 beneficiaries and 10 non-beneficiaries); and 46 are for Beef Cattle (32 beneficiaries and 14 non-beneficiaries).

**Although aBi Finance is promoting expansion of financial service delivery to support agribusiness development along the entire value chain (see Table 1), focus of the evaluation study was limited to farming (primary producer) enterprises to make it easier to define and find an appropriate Control group of non-beneficiaries against which to estimate the impact of the LGS and LOC programs attributed to the intervention by aBi Finance.**

#### **4.0 Methodology**

As mentioned earlier, this study was conducted at the FI and Bank Clients levels, using Key Informant Interviews (KII) and Household Survey (HS) methods, respectively to gather data. The gathered data from KIIs with FIs was analyzed using descriptive methods (means, frequencies, proportions); while the HS data was analyzed using a two-pronged methodology involving descriptive analysis and quasi experimental design. Descriptive methods were used to characterize the study sample in terms of demographic composition of the sampled farmers, asset endowment (human, natural, physical, and other assets) and job creation; and to assess beneficiary perceptions of the impact of the LGS and LOC programs on the performance of their agribusiness enterprises. Gross Margin analysis was used to estimate farmers' income from the enterprises in which they invested the loan money received under the loan guarantee and line of credit programs. Gross margin is specified as;

$$GM_i = TR_i - TVC_i$$

Where;  $GM_i$  = Gross Margin for the  $i^{th}$  enterprise

$TR_i$  = Total Revenue for the  $i^{th}$  enterprise (product of price and harvested quantity)

$TVC_i$  = Total Variable Cost incurred under the  $i^{th}$  enterprise (sum of out of pocket expenditure on factors of production, including physical inputs, hiring of labor and land, etc).

The quasi experimental design involved comparison of loan beneficiaries and non-beneficiaries along their “before” and “after” intervention status, to show evidence of impact of aBi Finance-supported intervention(attribution) on the outcomes of interest, including income (gross margins), wealth and job creation as outlined in the study objectives.

## **4.1 Data Gathering and Quality Control**

### *4.1.1 Questionnaire Preparation*

Preparation of the questionnaires used to gather data for this study was guided by the Terms of Reference (TOR) given to the Consultants by aBi Finance. Based on the TOR, key modules were defined and questions formulated around each module. All the questions in the questionnaire were designed in light of the study objectives; that is, for gathering information needed to meet the study objectives. The draft questionnaires for both the KII and HS were shared with aBi Finance for their input; and were appropriately revised after getting feedback from aBi Finance.

### *4.1.2 Interviewer Training and Supervision for the Household/Farmer-Level Survey*

The enumerators involved in data collection received in-class and in-field training. In-class training involved going through the questionnaires, section by section and question by question to ensure that they fully understood the meaning of each question; the information that the question was intended to capture; how to ask the questions; and how to probe for accurate information. During in-class training, several methods of probing for accurate information were shared with the trainees, especially where recall is involved as was the case in this study. In class training also involved “role playing” in the local languages, where one of the trainees would act as a respondent while another acts as the interviewer; and roles would then be switched and after each session. This was deliberately done in order to sharpen the enumerators’ probing skills, perfect their interview skills, build their confidence to conduct interviews in the local languages; and to build consensus on the wording of the questions on the local languages.

Field training was combined with pre-testing of the questionnaire; and this involved assessing the competencies of the enumerators to conduct quality interviews. Each interviewer, particularly those with lower experience conducting interviews, was assigned a supervisor on the consultancy team who was primarily responsible for monitoring the quality of the interview during the pre-test. Some of the issues the supervisors looked out for include how the enumerator introduces the study and builds rapport with the respondent, ability of the enumerator to take charge of the interview and ask the questions correctly in the local language; and ability to probe for accurate information and help the respondent to answer questions that require recall. After the pre-test interviews, the enumerators were given time to edit their questionnaires before submission to the supervisors for review. This was done to

check the ability of enumerators to correctly record information collected from the respondents. After this process, the best performing enumerators were retained and re-trained for two additional days before deploying them in the field to conduct the actual survey. Retraining was done based on the common errors and challenges identified in the field during the pre-test, with the aim of refining the questions and polishing the interview skills of the enumerators. The training was conducted by the Consultant and the Survey Team Leaders who were selected from the pool of experienced research assistants that have worked with the Consultant for the past 10 years. The main role of the Team Leaders during the training was to share their field experiences with the enumerators and to oversee the role-play sessions.

Supervision of the field survey was done by the Consultant, Research Assistants and Survey Team Leaders to ensure the gathering of quality data. The sampling of FIs and beneficiary farmers was done by the Consultant using the FI-supplied sampling frames in liaison with M&E staff from aBi Trust/aBi Finance. For the non-beneficiary (Control) farmers, the Survey Team Leaders did the sampling using household lists supplied by the community leaders. The Survey Team Leaders performed the primary role of supervising field interviews and reviewing the questionnaires to ensure that the gathered information was of high quality with no gaps in the questionnaires before moving on to the next study location.

#### *4.1.3 Measures for Quality Control*

All the KIIs with the FIs were conducted by a Financial Management Expert hired by the Consultant to ensure the gathering of quality data at the FI level. In light of the TOR for the FI-level assessment of aBi Finance programs, the approach and methodology used to gather the data is summarized in Table 3 below.

**Table 3: Approach and Methodology for the FI-Level Assessment of aBi Finance Programs**

<b>TOR for FI-level Evaluation</b>	<b>Methodology</b>
How the program has helped the PFI's and the clients.	<ul style="list-style-type: none"> <li>• The consultants held discussions with the respective PFIs staff both at the headquarters and branch level.</li> <li>• Reviewed the PFIs loan portfolio over the years and also the respective financial statements.</li> <li>• Reviewed the level of Agriculture lending during the period under review.</li> <li>• Assessed any potential benefits that have arisen as a result of the scheme.</li> </ul>
What are its limitations and how they can be improved	<ul style="list-style-type: none"> <li>• Interviewed the respective participating FI staff on the challenges being encountered in the program.</li> <li>• Used best practice to recommend possible improvements in the program implementation.</li> </ul>
Strategy of using the guarantee program by the bank	<ul style="list-style-type: none"> <li>• Reviewed the respective FIs implementation strategy.</li> <li>• Reviewed credit process flows for the respective PFIs, turnaround times, and client feedback.</li> </ul>

TOR for FI-level Evaluation	Methodology
How the program has impacted PFI's attitude to agriculture lending as evidenced by change in culture and operations.	<ul style="list-style-type: none"> <li>Assessed whether there have been any positive impacts with the implementation of the program over the review period.</li> </ul>

For the household survey, one-on-one face-to-face interviews were conducted by enumerators, using the questionnaires developed in 4.1.1 above. In the beneficiary households, the target respondent was the actual person who received an agricultural loan from the participating FI; and nearly all these were the household heads. In non-beneficiary (Control households), the target respondent was still the household head; but in the absence of the head, a responsible adult (spouse, adult child, relative) deemed knowledgeable about the household dealings was interviewed. A substantial amount of time was invested in the training of enumerators to ensure that highly competent enumerators are deployed to the field and adequately supervised to ensure the collection of high quality data. During the survey, Team Leaders reviewed every completed questionnaire on a daily basis to ensure that the enumerators were performing to expectation; and to enable corrective action to be taken in a timely manner. Beyond that, Team Leaders conducted call backs on selected households to validate the data gathered by the enumerators. The Consultant made random visits to the field to observe the interview process and carried out spot checks on completed questionnaires as a quality control measure.

Although the FIs collect background information on loan applicants that could be used as a baseline for evaluation, the ES did not collect this information from the partner FIs because awareness of its existence came late in the course of the study. Instead, respondents were asked to recall events that occurred up to three years back; and this was one of the key challenges of the study. To overcome this challenge, a number of strategies were employed including training enumerators to probe for accurate information that requires recall; breaking down long time periods into shorter time periods; and using major calendar events to facilitate recall. For example, the onset of aBi Finance's intervention in financial service delivery coincided with the 2011 presidential election period in Uganda, and this was used as a major calendar event to facilitate recall of what farmers did prior to intervention by aBi Finance.

To ensure that the respondents do not give biased, "desirable" responses to the interview, Field Team Leaders were cautioned at the training and reminded time and again not to



promise respondents any form of payment or benefits in return for their participation in the study. The purpose of study was stated up front before the start of the interview; and respondents were given an opportunity to accept or decline the interview based on understanding that their participation was voluntary with no direct private benefits from participation or penalties from non-participation. No mention was made of past or future support from aBi Finance, or of the fact that the loans received by farmers were guaranteed to reduce moral hazard; and farmers were not told anything about the organization that commissioned the evaluation study to avoid biasing their responses.

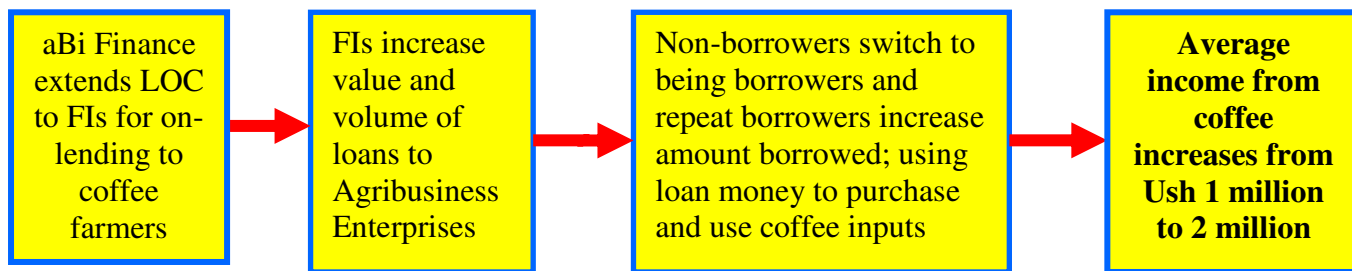
#### **4.2 Data Processing and Analysis**

The gathered data was entered by a team of experienced data entry clerks using a template prepared in MS Access. To minimize data entry errors, some of the enumerators with good data entry skills also participated in data entry, making sure that no enumerator entered the data they collected. After data entry, data cleaning was done by the data entrants under the supervision of the Consultant before the datasets were transferred and merged in STATA. Further data cleaning was done in STATA using a STATA syntax developed to identify errors and outliers in the data. Data analysis was then performed using a clean dataset to generate statistics that were summarized in table form and compiled into a study report. The task of data analysis and report-writing was led by the Consultant in collaboration with the Financial Management Expert and with the assistance of experienced Research Assistants who worked under the guidance and supervision of the Consultant.

#### **4.3 Impact Assessment and Attribution Strategy**

Impact assessment of program supported interventions is usually based on changes in the use of promoted practices or services by the beneficiaries (in this case loan services) and the ensuing changes in outcome indicators, such as income. This method of impact assessment is based on a sub-sample of farmers who switch from the previous scenario (non-borrowers) to the new scenario (borrowers or loan users), as illustrated in Figure 1 below; or from borrowers of small loan amounts to borrowers of large loan amounts, as a result of improved financial service delivery following intervention into the financial service sector. The impact of the intervention is captured by the resultant change in outcome indicators such as income, which is obtained by subtracting the income before borrowing (e.g., Ush 1 million) from the income after borrowing (e.g., Ush 2 million); in this case estimated at Ush 1 million as illustrated in Figure 1 below.

**Figure 1: Conceptual framework for impact analysis**



However, the estimate in income change of Ush 1 million illustrated above could be attributed to various factors, the most obvious being investment of more money into coffee production—thanks to the acquired loan made possible by aBi Finance’s LOC program to the local FI; but there could also be other contributing factors such as unusually good weather combined with unusually high coffee prices. The good weather and high prices are in this case confounding factors that would lead to exaggeration of the impact on coffee income attributed to aBi Finance’s LOC program. To accurately measure the attributable impact of aBi Finance’s interventions on the loan beneficiaries, the most appropriate methodology would involve use of (1) the potential outcome framework (Wooldridge, 2002). In this framework, every household faces two potential outcomes (one arising from participation in aBi Finance’s supported interventions ( $I_i^1$ ) and one arising from non-participation ( $I_i^0$ )); and (2) the Propensity Score Matching (PSM) method (Rosembaum and Rubin, 1983) to match participants with non-participants having similar scores and estimate the average population Treatment Effect (ATE) as defined below:

$$ATE_1 = \frac{1}{N} \sum_{i \in N_1} (I_{1i} - I_j)$$

where  $N$  is the number of Treatment or participating households,  $I_{1i}$  is the income of the Treatment household of interest, and  $I_j$  is the income of the “counterfactual” or Control household matched to the Treatment household. The Control household would in this case be one that produced and sold coffee under the same weather and price conditions as the Treatment household, with the only difference being that the Treatment household received a loan and invested the money into coffee production; while the Control household did not.

However, effective use of the PSM method would require a large enough sample of non-participants (Control) to match with the participants through Nearest Neighbor Matching (NNM), which the limited budget for this study could not allow. Due to lack of adequate sample size for PSM, an alternative method of impact analysis, known as the double difference was adopted. The double difference or difference-in-difference (**DID**) method

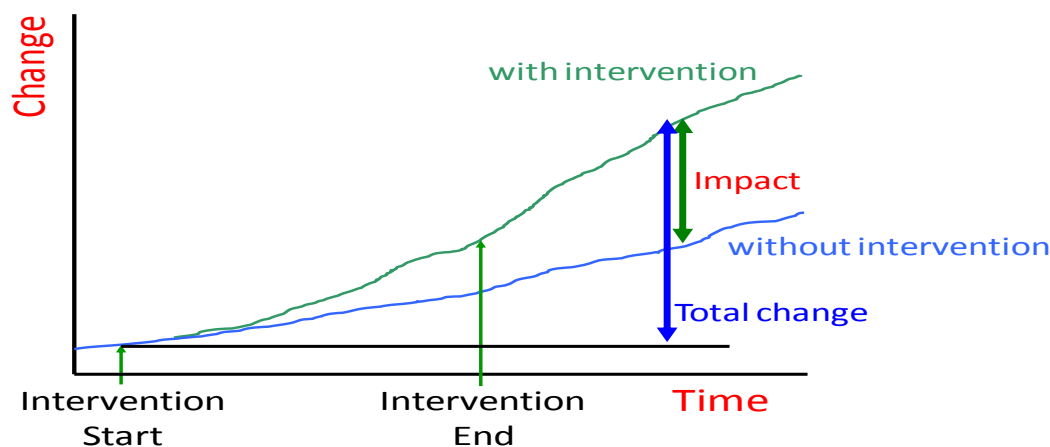
compares participants and non-participants of development interventions in terms of changes in desired outcome indicators over time, before and after the interventions. The double difference methods are superior to the single difference methods because they help to resolve the selection bias in single difference comparisons through the matching of two comparable groups—those who participate and those who do not.

To enable use of the difference-in-difference method in this study, Treatment and Control farmers were asked to answer questions about the “before” aBi Finance support scenario (which requires recall) and “after” (current situation). Farmers were first asked the last time (*Season and Year*) when they produced the target crop before aBi Finance-supported interventions in financial service delivery and after; that is in 2010 or before (“*before*”), and between 2011 and 2013 (“*after*”). These farmer-reported seasons and years then became the reference for detailed interviews on area planted to the crop, quantities and costs of inputs used, quantities of the crop harvested and sold, etc (see appendix #2 for survey tools) before and after aBi Finance-supported interventions. To estimate the attributable changes to aBi Finance support, the difference between the before and after scenarios for an outcome indicator (e.g., yield) is computed separately for the Treatment and Control farmers. This is the first difference. The second difference (attributable change) is obtained by subtracting the first difference for the Control farmers from the first difference for the Treatment farmers. For example: Consider a coffee farmer who purchased and applied fertilizers using the loan money provided by a bank participating in aBi Finance’s LGSprogram. For such a farmer, the attributable impact of aBi Finance’s support is in the form of productivity gains and reduction in production costs arising from the yield increase. So after computing the average yields and production costs for Treatment and Control farmers, the attributable impact to aBi Finance-supported interventions would be estimated as illustrated in Table 4 and Figure 2 below:

**Table 4: Example for Computation of intervention impact using difference-in-difference method**

Mean Values	Treatment			Control			Attributable Changes
	Before	After	Diff.	Before	After	Diff.	DID (Impact)
Productivity (Kg/Acre/)	180	300	120	180	200	20	<b>100</b>
Production Costs (Ush/Kg)	110	75	35	120	110	10	<b>25</b>

Figure 2: Methodology for measuring Difference in Difference (DID)



### Limitations of the Study

- (1) Unlike the PSM analytical technique which eliminates all unobserved heterogeneity in the study sample by matching beneficiaries to none beneficiaries with similar characteristics, the DID approach does not, and neither does it address the problems of selection bias that may arise out of a program's decision on whom to benefit within a particular village.
- (2) The ES depended on recall for information on respondents farming activities and outcomes before intervention by aBi Finance (2010 or before). The key limitation here is related to farmers' ability (or lack of it) to recall with accuracy quantitative information (area planted, harvests and sales, crop or milk yield, etc.) about the target enterprises in 2010 or before—three years before the interview. Although various means were used to help farmers to recall the events as they happened before intervention, the memories of some could have been stretched beyond their capacity to recall. Thus, the accuracy of the reported figures for the period before intervention and the changes computed based on these figures largely depended on farmers' ability to recall.
- (3) The depth of the responses to questions raised in the FI-level questionnaire were disappointingly low and indicative of limited understanding of agricultural financing and how the aBi Finance programs operate, especially at the branch level of the participating FIs. Some questions were not responded to at all, which inevitably affected the depth of reporting on the performance of the aBi Finance programs at the FI level.

## 5.0 Findings of the Key Informant Interviews (KIIs) with Participating FIs

The aBi Finance line of credit (LOC) and Loan Guarantee Scheme (LGS) programs started in September 2010 with the primary objective of promoting the provision of credit facilities by FIs to agricultural based SMEs through a non-profit loan guarantee scheme. The set out specific targets of aBi Finance's programs include:

1. Doubling agriculture's share of the participating Financial Institutions (FIs) loan portfolio,
2. Increasing term lending to SME agribusinesses threefold,
3. Creating an efficiently run loan guarantee company where the loss rate is within international good practice.
4. Creating Employment

As part of the efforts to increase the availability and use of financial services, aBi Finance partnered with FIs to provide 50% cover to loans provided to Small and Medium Agribusiness Enterprises. The loan guarantee program of aBi Finance (formerly ALGC) operates as illustrated in Figure 3 below.

**Figure 3: Loan Guarantee Outline**



### 5.1 Agriculture Portfolio Growth

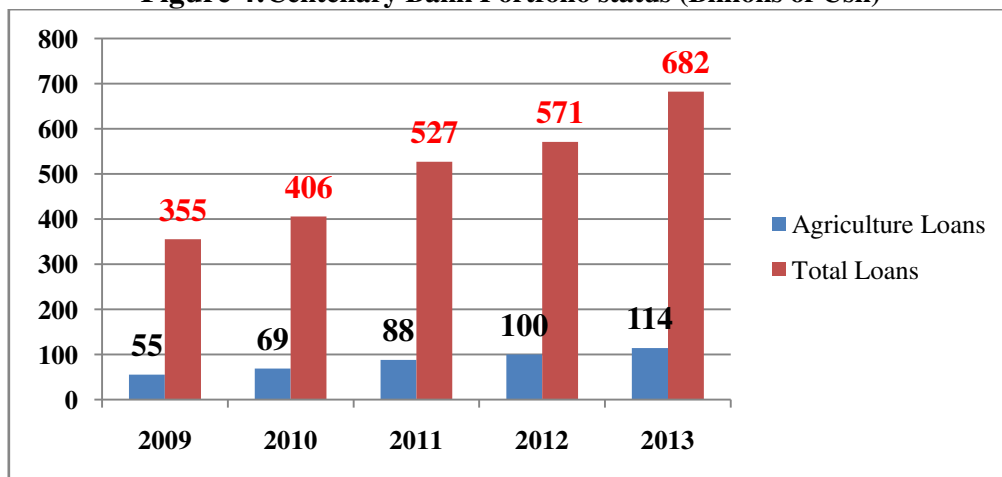
One of the primary objectives of aBi Finance's programs is to double share of the agriculture portfolio in the participating FIs. Agriculture lending and financing has been characterized by a perceived a high risk which resulted in low lending levels and high pricing. The Evaluation Study (ES) analyzed the status of agriculture lending in four FIs implementing aBi Finance's line of credit and loan guarantee programs, which include Centenary Bank, Opportunity Bank, FINCA and UGAFODE.

### 5.1.1 Centenary Bank

Centenary Bank was licensed as a commercial bank in 1993 and is the leading commercial bank engaged in microfinance lending, with the largest agriculture loan portfolio in the country at of Ush 114 billion. It is primarily involved in the promotion of development through loans to rural farmers, processors of agricultural produce, small manufacturers, small traders, importers and exporters. The bank has over 60 branches and as at end of 2012, the bank had a balance sheet size of over Ush 1.1 trillion—making it the 5<sup>th</sup> largest bank<sup>5</sup>; total loans and advances of Ush 556bn and customer deposits of Ush 818 bn.

Centenary Bank operates both the loan guarantee and line of credit programs supported by aBi Finance. Agriculture lending has continued to grow over the years, with the total outstanding portfolio now standing at over Ush 114bn; and this accounts for about 17% of the total bank lending portfolio. aBi Finance-supported loans account for about 22% of the total agriculture portfolio.

**Figure 4: Centenary Bank Portfolio status (Billions of Ush)**



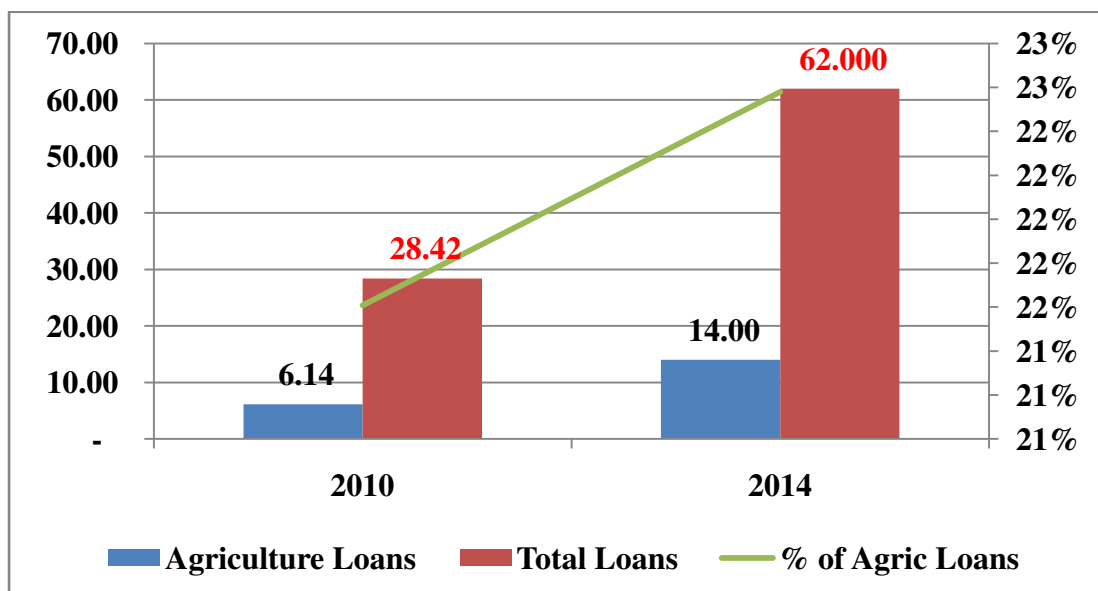
Agriculture lending has been at the core of the bank’s credit strategy and the agriculture portfolio has more than doubled from Ush 55bn in 2009 to over Ush 114bn in 2013—an increase of 107%. Despite the significant growth, the portfolio quality has remained low (below 3%), which is a testimony of low risk and prudent credit appraisal process.

<sup>5</sup> Based on total balance sheet size

### 5.1.2 FINCA Uganda

FINCA Uganda was the country’s first regulated, microfinance deposit-taking institution (MDI). It serves clients in 27 branches spread across both the rural and urban areas of the country. Out of these, 7 branches currently offer agriculture lending to its customers. FINCA Uganda offers three types of credit products, which include individual and group (village banking) loan products to rural, urban, and peri-urban clients in the form of working capital, business improvement loans, and salary loans. FINCA Uganda currently operates only the loan guarantee scheme supported by aBi Finance, and has a portfolio guarantee limit of Ush 4bn. FINCA has witnessed rapid growth in its agriculture portfolio, which more than doubled from Ush 6.1bn in 2010 to Ush 14bn as at end of 2013. However the sectors share of the total portfolio has increased only marginally during this period from 21% to 23% as shown in Figure 5 below.

**Figure 5: FINCA Uganda’s Portfolio status (Billions of Ush)**



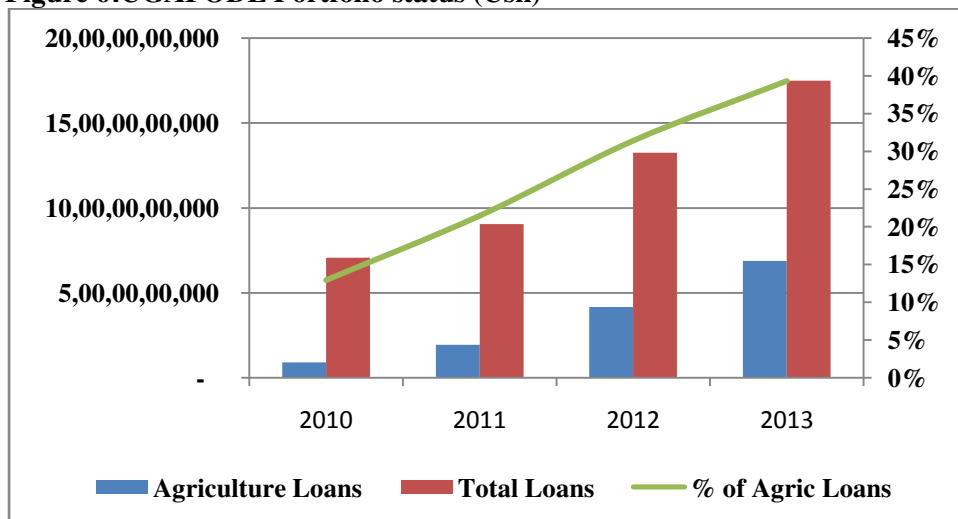
### 5.1.3 UGAFODE

UGAFODE Microfinance Limited was incorporated in 1994 as a non-governmental organization (NGO) under the name of Uganda Agency for Development Limited (UGAFODE); to provide primary (savings mobilization and lending) affordable financial services to its customers. In 2011 UGAFODE was licensed as a Microfinance Deposit taking Institution (MDI). UGAFODE is focused on being the leading Microfinance Institution in Uganda. It currently has 12 branches mainly in the central and western regions, offering a variety of financial services, with the Micro Enterprise Sector being the main target market.

UGAFODE has specially tailored agricultural loan products, designed to finance active rural farmers and SMEs in cattle fattening, crop production, dairy, poultry, livestock breeding, produce-marketing, processing, and transportation. The minimum loan amount is Ush 100,000 with subsidized interest rate 25% p.a. compared to other products with average rates of 30% p.a.

Agriculture lending has continued growing over the years. The total outstanding portfolio for agriculture is now over Ush 6.9bn and this accounts for about 39% of the total bank lending portfolio. aBi Finance-supported loans account for about 20% of the total agriculture loan portfolio. Agriculture lending has been significant in the western region branches of UGAFODE (along the cattle corridor), and the agriculture loan portfolio has increased by close to 700% from Ush 900m in 2009 to over Ush 6.9bn in 2013 (see Fig 6).

**Figure 6:UGAFODE Portfolio status (Ush)**



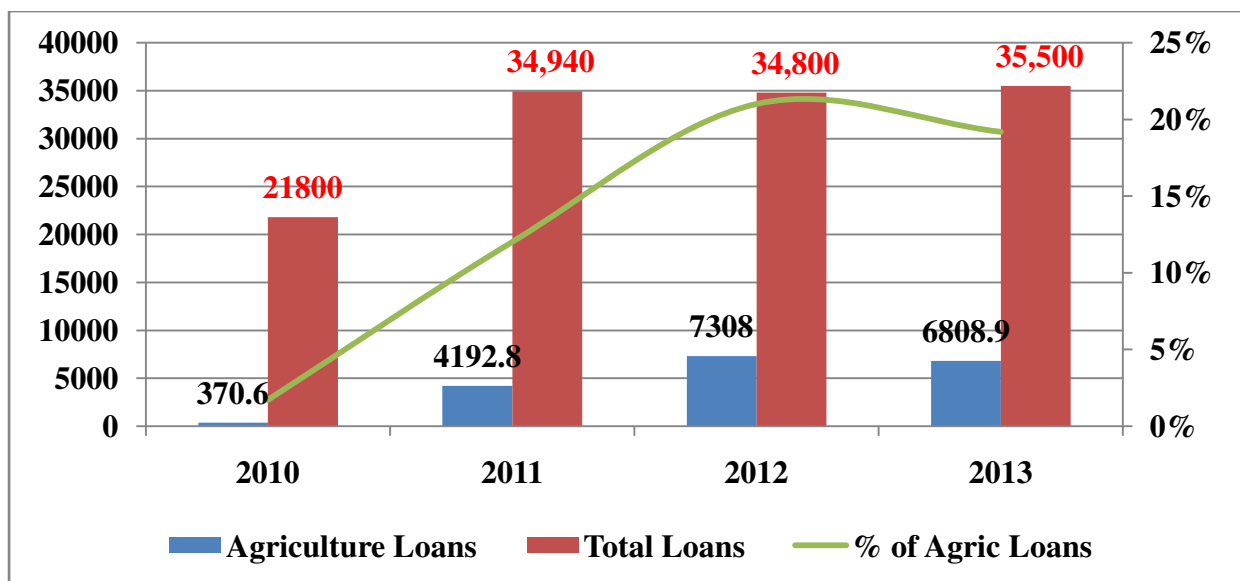
#### 5.1.4 Opportunity Bank Limited (OBL)

Opportunity Bank Limited (OBL) is a member of the Opportunity Transformational Inc (OTI). It started in 1995 as Faulu Uganda owned by Food for the Hungry International (FHI). OTI acquired 63% of the shareholding from FHI in 2006, and it is the intention of OTI to continue increasing its shareholding. OBL is a leading Ugandan Micro Finance Institution, and in December 2008 it acquired a Tier 2 Financial Institutions license from Bank of Uganda to operate as a regulated Credit Institution. This effectively made OBL a Savings and Loan Organization offering micro loans, savings and insurance products. OBL specializes in transformational lending in urban, peri-urban and rural environments, and has 18 branches across the country.



OBL initially hinged its agriculture portfolio to supporting sugarcane growing in the Busoga region. The initial plan was to form a linkage with Bugiri Sugar Factory, however, due to delay in the factory take-off, linkage was finalized with Kaliro Sugar. OBL is considering pioneering another linkage with sorghum growers. Agricultural lending accounts for 19% of the total bank portfolio of Ush 35.5bn (see Fig 7). Agricultural lending suffered slowed growth between 2012 and 2013 largely due to the delayed take-off of the planned linkage program with Bugiri sugar. Nevertheless, OBL was able to achieve significant growth in its agriculture portfolio from Ush 0.371bn (1.7% of the total bank portfolio) in 2010 to Ush 6.8bn in 2013 (19% of the total bank portfolio).

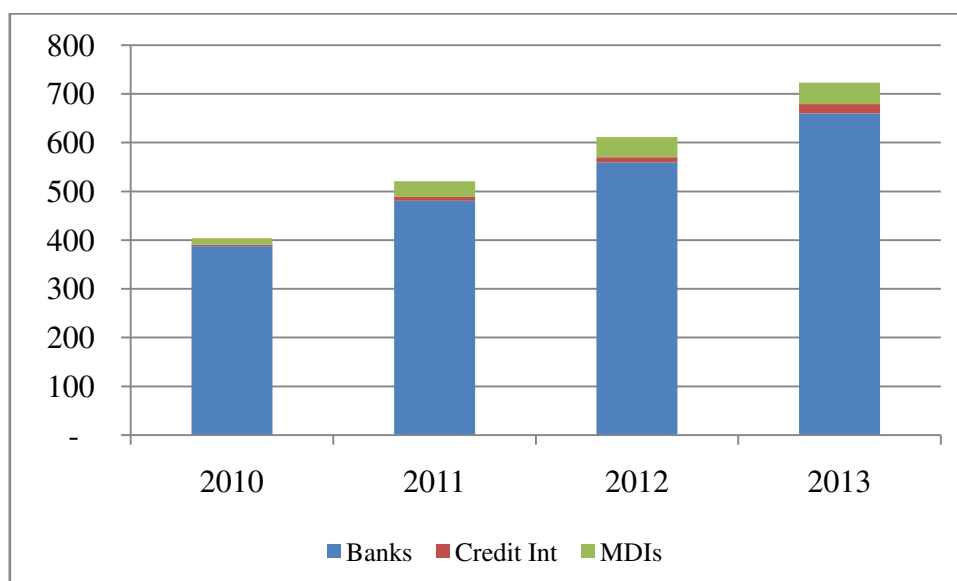
**Figure 7: Opportunity Bank Portfolio status (Millions of Ush)**



### 5.1.5 Market Overview

Over the review period (2010 to 2013), the overall agriculture lending portfolio in the country grew by 79% from Ushs 400bn to Ushs 720bn. This was majorly provided by commercial banks accounting for 91% of the total credit in the agriculture sector as shown in figure 8 below.

**Figure 8: Agriculture Sector Lending Portfolio (Ushs bn)**



The major lenders of the overall sector portfolio are Centenary Bank (16%) and Stanbic Bank (15%) who have 31% share of the total agriculture lending portfolio, with 57% of the portfolio allocated to processing and marketing, and the balance (43%) to agricultural production. Of the total sector portfolio of Ushs 720bn, aBi has directly supported 12% (Ushs 88.5bn). The total agriculture sector portfolio increased by 28% (Ushs 320bn) from 2010 to 2013.

Other promoters of agricultural lending include the World Bank and ACF BOU through which the Government of Uganda through its central bank established an agricultural credit facility for the purpose of supporting agricultural expansion and modernization in partnership with commercial banks. The funds were advanced by government at a zero interest rate and the risks and expenses on the loans to customers is shared on a 50% basis.

## 5.2 Agriculture Lending Tenures

Overall, the agriculture tenures for majority of the sampled FIs have been maintained at short term (12 months and below). The various lending practices and products for the various sampled FIs are highlighted below

### 5.2.1 *Centenary Bank*

Centenary Bank has a deliberate strategy to grow its focus on the agriculture sector. The sector has a target allocation of 20% of Centenary's total loan portfolio, and the bank has specially tailored agriculture loan products. Loan products for agriculture are designed to finance agribusiness activities in the entire value chain including production, processing and marketing of products, animal production (diary, poultry and piggery projects), fishing and fish farming, bee keeping as well as food processing i.e. grain mills, oil mills and hullers. The loan period and repayment plan is dependent on the nature and season of the agricultural activity to be financed. Key features of agriculture loan offerings include:

- The loan period for working capital purpose is up to a maximum of 12 months, but development / investment loans may exceed 12 months. The minimum loan amount of Ush 100,000.
- There are no principal loan repayments during the grace period except for the interest.
- The loan is repayable through equal installment payments whose amounts are dependent on the projected cash flow of the agricultural activity.

One of the key objectives of most guarantee schemes is to mitigate the potential risk faced by the lenders. With the guarantee in place, the bank has been able to manage its risk with the portfolio at risk (PAR)<sup>6</sup> within acceptable levels. As mentioned earlier, the agricultural portfolio quality has remained low (below 3%), which is a testimony of low risk and prudent credit appraisal process.

### 5.2.2 *FINCA Uganda*

FINCA was originally not keen on lending to agriculture due to the perceived high risk, however, pressure from various stakeholders and support from aBi Finance enabled FINCA to expand lending to agriculture. FINCA loans tenures are tailored to the customer's cash-flow projections. The options include having a monthly loan repayment or a structured repayment where the customer can pay on a quarterly basis (every 3 months) or termly (every 4 months). However the objective is to keep the repayment period short (i.e., loans are

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<sup>6</sup> PAR based on 30 day basis

predominantly short-term) and coincident with the harvesting period. The overall risk profile for the agriculture portfolio has been within the acceptable levels; but the PAR for agriculture is at 3.1%, which is slightly above the overall portfolio for FINCA of 2.58%.

### 5.2.3 *UGAFODE*

As mentioned earlier, UGAFODE has specially tailored agriculture loan products and provides flexible financing terms to its farmers. For loan advances below Ush 2m, the MDI can accept land sales agreements. Inherited land can be used with consent from LCs and family members. In case of loan default and need for loan recovery, the company encourages other family members to buy the said land especially when they are co-guarantors. However these are not so common occurrences and the company endeavors to pursue other recovery means. Farmers are also encouraged to form groups to co-guarantee each other.

UGAFODE structures its loan repayments on a selective basis, depending on the respective farmers' cash-flow requirements and purpose of the loan, but agriculture lending is predominantly short-term (loan tenure of 12 months and below). There are 3 major repayment plans monthly, quarterly and termly (3 times a year). Despite the seven-fold increase in the agriculture loan portfolio cited earlier, the portfolio risk has remained low, with PAR standing at 3.5% (compared to 6% of the overall portfolio), which is a testimony of low risk and prudent credit appraisal process. However, threats and risk associated with agricultural production mainly due to unpredictable weather patterns has continued to hurt farmers especially in the absence of affordable crop insurance policies. The region has recently been badly hit by the bacterial banana wilt (BBW) and hailstones that affected tea production.

### 5.2.4 *Opportunity Bank Limited (OBL)*

OBL offers flexible terms to borrowers in the agricultural sector, which include:

- Lending to farmers and other actors along the agribusiness value chains, including input dealers, transporters and processors
- Lending to groups, individuals or SMEs
- Scheduling repayments according to the client's cash-flow
- Allowing grace periods especially during the gestation period
- Accepting loan repayment to be made from other non-agriculture income sources

However, unlike the other sampled FIs lending to agriculture, OBL agribusiness loans are predominantly medium-term (between 12 and 24 months). This is likely because most of the borrowers at the visited Iganga branch of OBL received loans for establishing sugarcane plantations, which would take a while to produce returns; but after which, the returns would be realized for several years. Initially the bank faced a number of challenges in managing its portfolio, which include the delayed take-off of the sugar project. This caused an increase in the bank's PAR up to a high of 16%. However, with support from aBi Finance through the guarantee program, the risk has progressively reduced to 12.1% as at end of 2103. Currently the bank pays the whole guarantee fee charge without onwards transfer to the farmers however to ensure sustainability it would be prudent for this charge to be lowered or shared with the farmers. Accessibility to credit by farmers has been improved since the OBL is now able to provide lending for both individuals and groups through cross guarantees; and to accept Kibanja collateral with a maximum loan of up to Ush 10m.

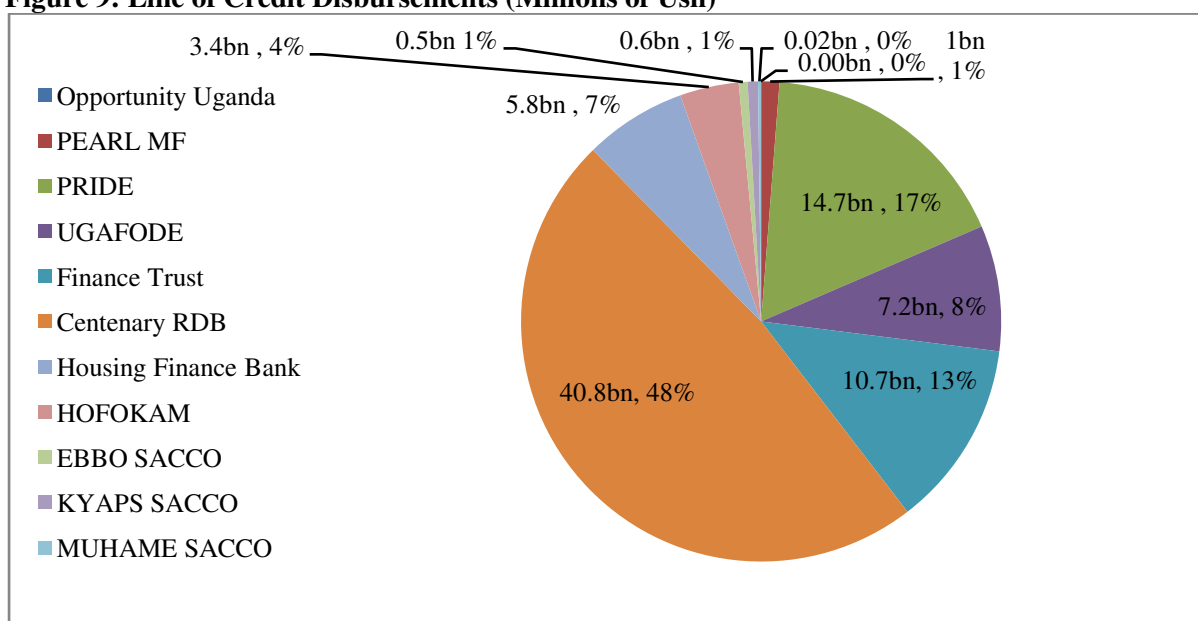
### **5.3 aBi Finance Program Efficiency**

Evaluation of program efficiency was intended to determine if aBi Finance has through its LOC and LGS programs been able to provide the intended services to the stakeholders within acceptable means and best practice.

#### *5.3.1. Line of Credit (LOC)*

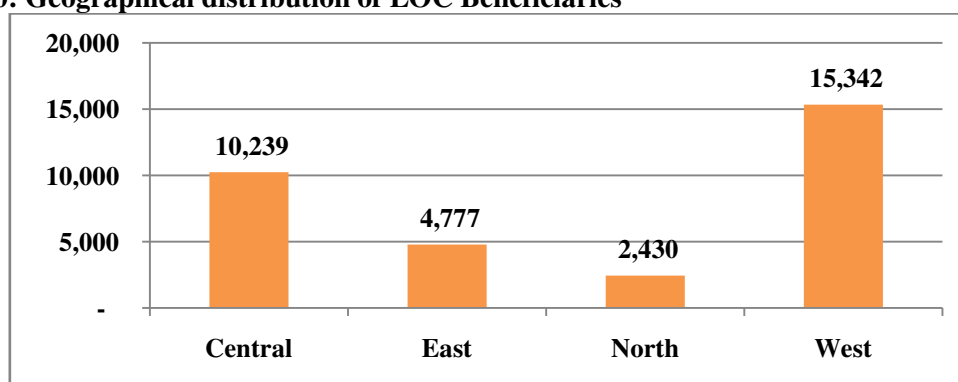
Under the LOC program, funds are provided by aBi Finance to partner FIs for onward lending to clients across the selected value chains. As at end of 2013 there were 11 partner FIs (spread across Banks, MFIs and SACCOs) implementing the LOC program, and the total outstanding amount was Ush 35bn, which is 59% above the target of Ush 22bn. Total loan disbursements from the LOC program as at end of 2013 were Ush 88bn spread across 32,788 clients, with an average loan size of about Ush 2.7m. However, this fell short of the Line of Program (LOP) target of 35,000 beneficiaries. The gender profile of LOC program beneficiaries shows that majority (66%) are male, with the proportion of female beneficiaries falling below the LOP target of 40%. As shown by Figure 8 below, nearly half(48%) of the total amount disbursed at end of 2013 under LOC was with Centenary Bank.

**Figure 9: Line of Credit Disbursements (Millions of Ush)**



Despite the partner FIs having branches spread across the whole country, over three quarters (78.1%) of the LOC program beneficiaries are from Western and Central regions of Uganda, with the Northern region accounting for only 7.4% of the beneficiaries (see Figure 9 below).

**Figure 10: Geographical distribution of LOC Beneficiaries**

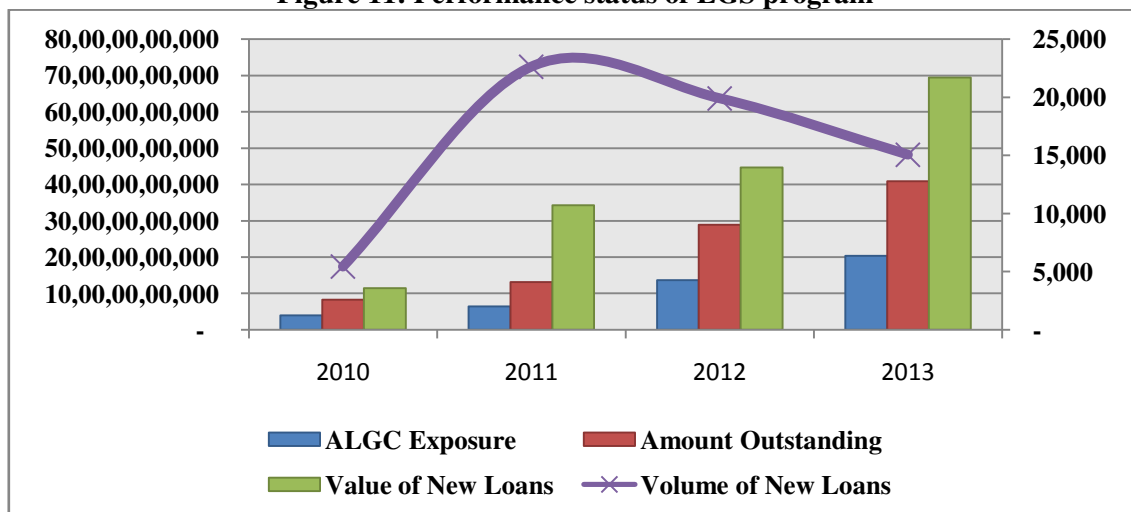


### 5.3.2. Agribusiness Loan Guarantee Scheme (LGS)

The volume of loans disbursed under the LGS program has grown significantly over the last 4 years, with outstanding loans totaling Ush 40bn and the claims settled are less than 1%. As

at end of 2013 the leverage ratio<sup>7</sup> was at 99%, which implies more room for growth within the scheme. As shown in Figure 10 below, the total amount outstanding has significantly grown from about Ush 8.3bn (2010) to Ush 40.9bn as at end of 2013. Between 2010 and 2013, a total of 63,026 new agribusiness loans were underwritten, falling slightly short of the LOP target of 64,000, which had been revised upwards from 30,000 mid way the program. The number of new beneficiaries per year grew from about 4,000 in 2010 to about 10,000 new beneficiaries in 2013. This is despite a drop in the number of new loans being disbursed which has been declining since 2011, although the average loan size has more than doubled from Ush 2.2m to Ush 4.6m due to the bigger sizes of loans being offered.

**Figure 11: Performance status of LGS program**



The claims settled over the LOP period amounted to USh 355m which was only 0.4% of the fund as at 31<sup>st</sup> December 2013. The guarantees at risk ratio as at 31<sup>st</sup> December 2013 was 3.3% which was within the 10% limit. This epic performance notwithstanding, the FIs implementing aBi Finance’s programs raised a few points of concern, which include:

- **Insufficient Limits:** FIs running the loan guarantee scheme have often exhausted their guarantee limits, which has caused delays in loan disbursements by the FIs as they use loan repayments to get around the utilization limits.
- **Reporting Requirements:** Some of the FIs have found it a challenge to ensure that data sent to aBi Finance is accurate and timely. Delays in reporting have been caused by back and forth communication to ensure accuracy of the shared data.

<sup>7</sup> Leverage ratio is value of credit generated per unit value of the guarantee fund

- Also noted during the Evaluation Study visits to the FIs was the paucity of technical skills in the field of agricultural financing especially at the branch level, which causes delays in designing appropriate loan products for different agribusiness value chains.

#### 5.4 Loan Additionality

The TOR for the Evaluation Study stipulates that the targets of aBi Finance programs were to be achieved in the form of new additional lending defined as;

- (iii) Full additionality, where a loan that would not have been granted without the support of the guarantee is made.
- (iv) Partial additionality, where the size of the loan would have been significantly reduced had there not been the guarantee.

There are varying perceptions by the various FIs on the impact of aBi Finance's programs on loan additionality. These program targets have been analyzed based on the size of the FIs; that is large versus small FIs.

1. **Large FIs:** These have a big customer base, deposits and funding from various stakeholders, including the World Bank. In this category is Centenary Bank and FINCA Uganda. These base their loan approval criteria on the strength of the projected customer cash-flow, and the guarantee is treated as a secondary/additional risk mitigating factor. Although Full Additionality is not explicitly tracked and analyzed by the FIs, the general impression is that majority of the small loan applications (below Ush 5m) without registered securities have been granted because of aBi Finance's programs. Partial additionality is also not tracked on a regular basis, and the FIs expressed preference for espousing the full additionality principle in practice.

2. **Small FIs:** Included in this category is UGAFODE and Opportunity Bank. These are largely recently incorporated MDIs with insufficient funding and small customer deposits. The loan guarantee and line of credit programs have critically influenced the credit approval process. Majority of the smaller loans without registered security have been given based on aBi Finance's programs; while registered security is required even with the guarantee in place for bigger loan amounts usually above Ush 5m. Similar to large FIs, the preferred practice by smaller FIs is to operate on the full additionality principle as opposed to partial additionality.



## 5.5. Remarks on aBi Finance Programs' Assessment

The following remarks on overall assessment of the aBi Finance programs are based on a number of factors, including guarantee fund's clarity of purpose, leverage, governance and management; geographical coverage; targeted borrowers; and eligible financial services providers.

**1. Fund clarity of purpose:** While the aBi Trust clearly articulates its three inter-related sub-components (VCD, G4G and FSD) and the subsequent expected outputs of each subcomponent, there is lack of clear understanding of the operation of the aBi Finance's line of credit and loan guarantee programs. This is mainly observed at the lower branch level, and can be attributed to lack of technical skills in agriculture lending and operation of credit guarantee schemes. **This will require technical capacity strengthening at the branch level.**

At the farmer level, there was a deliberate move to limit dissemination of information about the guarantee program for fear of the possibility of moral hazard that may weaken the will and commitment of the borrowers to repay the loan after they know that the guarantee fund would reimburse the FIs. **However, this could be mitigated by increased awareness of the value of specific credit products that farmers would lose access to if they failed to repay.**

**2. Leverage:** This looks at the potential and multiplier effect of the guarantee fund to generate credit in the sector. As at the end of 2013 (end of third year of operation), the leverage ratio stood at 99% against a target of 300%, which suggests more room for growth within the scheme. Given the increased awareness and sensitization, this leverage is expected to double in a year's time. There has been increased lending to agriculture across the sampled participating FIs, with all of them doubling their lending to the sector.

**3. Governance and Management:** aBi Finance has a well-established governance structure in place from the Board of Directors to the Executive Management. It also has a risk management framework in place with internal and external audits to provide the necessary quality assurance to the Board. The detailed and holistic screening and assessment of potential FIs included in the program has further improved on the management of the guarantee program. **However, as earlier noted there is need to further up-skill the technical capacity at the branch levels of the FIs.**

**4. Geographical coverage:** While the partnering FIs have country wide coverage, the actual loan disbursements have been skewed with a lower proportion of funds disbursed in Northern Uganda. **Although our field assessment only covered the Central, Western and Eastern regions, the overall report indicated that there is a need to actively encourage more credit disbursement in Northern Uganda.**

5. **Targeted Borrowers:** The focus for all the FIs was SMEs and individual farmers. It is worth noting that this has been achieved based on the sampled farmers interviewed. Also, the general perception and fears of high risk in agriculture lending has been allayed since in most FIs, the agriculture sector has a lower NPA than the overall portfolio average. The countrywide branch out-reach for the surveyed eligible service providers (FIs) sufficiently covers the targeted borrowers.

## 6.0 Findings of the Farmer-level Survey

This section presents and discusses findings on the profile of the sampled loan beneficiary and non-beneficiary farmers engaged in the similar agribusiness enterprises (Dairy, Beef Cattle, Sugarcane, Coffee and Banana) and the credit history of the loan beneficiaries with the partner Financial Institutions in aBi Finance's LGS and LOC programs. Findings on wealth creation (change in asset endowment), employment creation and income from the surveyed agribusiness enterprises are also presented and discussed here.

### 6.1 Profile of the sampled farmers

Majority (80% and above) of the sampled farmers, both loan beneficiaries (Treatment) and non-beneficiaries (Control) are male, implying that the enterprises targeted by the evaluation study are male dominated, likely because of their commercial value. Due to the male dominance of the studied enterprises, agricultural lending to these enterprises is also male-dominated, as reflected in the large proportions of male borrowers (80%-93.3%) in these enterprises. On average, farmers in the Dairy enterprise are significantly older (51.1 years and 64.1 years for beneficiaries and non-beneficiaries, respectively) than their cohorts in the other enterprises, whose average age is in the low to mid 40s. The education level and family size among Dairy farmers (particularly the loan beneficiaries) are also higher compared to their cohorts in the other enterprises. Majority of the sampled loan beneficiaries and non-beneficiaries (over 60% to 100% depending on the enterprise) engage in primary production of crops and/or livestock as their main occupation and source of livelihood. This is attributed to the fact that focus of the ES was limited to primary producer enterprises to make it easier to define and find an appropriate Control group of non-beneficiaries against which to measure the impact (change in performance indicators) attributed to aBi Finance.

**Table 5: Characteristics of the Dairy Farmers/Household Heads and their households**

Socio-economic characteristics	Dairy		Coffee		Beef Cattle		Sugarcane		Banana	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
% Male Farmers	93.33	80.00	83.87	86.67	90.63	85.71	83.87	81.82	80.00	80.00
Average age (years) of farmer	51.50 (10.55)	64.10 (17.70)	46.74 (10.71)	48.27 (10.14)	42.17 (8.05)	42.93 (13.53)	45.94 (9.81)	42.91 (10.95)	44.47 (11.09)	47.00 (11.98)
Highest school grade completed by Farmer/ Head	8.26 (3.45)	11.80 (5.02)	7.00 (3.02)	7.80 (4.57)	7.45 (4.69)	6.71 (3.38)	7.55 (4.01)	7.82 (2.99)	7.87 (3.60)	7.56 (3.13)
Average Family Size	11.80 (4.06)	9.10 (3.78)	8.58 (3.13)	9.60 (3.11)	9.84 (5.48)	8.50 (3.88)	9.68 (3.04)	7.55 (2.16)	7.53 (2.81)	6.90 (2.02)
<b>Main Occupation of Farmer/Household Head (%Households/Farmers Reporting)</b>										
Production of crops	3.33	0.00	83.87	80.00	21.88	71.43	61.29	72.73	66.67	90.00
Production of livestock	96.67	90.00	0.00	0.00	46.88	7.14	0.00	0.00	0.00	0.00
Salary earner	0.00	10.00	0.00	13.33	6.25	14.29	9.68	9.09	13.33	0.00

## 6.2 Borrowing for Investing in Agriculture

Key among the targets of aBi Finance’s LGS and LOC programs is to double the share of the agricultural portfolio in the participating FIs and increase term lending to SME agribusinesses threefold. This is largely because lending to agriculture has been perceived by most FIs to be intrinsically high risk, which has been used to justify the low lending levels and high pricing of loan products to the agricultural sector. The ES analyzed the status of agriculture lending in four partner FIs in aBi Finance’s LOC and LGS programs, namely; Centenary Bank, Opportunity Bank, FINCA and UGAFODE. Findings at the FI level show that the general perception and fear of high risk in agricultural lending has been allayed because in all but one of the sampled FIs, agriculture has lower PAR ratios compared to the total FI loan portfolio. As a result, all but one of the sampled FIs more than doubled their share of agricultural lending between 2010 and 2013. Following below is a discussion of the findings on the borrowing history of the loan beneficiaries under the LOC and LGS programs of aBi Finance with respect to the volume (number) and value of loans the beneficiaries have enjoyed from the partner FIs since 2010; accessibility to financial services reflected in perceptions of ease of accessing loans and distance to FIs; tenure of the loans and interest rates charged on these loans; what the client used the loan for with a view of determining the extent to which the acquired loans contributed to employment creation; and whether and to what extent borrowing contributed to the beneficiaries’ income.

### 6.2.1 Volume and Value of loans and Tenure for Loans Received Between 2010 and 2013

Table 6 below shows that the proportion of borrowers receiving agricultural loans between 2010 and 2013 from FIs operating aBi Finance-supported LOC and LGS programs (Partner FIs) increased by 16.7 percentage points for the Banana enterprise (UGAFODE); 20 percentage points for the Dairy enterprise (Centenary Bank); 64.6 percentage points for the Coffee enterprise (Centenary Bank); 68.75 percentage points for the Beef Cattle enterprise (FINCA); and 93.6 percentage points for the Sugarcane enterprise (Opportunity Bank).

**Table 6: Volume of loans given by partner FIs in aBi Finance’s Programs between 2010 and 2013**

Enterprise	% Sampled Borrowers Receiving Loans from Partner FI			
	2013	2012	2011	2010
Centenary Bank for Coffee	93.55	67.74	45.16	29.03
Centenary Bank for Dairy	86.67	90.00	66.67	66.67
FINCA for Beef-Cattle Fattening	78.13	65.63	28.13	9.38
Opportunity Bank for Sugarcane	3.23	0.00	96.77	3.23
UGAFODE for Banana	66.67	66.67	56.67	50.00

With the exception of sugarcane, 2013 is the year when the largest proportion of borrowers (66.7%, 78.13%, 86.67% and 93.6% for Banana, Beef Cattle, Dairy and Coffee, respectively) received their most recent loan from the partner FI. For sugarcane, 96.77% of the borrowers received their last loan from Opportunity Bank in 2011, and the proportion dropped to 3.23% thereafter in 2012 and 2013 because of the failed plan to link farmers with Bugiri Sugar.

The average value of the loans received by borrowers in the different enterprises between 2010 and 2013 are summarized in Table 8 below. These increased by Ush 0.8m, Ush 1.48m, Ush 2.8m, 4.22m and Ush 4.52m for the Coffee, Banana, Sugarcane, Beef Cattle and Dairy enterprises, respectively. **This apparent annual increase in the number of farmers taking agricultural loans and the size of loans taken is suggestive of a positive impact of aBi Finance's LGS and LOC programs on agricultural lending and borrowing.**

**Table 7: Average Value (Ush) of loans received from partner FIs in aBi Finance's Programs between 2010 and 2013**

Enterprise	2013	2012	2011	2010	Change in Loan Values (Ush) 2010-2013
Centenary Bank for Coffee	1,613,793 (1,265,116)	1,385,714 (559,719.3)	1,214,286 (533,287.5)	800,000 (165,831.2)	813,793**
Centenary Bank for Dairy	9,820,000 (3,786,502)	8,240,741 (3,411,999)	6,421,053 (2,287,265)	5,305,556 (2,345,987)	4,514,444***
FINCA for Beef-Cattle Fattening	5,920,000 (3,402,450)	5,309,524 (2,472,227)	3,288,889 (2,351,300)	1,700,000 (519,615.2)	4,220,000**
Opportunity Bank for Sugarcane	3,000,000 (N=1)	-	3,769,001 (2,877,843)	1,000,000 (N=1)	2,769,001 <sup>8</sup>
UGAFODE for Banana	3,049,000 (2,182,664)	2,415,000 (1,747,261)	1,740,000 (1,295,904)	1,573,333 (1,012,399)	1,475,667**

\*\* , \*\*\* Represents statistically significant change at 5% and 1% level, respectively. Figures in parentheses are standard deviations

Further analysis of loan values shows that the size of loans given to majority of the borrowers for investing in the surveyed crop enterprises (86%, 90% and 96.5% for Sugarcane, Banana and Coffee, respectively) were in the range of Ush 5million and below; while majority of their cohorts in the livestock enterprises (86.7% and 88% for Dairy and Beef Cattle, respectively) took bigger loans in the range of Ush 2-10million (see Table 8).

**Table 8: Most Prevalent Loan Values and Loan Periods (Tenure) and Borrowing History**

FI and Enterprise	Most Prevalent Loan Value Range (000'000 Ush)	% Borrowers whose loan value is in the range	Most Prevalent Loan Period Range (Months)	% Borrowers in loan period range	% Repeat Borrowers 2010-2013
Centenary Bank for Coffee	≤ 2	96.5	≤ 10	80.0	83.9
Centenary Bank for Dairy	3 -10	86.7	10 - 12	88.46	93.33
FINCA for Beef-Cattle	2 - 10	88.0	≤ 12	84.0	62.5
Opportunity Bank for Sugarcane	≤ 5	86.0	12 - 24	83.3	3.23
UGAFODE for Banana	≤ 5	90.0	6-12	85.0	86.7

<sup>8</sup> For Sugarcane, the change in loan values is for the years 2010 and 2011.

The average loan periods (tenure) for the loans received by borrowers in the different enterprises and FIs between 2010 and 2013 are summarized in Table 9 below. On average, the loan tenure decreased by half a month for Centenary Bank borrowers (Coffee and Dairy enterprises), but increased by an average of 2.3 months for UGAFODE, 2.8 months for FINCA; and 6.2 months for Opportunity Bank. Further analysis of loan tenure shows that the majority (80% and above) of borrowers in the Coffee, Beef Cattle, Dairy and Banana enterprises received short-term loans (12 months and below).

**Table 9: Tenure of Loans or Loan Period (Months) on loans given by partner FIs in aBi Finance's Programs between 2010 and 2013**

Enterprise	2013	2012	2011	2010	Change in Loan Tenure 2010-2013
Centenary Bank for Coffee	8.64 (2.28)	9.10 (2.39)	8.71 (2.76)	9.11 (2.15)	-0.5
Centenary Bank for Dairy	12.89 (2.74)	13.55 (3.46)	11.95 (2.06)	13.5 (4.72)	-0.6
FINCA for Beef-Cattle Fattening	12.32 (4.29)	16.02 (5.29)	10.44 (4.10)	9.50 (4.33)	2.8
Opportunity Bank for Sugarcane	24.00	-	17.77 (4.44)		6.2 <sup>9</sup>
UGAFODE for Banana	12.38 (2.46)	10.85 (1.98)	10.60 (2.26)	10.13 (2.45)	2.3

Table 9 above shows that it is only in the Sugarcane enterprise for which majority of borrowers (83.3%) received mid-term loans (12-24 months). Also, it is only in the Sugarcane enterprise and for which the majority of borrowers (93.33%) were first time borrowers and only one borrower (3.23%) was a repeat borrower from Opportunity Bank in 2011—the year when nearly all (96.77) received their last loan from Opportunity Bank for investing in Sugarcane production. For the rest of the enterprises and their respective FIs, majority of the borrowers (62.5%, 83.9%, 86.7% and 93.33% for Beef Cattle, Coffee, Banana and Dairy enterprises, respectively) were repeat borrowers.

#### 6.2.2. Accessibility to Financial Services and Interest Rates Charged by Partner FIs

During the ES survey, borrowers were asked how easy it was to access the loans they acquired between 2010 and 2013 from the partner FIs in aBi Finance's LOC and LGS programs.

**Table 10: Borrowers' Perceptions on Ease of Accessing Loans**

Enterprise	% Borrowers Claiming Easy or Very Easy Access to Loans			
	2013	2012	2011	2010
Centenary Bank for Coffee	87.1	90.48	85.72	100
Centenary Bank for Dairy	85.18	86.2	100	95
FINCA for Beef-Cattle Fattening	83.87	92.6	88.24	88.88
Opportunity Bank for Sugarcane	50.0 (N=2)	-	34.38	83.3
UGAFODE for Banana	92.31	87.5	81.48	73.68

<sup>9</sup> For Sugarcane, the change in loan tenure is for the years 2011 and 2013.

With the exception of Sugarcane in 2011, the majority of the respondents (over 80%) said it was easy or very easy to access loans. However, the percentage of borrowers perceiving loan access to be easy or very easy dropped (albeit marginally) between 2010 and 2013 for all enterprises except Banana for which the percentage increased from 73.7% in 2010 to 92.3% in 2013. For Sugarcane, only one out of six borrowers received loans from Opportunity Bank in 2010; and the rest sourced loans from other FIs. Moreover, the percentage of borrowers claiming to have easily or very easily accessed loans decreased from 83.3% in 2010 to 34.38% in 2011, the year when the majority of the borrowers received loans from Opportunity Bank (96.77%) for investing in Sugarcane production. This is attributed to the failed plan by Opportunity Bank to link farmers with Bugiri Sugar, which made aBi Finance-funded portfolio at Opportunity Bank to register 100% NPA at the initial stages; leading to slowed growth of the bank's agricultural portfolio in 2012 and 2013. Among the sampled borrowers from Opportunity Bank, only one received loans in 2013 and none 2012.

Distance from the homes of the sampled farmers to the nearest banking institution were analyzed for change between 2010 and 2013, as an additional indicator of change in accessibility to financial services during the period of intervention by aBi Finance. The findings in Table 11 below show that average distance decreased for all enterprises except Coffee, but by a bigger margin among loan beneficiaries than non-beneficiaries, **implying that financial services were brought closer to the farmers between 2010 and 2013—thanks to aBi Finance's support to financial institutions operating its LOC and LGS programs.** For Coffee, the distance increased in both farmer categories but by a bigger margin among non-beneficiaries (2.53 km) than beneficiaries (0.36 km).

**Table 11: Average distance (km) from home to nearest banking institution**

Enterprise	Distance (km) among Beneficiaries			Distance (km) among Non-Beneficiaries			Attributable Change to aBi Finance's Programs (DID) in Km
	2013	2010	Change in Distance (km)	2013	2010	Change in Distance (km)	
Coffee	35.39 (14.61)	35.03 (15.58)	0.36	36.16 (14.25)	33.63 (16.02)	2.53	-2.17
Dairy	13.94 (12.95)	15.44 (13.91)	-1.5	11.80 (9.98)	12.10 (9.79)	-0.3	-1.20
Beef Cattle	22.70 (19.47)	41.75 (34.42)	-19.05***	33.41 (25.34)	51.13 (34.98)	-17.72	-1.33
Sugarcane	8.11 (6.31)	13.38 (8.99)	-5.27***	12.31 (7.90)	12.40 (8.30)	-0.09	-5.18
Banana	5.18 (5.21)	6.31 (6.81)	-1.13	5.43 (6.05)	6.28 (5.99)	-0.85	-0.28

\*\*\* Represents statistically significant change at 1% level. Figures in parentheses are standard deviations

The increase in accessibility to financial institutions (measured by reduction in distance to FIs) attributed to aBi Finance’s intervention in financial service delivery is estimated at 5.18km, 2.17km, 1.33km, 1.2km and 0.28km for Sugarcane, Coffee, Beef Cattle, Dairy and Banana enterprises, respectively.

Table 12 below shows the average interest rates charged for agricultural loans given between 2010 and 2013 by the FIs operating aBi Finance’s LOC and LGS programs. All FIs reduced the interest rates charged, with UGAFODE reducing by the highest margin of 8.3 percentage points; followed by FINCA at 6.4 percentage points; Centenary Bank (for the Dairy enterprise) at 4.2 percentage points; Opportunity Bank at 1.97 percentage points; and Centenary Bank (for the Coffee enterprise) at 0.5 percentage points.

**Table 12: Interest Rates (%) on loans given by partner FIs in aBi Finance’s Programs between 2010 and 2013**

<b>Enterprise</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>Change in Interest Rates 2010-2013</b>
<b>Centenary Bank</b> for Coffee	22.43 (5.37)	24.76 (4.65)	20.57 (4.70)	22.89 (7.29)	-0.5
<b>Centenary Bank</b> for Dairy	29.89 (1.76)	30.93 (3.29)	31.81(3.94)	34.05(5.47)	-4.2***
<b>FINCA</b> for Beef-Cattle Fattening	25.64 (8.26)	24.57 (4.61)	26.00 (4.24)	32.00 (6.93)	-6.4
<b>Opportunity Bank</b> for Sugarcane	34	-	35.97 (3.41)	-	-1.97 <sup>10</sup>
<b>UGAFODE</b> for Banana	27.3 (3.06)	28.8 (5.00)	35.4 (1.85)	35.6 (1.55)	-8.3***

\*\*\* Represents statistically significant change at 1% level. Figures in parentheses are standard deviations

### **6.3. Employment Creation:**

The mandate of aBi Trust and, thus, aBi Finance is to support the private sector actors to increase their contribution to the agricultural sector by increasing land and labor productivity, and market competitiveness; and by so doing contribute to poverty reduction through economic growth, wealth, and employment creation. The TOR for the Evaluation Study (ES) included determining what the loan beneficiaries used the loan for, to provide an insight into the extent to which the loan money enabled beneficiaries to access labor when they needed it; and by so doing create employment. Table 13 below shows that very large proportions of loan beneficiaries in the Coffee (100%) and Sugarcane enterprises (96.78%) spent part of the loan money on hiring labor and, thus, creating employment. However, much smaller proportions of loan beneficiaries in the Dairy (23.3%), Banana (20%) and Beef-Cattle (9.38%) enterprises used the loan money on employment creation. This is also reflected in the fact that out of the 303 Fulltime Equivalent (FTE) jobs created by all the sampled loan beneficiaries in the different enterprises, the majority were in Sugarcane (101.88) and Coffee (62.43) enterprises.

<sup>10</sup> For Sugarcane, the change in interest rates is for the years 2011 and 2013.



**Table 13: Loan Utilization by Enterprise and FTE Jobs Created**

Activities on which the loan beneficiaries spent the loan money	% of Loan Beneficiaries by Enterprise Spending Loan Money on Different Activities				
	Dairy Enterprise (N=30)	Beef Enterprise (N=32)	Sugarcane Enterprise (N=31)	Coffee Enterprise (N=31)	Banana Enterprise (N=30)
Purchase of stock	-	68.75	-	-	-
Purchase of pasture seed/ planting materials	46.67	-	74.19	-	-
Purchase processed feed/ nutrient supplements	6.67	31.25	-	-	-
Purchase land or plantation/Rent land	16.67	9.38	20.03	-	3.33
Purchase drugs	20.00	25.00	-	-	-
Purchase chemicals/fertilizers	26.67	25.00	-	93.55	30.0
Hiring Labor	23.33	9.38	96.78	100.0	20.0
Purchase farm tools/equipment	6.67	3.13	-	16.13	3.33
Pay for Vet charges/fees	16.67	6.25	-	-	-
Repair farm structures	3.33	6.25	-	-	-
Pay for processing fees	-	-	-	9.68	-
<b><i>Fulltime Equivalent (FTE) Jobs Created by Loan Beneficiaries and Non-Beneficiaries</i></b>					
<b>Additional FTE Jobs Created by Beneficiaries</b>	<b>37</b>	<b>45.5</b>	<b>101.88</b>	<b>62.43</b>	<b>56.25</b>
<b>Additional FTE Jobs Created by Non-Beneficiaries</b>	<b>12.125</b>	<b>8.125</b>	<b>41.25</b>	<b>1.52</b>	<b>4.5</b>

Loan beneficiaries investing in non-crop enterprises (dairy and beef) created fewer jobs than their cohorts in the crop enterprises (banana, coffee and sugarcane), because additional stock in the livestock enterprises doesn't directly translate into additional labor requirement. Other activities on which large proportions of beneficiaries (10% and above) spent loan money include purchase of livestock (beef cattle), purchase of pasture seed and planting materials (dairy and sugarcane), purchase of feed and nutrient supplements (beef cattle and dairy), purchase or renting of land (dairy, beef cattle and sugarcane), purchase of drugs (beef cattle and dairy), purchase of chemicals and/or fertilizers (beef cattle, dairy, coffee and banana), and payment for vet fees (dairy and beef cattle) and processing fees (coffee).

The ES survey interviewed farmers on the number and types of workers they employed in 2010 (Before aBi Finance programs) and in 2013 when the ES was conducted. The findings show that both permanent and short-term workers were employed by the sampled farmers in the different enterprises, but there were fewer farmers employed on permanent than short or temporary terms. The short-term jobs created by the sampled farmers were converted to fulltime equivalents (FTEs) by summing up the total number of days worked by the short-term workers and dividing it by 240—the number of days one must have worked to be considered fulltime. The total number of FTE jobs created by the sampled farmers was 303 for loan beneficiaries (N=154) and 67.5 (N=60) for non-beneficiaries (see Table 14). **This**

**implies that on average, each loan beneficiary created about two FTE jobs compared to the average of one FTE job created by their cohorts in the non-beneficiary category.**

#### **6.4. Income Growth and Wealth Creation**

To assess the impact of aBi Finance programs on income change among loan beneficiaries, income from various enterprises was estimated using Gross Margin (GM) analysis for the year 2010 (before aBi Finance programs) and 2013, when the Evaluation Study (ES) was carried out. To estimate income (GMs) from the different enterprises, the cost of borrowing (computed using the interest rates charged on the loans to the beneficiaries) was, in addition to production and marketing costs, deducted from the total earnings. Average incomes for beneficiaries were compared to those of non-beneficiaries to determine the income change attributed to aBi Finance's support to FIs through the LOC and LGS programs. Wealth creation (measured by changes in the value of asset holding) was also estimated and compared between beneficiaries and non-beneficiaries to show further evidence of impact of aBi Finance Programs on the beneficiaries. This is in light of the mandate aBi Trust and, thus aBi Finance to support the private sector actors to increase their contribution to the agricultural sector, as a means of reducing poverty through economic growth, wealth and employment creation.

The ES findings in Table 14 below show that average income per loan beneficiary increased significantly following receipt and use of agricultural loans from FIs operating aBi Finance programs. Among non-beneficiary farmers, however, income either increased by a lower margin than for beneficiary farmers (in banana, coffee and beef enterprises) or dropped in the dairy and sugarcane enterprises. This notable income growth came about as a result of increased area and production (for the enterprises against which the farmers received loans), which increased by a greater magnitude among loan beneficiary than non-beneficiary farmers. Because of the increased production, sales also increased significantly and by a bigger magnitude among loan beneficiary farmers; as did the prices received by farmers in all enterprises except coffee, whose prices fell by 27.7% among loan beneficiaries (from Ush 5,034/kg in 2010 to Ush 3,642/Kg in 2013) and by 36.4% among non-beneficiaries farmers (from Ush 4,994/kg in 2010 to Ush 3,177/Kg in 2013). The sharp price fall notwithstanding, average coffee income per farmer increased in both farmer categories but by a bigger margin among loan beneficiaries than non-beneficiaries (by Ush 382,434 versus Ush 268,794). Thus,

the increase in Coffee income attributed to aBi Finance's support is estimated at Ush 176,075 per farmer.

**Table 14: Average income (GM per farmer) and income and Income Change between 2010 and 2013 by Enterprise**

Enterprise	Income (Ush/Farmer) among Beneficiaries			Income (Ush/Farmer) among Non-Beneficiaries			Attributable Change to aBi Finance's Programs (DID) in Ush
	2013	2010	Income Change (Ush)	2013	2010	Income Change (Ush)	
Coffee	2,024,502 (1,497,871)	1,642,068 (1,475,660)	382,434	1,756,407 (1,523,877)	1,642,767 (1,446,092)	113,640	268,794
Dairy	29,400,000 (9,966,853)	24,800,000 (14,100,000)	4,600,000	18,100,000 (10,800,000)	19,300,000 (10,300,000)	-1,200,000	5,800,000
Beef-Cattle Fattening	12,900,000 (10,900,000)	6,265,054 (6,010,510)	6,634,946**	9,398,386 (5,645,830)	4,076,287 (1,378,002)	5,322,099	1,312,847
Sugarcane	12,500,000 (7,213,352)	7,662,229 (5,337,300)	4,837,771***	9,522,689 (7,493,822)	9,882,451 (8,276,210)	-359,762	5,197,533
Banana	2,591,095 (4,156,067)	1,355,073 (1,337,966)	1,236,022	1,720,206 (935,921.2)	736,627 (721,187.2)	983,579	252,443

\*\* , \*\*\* Represents statistically significant change at 5% and 1% level, respectively. Figures in parentheses are standard deviations

The attributable change in coffee income to aBi Finance's support would have been much higher had the timing of the ES in 2013 not coincided with the large slump in prices in 2013 compared the time of inception of aBi Finance's intervention in the financial sector in 2010. The ES findings further show that 53.3% of the loan beneficiaries (N=31) registered positive income growth between 2010 and 2013, estimated at an average of Ush 878,892 per coffee farmer (see Table 15); compared to those in the non-beneficiary category in which 26.7% of the farmers (N=15) registered positive income growth estimated at Ush 847,852 on average.

**Table 15: Income Growth between 2010 and 2013 for Farmers with Positive Income Change by Enterprise**

Enterprise	% of farmers with positive income change		Average income growth for farmers with positive income change	
	Beneficiaries	Non-Beneficiaries	Beneficiaries	Non-Beneficiaries
Coffee	53.33	26.67	878,892.1 (754,650.3)	847,852.4 (1,325,906)
Dairy	76.67	50.0	9,796,766* (7,84,9382)	2,497,849 (1,106,054)
Beef-Cattle Fattening	81.25	64.29	12,000,000* (9,866,086)	9,089,935 (4,508,473)
Sugarcane	58.06	54.55	7,578,747* (4723821)	4,086,250 (2,277,963)
Banana	46.67	60.00	1,422,534 (2,840,091)	1,636,136 (870,771.1)

\* Represents statistically significant change at 10% level. Figures in parentheses are standard deviations

In the dairy enterprise, average income increased among beneficiaries by Ush 4.6 million between 2010 and 2013, but decreased in the non-beneficiary group by Ush 1.2 million; leading to a large increase in average income of Ush 5.8 million per farmer attributable to aBi Finance's support. Narrowing the income analysis to farmers with positive income change

shows that 76.7% of the loan beneficiaries (N=30) registered positive income growth, estimated at an average of Ush 9.8 million per farmer. This is much higher than in the non-beneficiary category, where 50% of the farmers (N=10) had positive income growth between 2010 and 2013, estimated at about Ush 2.5 million per farmer.

Average income in the Beef Cattle fattening enterprise also grew in both farmer categories, but by a bigger margin in the loan beneficiary (Ush 6.63 million) than the non-beneficiary group (Ush 5.32 million); leading to an increase in average income of close to Ush 1.3 million attributable to aBi Finance's support. The results also show that income growth in the Beef Cattle enterprise was statistically significant at the 5% level of significance. However, because the Gross Margin estimates per farmer are based on sales and not output, it is possible that the income from the cattle-fattening enterprise is underestimated for some farmers who fattened cattle during the year but had not sold some of them by the time of the survey (December 2013). Unfortunately, the survey tool missed capturing this information, which makes it impossible to account for unsold beef cattle in the income estimates. However, given that the month of December is at the peak of the sales season due to heightened demand for beef during the festive period, we can assume that all the cattle fattened during the year were sold in the month of December. Nevertheless, further analysis shows that over four fifths (81.25%) of the loan beneficiaries (N=32) registered positive income growth following intervention by aBi Finance, estimated at an average of Ush 12 million per farmer. This is much higher than in the non-beneficiaries category, where 64.29% of the farmers (N=14) had positive income growth between 2010 and 2013, estimated at about Ush 9.1 million per farmer.

In the Sugarcane enterprise, average income in the loan beneficiary group significantly increased (at 1% level of significance) by Ush 4,837,771 per farmer (63.1% increment); while in the non-beneficiary group, it decreased by Ush 359,762 per farmer (3.6%). The increase in Sugarcane income attributable to aBi Finance's support is estimated at Ush 5,197,533 per farmer. Further analysis shows that more than half (58.06%) of the loan beneficiaries (N=31) registered positive income growth following intervention by aBi Finance, estimated at an average of Ush 7,578,747 per farmer, compared to the non-beneficiary group in which 54.6% of the farmers (N=11) registered positive income growth estimated at Ush 4,086,250 per farmer.

Finally, average banana income per farmer increased in both farmer categories but by a bigger margin among loan beneficiaries (by just over Ush 1.2 million) than non-beneficiaries (by close to Ush 1 million). The increase in banana income attributable to aBi Finance's support is estimated at Ush 252,443 per farmer. The attributable change in banana income to aBi Finance's support would have been much higher in the absence of the Bacterial Banana Wilt (BBW), which has had a devastating effect in the banana enterprise in western Uganda, and compelled some banana farmers to borrow and invest the loan money in alternative agricultural enterprises such as Tea and coffee to mitigate the risks and losses associated with BBW. Narrowing the income analysis to farmers with positive income change shows that nearly half (46.7%) of the loan beneficiaries (N=30) registered positive income growth following intervention by aBi Finance, estimated at an average of Ush 1,422,534 per farmer, compared to the non-beneficiary group in which 60% of the farmers (N=10) registered positive income growth estimated at Ush 1,636,136 per farmer. This shows that the cost of borrowing coupled with the poor performance of the banana enterprise put the loan beneficiaries at a disadvantage relative to those who didn't borrow for investing in the banana enterprise.

To determine the impact of aBi Finance programs on wealth creation among loan beneficiaries, the sampled farmers were interviewed on the number and value of various assets held in 2011 (at the onset of aBi Finance programs) and 2013, when the ES was conducted. The estimated asset values were then compared with those for non-beneficiaries to determine the contribution of aBi Finance's LOC and LGS programs to wealth creation. The study findings in Table 16 below show that with the exception of sugarcane and banana, the value of farm equipment held by the sampled farmers increased in both farmer categories, but by a greater magnitude among loan beneficiaries than non-beneficiaries.

**Table 16: Asset Holding and Changes between 2011 and 2013 by Enterprise**

<b>Farm Equipment Holding</b>							
<b>Enterprise</b>	<b>Value of Farm Equipment (Ush) among Beneficiaries</b>			<b>Value of Farm Equipment (Ush) among Non-Beneficiaries</b>			<b>Attributable Change to aBi Finance's Programs (DID) in Ush</b>
	<b>2013</b>	<b>2011</b>	<b>Change in Value (Ush)</b>	<b>2013</b>	<b>2011</b>	<b>Change in Value (Ush)</b>	
Coffee	707,451.6 (685474.6)	572,386.7 (418641.6)	135,064.9	600,214.3 (447652.1)	565875 (405510.3)	34339.3	100,725.6
Dairy	2,444,133 (1,684,442)	2,318,773 (1,819,278)	125,360	1,587,600 (1,101,229)	1,688,480 (1,067,305)	-100880	226,240.0
Beef-Cattle Fattening	1473538 (1325462)	764307.7 (731642.8)	709,230.3**	1046357 (988605.9)	699250 (431699)	347107	362,123.3
Sugarcane	116,267.9 (87626.15)	131,389.7 (92545.79)	-15,121.8	60,000 (32692.51)	111,111.1 (69088.99)	-51111.1	35,989.3
Banana	411760.9	249043.5	162,717.4**	870416.7	599000	271416.7	-108699.30

	(450926.2 )	(306950.3)		(1192402)	(1151717)		
<b>Landholding</b>							
<b>Enterprise</b>	<b>Landholding(Acres) among Beneficiaries</b>			<b>Landholding(Acres) among Non-Beneficiaries</b>			<b>Attributable Change(DID) in Acres</b>
	<b>2013</b>	<b>2011</b>	<b>Change in Acreage</b>	<b>2013</b>	<b>2011</b>	<b>Change in Acreage</b>	
Coffee	5.52 (3.66)	5.13 (3.77)	0.39	4.53 (2.33)	4.53 (2.50)	0	0.4
Dairy	135.77(86.60)	128.64(87.3)	7.13	99.54 (68.26)	98.42 (67.8)	1.12	6.0
Beef-Cattle Fattening	56.53 (63.50)	52.04 (57.55)	4.49	97.88 (184.3)	94.96 (185.1)	2.92	1.6
Sugarcane	10.98 (8.97)	10.92 (9.14)	0.06	6.71 (5.34)	4.71 (5.07)	2	-1.94
Banana	8.93 (9.19)	6.54 (6.19)	2.39	13.3 (14.25)	11.40 (12.87)	1.9	0.49
<b>Livestock Holding</b>							
<b>Enterprise</b>	<b>Value of Livestock (Ush) among Beneficiaries</b>			<b>Value of Livestock (Ush) among Non-Beneficiaries</b>			<b>Attributable Change (DID) in Ush</b>
	<b>2013</b>	<b>2011</b>	<b>Change in Value (Ush)</b>	<b>2013</b>	<b>2011</b>	<b>Change in Value (Ush)</b>	
Coffee	2324300 (1283943)	1808379 (1030405)	515,921**	2357400 (889235.5)	2879200 (1944846)	-521,800	1,037,721.0
Dairy ( <i>Improved Cattle</i> )	81,000,000 (68000000)	62,200,000 (54,800,000)	18,800,000***	44,100,000 (36,300,000)	53,800,000 (51,900,000)	-9,700,000	28,500,000.0
Beef-Cattle Fattening ( <i>Improved Cattle</i> )	24,900,000 (13,700,000)	11,700,000 (8,553,599)	13,200,000***	19,100,000 (9,985,745)	12,600,000 (3,346,640)	6,500,000	6,700,000.0
Sugarcane	779,545.5 (663519.2) (N=17)	646,500 (540593.8) (N=16)	133,045.5	2,542,500 (1340981) (N=5)	1,855,600 (1425569) (N=5)	686900	-553,854.5
Banana	10,000,000 (4905893)	8,892,005 (5041280)	1,107,995	5,939,780 (3951000)	5,716,000 (7591745)	223,780	884,215.00

\*\* , \*\*\* Represents statistically significant change at 5% and 1% level, respectively. Figures in parentheses are standard deviations

For sugarcane, the value of farm equipment dropped in both farmer categories but by a greater magnitude among non-beneficiaries than beneficiaries. For banana on the other hand, the value of farm equipment increased in both farmer categories but by a greater magnitude among non-beneficiaries than beneficiaries. As a result there was growth in value of farm equipment attributed to aBi Finance's programs estimated at Ush 100,726 for Coffee; Ush 226,240 for Dairy; Ush 362,123 for Beef Cattle; and Ush 35,989 for Sugarcane. For Banana, however, there was a drop in value of farm equipment attributed to aBi Finance's programs estimated, at Ush 108,699.

Again, with the exception of sugarcane, landholding and value of livestock held by sampled farmers increased by a greater magnitude among loan beneficiaries than non-beneficiaries. Even for sugarcane, the value of livestock and landholding increased in both farmer categories but by a bigger magnitude among non-beneficiaries than beneficiaries. As a result, there was growth in landholding attributed to aBi Finance's programs estimated at 0.4 acres, 6 acres, 1.6 acres and 0.49 acres in the Coffee, Dairy, Beef Cattle and Banana enterprises,

respectively. For Sugarcane, however, there was a drop in average landholding attributed to aBi Finance’s programs estimated at 1.94 acres. Regarding livestock, there was growth in value of livestock holding attributed to aBi Finance’s programs estimated at just over Ush 1m for Coffee; Ush 28.5m for Dairy; Ush 6.7m for Beef Cattle and close to Ush 0.9m for Banana. Again for Sugarcane, there was a drop in value of livestock holding attributed to aBi Finance’s programs, estimated at Ush 553,855.

Loan beneficiaries (Treatment farmers) were further probed for their perception on how and to what extent loans from the participating FIs had benefited their enterprises in terms of production, income, profitability and ability to use good agricultural practices (GAPs), among other things. This was done to gain insight on how they felt about borrowing money for farming; if they think it is beneficial or not.

**Table 17: Percentage of Farmers Reporting Positive Impact of Borrowing for Farming on Performance Indicators**

	<b>Production/Yield</b>	<b>Income</b>	<b>Profitability</b>	<b>Ability to use GAPs</b>
Dairy	53.30	63.30	53.3	33.3
Banana	20.00	23.30	23.3	33.3
Coffee	90.30	61.30	45.2	58.2
Beef Cattle	68.80	50.00	37.6	6.25
Sugarcane	12.90	6.50	3.2	38.7

Table 17 above shows that large proportions of Dairy, Beef and Coffee farmers said borrowing had significantly increased production, income, profitability and ability to apply better farming practices because the loan money was used to purchase modern inputs and technologies, animals, land and equipment, as well as hiring additional labor to sustain their growing enterprises. Lower proportions of banana and sugarcane farmers felt agricultural borrowing was beneficial. For banana, this is likely because of the problem of banana wilt, which has compelled many banana farmers to borrow for Tea and Coffee enterprises instead of banana. For sugarcane, this is likely because of the failed plan by Opportunity Bank to link farmers with Bugiri Sugar.

## **7.0. Concluding Remarks and Recommendations**

The main objective of this Evaluation Study (ES) was to evaluate the performance of aBi Finance programs (LGS and LOC) over the past 3 years (September 2010 to September 2013) against set objectives and determine the extent to which intended goals have been achieved; and to recommend corrective or other measures that may be deemed necessary to

achieve the main objectives. The ES undertook to evaluate performance at two levels; namely, the participating Financial Institution (FI) and the Beneficiary or Bank Clients level. At the FI level, the ES undertook to conduct an overall assessment of the program in general on (1) How has it helped the participating FI's and their clients; (2) The program's limitations and how the programs can be improved; (3) The strategy of using the guarantee and line of credit programs by the bank; and (4) How if at all, the programs have impacted FI's attitude to agriculture lending as evidenced by change in culture and operations. At the Beneficiary/Bank clients' level, the ES undertook to determine (1) What the client used the loan for; (2) Volume and value of loans enjoyed by clients from the bank prior to the current one; (3) How easy it was for the client to access these loans; (4) Whether and to what extent this has contributed to increased income for the clients.

At the FI level, evaluation of the impact the LOC and LGS programs was undertaken in four FIs, namely; Centenary Bank, Opportunity Bank, FINCA and UGAFODE. The corresponding enterprises against which farmers received loans from these FIs are Dairy and Coffee; Sugarcane; Beef Cattle Fattening; and Banana, respectively. It is on these enterprises that assessment of the performance of the LOC and LGS programs was based. **Although aBi Finance is promoting expansion of financial service delivery to support agribusiness development along the entire value chain, focus of the ES was limited to farming (primary producer) enterprises to make it easier to define and find an appropriate Control group of non-beneficiaries against which to estimate the impact of the LGS and LOC programs attributed to the intervention by aBi Finance.**

The ES depended on recall for information on respondents' farming activities, investments and outcomes before intervention by aBi Trust (2010 or before). Although various means were used to help farmers to recall the events as they happened before intervention (for example by using the last presidential election period as a reference for the pre-intervention period), the memories of some could have been stretched beyond their capacity to recall. **It is important therefore, that future evaluation efforts of aBi Finance programs review clients' files at the partner FIs to pick any information than can be used as baseline data for impact assessment. aBi Finance needs to emphasize to partner FIs the importance of collecting such information from all loan applicants; and to guide them on how to do this to ensure collection of usable information.**



Some of the visited FIs during the ES, particularly at the branch level seemed to be lacking knowledge on how the ALG guarantee programs operate. While the aBi Trust clearly articulates its three inter-related sub-components (VCD, G4G and FSD) and the subsequent expected outputs of each subcomponent, there is lack of clear understanding of the operation of LOC and LGS programs of aBi Finance. This was mainly observed at the lower branch level, and can be attributed to the paucity of technical skills in agriculture lending and operation of credit guarantee schemes, **hence the need for technical capacity strengthening at the branch level.**

The study findings show that majority (80% and above) of the sampled farmers, both Treatment and Control are male; indicating that the enterprises targeted by the evaluation study are male dominated, likely because of their commercial value. Because of the male dominance of the studied enterprises, agricultural lending to these enterprises is also male-dominated, as reflected in the large proportions of male borrowers (Treatment farmers) for all enterprises. **On top of striving to meet the LOP target of 40% female beneficiaries, it appears that aBi Finance needs to do more to ensure that female smallholders do not miss out on the welfare-improving opportunities created by the LOC and LGS programs.**

For all surveyed enterprises, commodity sales increased by a bigger magnitude among Treatment than Control farmers, and this led to a large net increment in sales for all enterprises attributed to aBi Finance. **However, selling prices dropped significantly for coffee, but by a bigger margin among Treatment than Control farmers; while prices rose for the rest of the enterprises by a bigger margin among Treatment farmers, save for milk. The significant fall in coffee prices had a significant negative effect on the impact of the aBi Finance programs on the borrowing farmers.**

Average income per farmer from the surveyed enterprises for which loans were given by FIs increased significantly among Treatment farmers (borrowers) in the beef cattle, dairy and sugarcane enterprises after they received aBi Finance-guaranteed loans. Among Control farmers (non-borrowers), however, income either increased by a lower margin than for borrowers (in banana, coffee and beef enterprises) or dropped in the dairy and sugarcane enterprises. **Thus, there was a significant increase in farmer income in majority of the enterprises attributed to aBi Finance's support. The proportion of farmers showing**

**income growth after taking aBi Finance-guaranteed loans was higher among farmers in the Treatment than Control category, except for banana; and the average income growth for those whose income grew was significantly higher among borrowers than non-borrowers, except for banana. This underscores the need for expanding the aBi Finance programs to increase geographical coverage and the number of supported commodities, as a way of achieving the development objective of aBi Trust and aBi Finance of building a self-sustaining export-led economy in which the benefits are shared by all Ugandans.**

Large proportions of the sampled borrowers in the Dairy, Beef and Coffee enterprises said borrowing had significantly increased their production, income, profitability and ability to apply better farming practices because the loan money was used to purchase modern inputs and technologies, animals, land and equipment, as hiring additional labor to sustain their growing enterprises. Lower proportions of banana and sugarcane farmers felt agricultural borrowing was beneficial. For banana, this is likely because of the problem of the bacterial banana wilt (BBW), which has compelled many banana farmers to borrow for Tea and Coffee enterprises instead of banana. **This underscores the need for availing affordable crop insurance services to farmers to increase their confidence to borrow for investing in agriculture.** For sugarcane, this is likely because of the failed plan by Opportunity Bank to link farmers with Bugiri Sugar.

The proportion of Treatment farmers (borrowers) receiving agricultural loans from FIs operating aBi Finance-supported LOC and LGS programs increased by between 16.7 percentage points for banana (UGAFODE) to 93.6 percentage points for sugarcane (Opportunity Bank) between 2010 and 2013. The average value of agricultural loans received by the borrowers between 2010 and 2013 also increased by between Ush 0.8 million for Coffee and Ush 4.52 Million for the Dairy enterprise. **This apparent annual increase in the number of farmers taking agricultural loans and the size of loans taken suggest a positive impact of aBi Finance's loan guarantee and line of credit programs on agricultural lending and borrowing.**

The size of loans given to majority of farmers (above 80%) in the surveyed crop enterprises were in the range of Ush 5million and below; while majority (close to 90%) of their cohorts in the livestock enterprises took bigger loans in the range of Ush 2-10million. Also, majority

(80% and above) of loan beneficiaries in the coffee, beef, dairy and banana enterprises received short-term loans (12 months and below). It is only in the sugarcane enterprise for which majority of the borrowers (83.3%) received mid-term loans (12-24 months); and for which the majority (96.77%) were first time borrowers from Opportunity Bank. For the rest of the enterprises and their respective FIs, majority of the sampled farmers (62.25% to 93.33%) are repeat borrowers. **The ES didn't ask about the adequacy of the borrowed funds, but these figures seem to suggest that agricultural lending currently favors non-crop enterprises, yet majority of the smallholders depend on crop farming for their livelihood. Future aBi Finance programs may need to investigate and attempt to address this disparity.**

The average distance from the homes of the sampled farmers to the nearest banking institution decreased by a bigger magnitude among Treatment farmers, **implying that financial services were brought closer to the farmers during this period—thanks to aBi Finance's support to financial institutions.** Also, with the exception of Sugarcane in 2011, the majority of the respondents (over 80%) said it was easy or very easy to access agricultural loans from the partner FIs, which is further evidence of increased accessibility to financial services.

**At the FI level, the study findings show that agricultural lending has continued to grow, doubling or more than doubling between 2010 and 2013 for all the surveyed FIs except Opportunity Bank,** where agricultural lending slowed down in 2012 and 2013 because of delayed take-off of the planned linkage program with Bugiri sugar. The significant growth notwithstanding, the portfolio quality has remained low, which is a testimony of low risk and prudent credit appraisal process. **With the credit guarantee scheme in place, the FIs have managed their risk, to the extent that NPAs for agriculture are at most half of the branch-level averages. This has changed the perception of agriculture as being high risk, leading to an increased appetite for agricultural lending. *The general perception and fears of high risk in agriculture lending has been allayed since in most FIs, the agriculture sector has a lower NPA than the overall portfolio average.*** Also, due to the informal nature of most borrowers, FIs have relaxed their collateral requirements and this has improved credit accessibility to farmers as the FIs are now able to provide lending without registered securities.

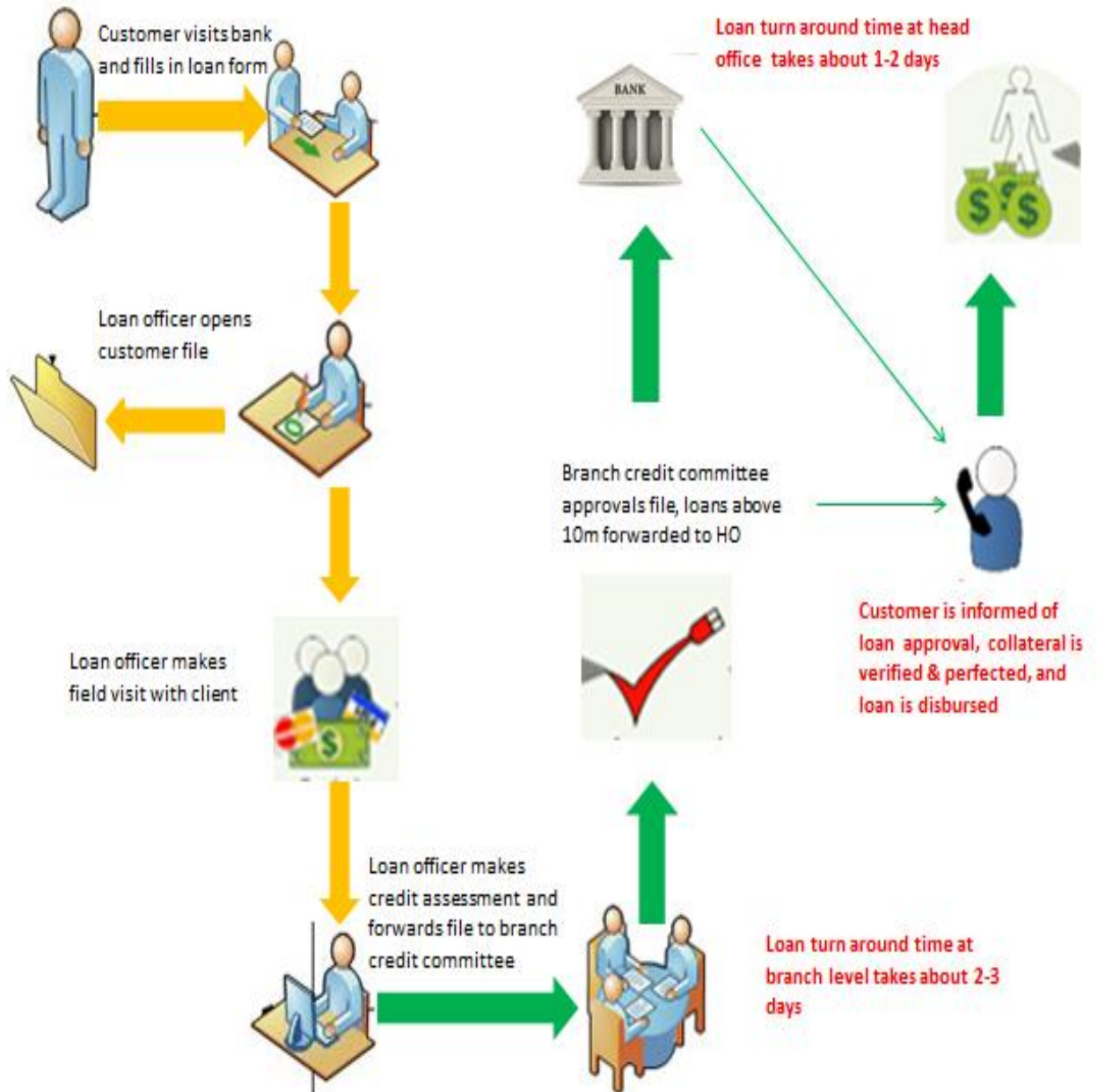
However, challenges still remain in form of limited capacity at the branch level to efficiently operate credit guarantee schemes; over utilization of the current limits which results in reduced lending capacity as the bank waits for loan repayments to provide further lending capacity; threats and risk associated with unpredictable weather patterns and crop diseases and pests in the absence of affordable crop insurance policies. Also, while the partnering FIs have country wide coverage, the actual loan disbursements have been skewed with a lower proportion of funds disbursed in Northern Uganda. Although our field assessment only covered the Central, Western and Eastern regions, there is a felt need to actively encourage more credit disbursement in Northern Uganda.

## **APPENDIX #1:**

### **APPENDIX 1.1: List of Key Officials Met**

- Sabano Mwaka AnnMarie, Supervisor Agricultural Credit, Centenary Bank
- Emmanuel Lubwama, Agriculture Product Manager, Opportunity Bank
- Mary Stella Oyat, UGAFODE MDI
- Nicholas Mujuni Chani, Manager Credit Service, Centenary Bank Mbale Branch
- Edimond Mugarura, Asst Manager Credit, Centenary Bank Ibanda Branch.
- Adams Nkwatsiibwe, Branch Manager, UGAFODE Mbarara
- Denis Kamwehanga, Branch Manager, UGAFODE Ishaka Branch
- Lawrence Mukiibi, Branch Manager, FINCA Sembabule Branch

## APPENDIX 1.2: Typical Loan Approval Process



**APPENDIX #2: SURVEY QUESTIONNAIRES**  
**EVALUATION OF THE AGRIBUSINESS LOAN GUARANTEE COMPANY (ALGC) PROGRAMME**  
**IN UGANDA**

**FINANCIAL INSTITUTION QUESTIONNAIRE**

**Introduction to the Respondent**

The Agribusiness Loan Guarantee Company is conducting an evaluation of the agricultural loan guarantee scheme programme after a period of 3 years of implementation. The purpose of the evaluation is to assess programme performance and inform future programme planning and implementation. As one of the participating financial institutions, your organization has been selected to participate in this evaluation study, and your participation is highly appreciated. The information you will provide will guide future investment in financial service delivery, and will be treated with utmost confidentiality.

**Date of Interview** \_\_\_\_\_

**1.0. General Information**

1.1 Name of Organization: \_\_\_\_\_  
 1.2 Physical Address: 1.2.1 Town: \_\_\_\_\_ 1.2.1 Plot No: \_\_\_\_\_  
 1.3 Postal Box: \_\_\_\_\_ 1.4 Tel: \_\_\_\_\_  
 1.5 Email: \_\_\_\_\_ 1.6 District: \_\_\_\_\_  
 1.7 Contact Person: 1.7.1 Name \_\_\_\_\_ 1.7.2 Position: \_\_\_\_\_  
 1.8 Tel: \_\_\_\_\_ 1.9 Email: \_\_\_\_\_  
 1.10 Type of Institution (*tick as appropriate*): Bank: \_\_\_\_\_  
 Microfinance: \_\_\_\_\_

**2.0** Indicate in the table below, the trend in the value of the loan Portfolio of your institution since the inception of the Agribusiness Loan Guarantee Company programme in 2010

Year	Total Loan Portfolio (shs)	Value (in UShs) Disbursed to agricultural based SMEs	No. of Recipient agricultural based SMEs
2010			
2011			
2012			
2013			
Total			

**3.0 (a)** Indicate in the table below, the trend in term lending to agribusiness SMEs by your institution since the inception of the Agribusiness Loan Guarantee Company programme in 2010

Year	Total value (in Ushs) dispersed to agribusiness SMEs	No. of agribusiness SMEs recipients	Distribution of <b>Value</b> of Disbursement(s) (Ushs) by Purpose of loan			
			Agro-Inputs/ equipment	Production	Value addition /Processing	Marketing
2010						
2011						
2012						
2013						
Total						

**(b)** Also provide information on the performance of disbursed loans to agribusiness SMEs in the table below.

Year	No. of agribusiness SMEs Defaulters	Value (in Ushs) defaulted by purpose of loan					Main Reason (One) for Defaulting			
		Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing	Total	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing
2010										
2011										
2012										
2013										
Total										

**4.0 (a)** Indicate in the table below, the number of loans granted by your institution which would otherwise not have been granted in the absence of support of the Agribusiness Loan Guarantee Company (ALGC)

Year	No of loans granted to agricultural-based SMEs which wouldn't have been granted in the absence of ALGC support				Value of the Loans (Ushs) by purpose of loan to agricultural-based SMEs which wouldn't have been granted in the absence of ALGC support				Total Value of loans which wouldn't have been granted in the absence of ALGC support
	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing	
2010									
2011									
2012									
2013									
Total									

**4.0 (b)** Indicate in the table below, the number of loans granted whose size would have been significantly reduced had there not been the support of the Agribusiness Loan Guarantee Company (ALGC)

Year	No of loans granted whose size would have been significantly reduced had there not been support of ALGC				Value of the Loans granted(Ushs)				Estimated value of loans(Ushs), had they been entirely shouldered by the Bank, without ALGC support			
	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing	Agro-Inputs/equipment	Agricultural Production	Value addition /Processing	Marketing
2010												
2011												
2012												
2013												
Total												

**5.0 (a)** Please list ways (starting with the most important and ending with the least important) in which the guarantee scheme of Agribusiness Loan Guarantee Company (ALGC) has helped your organization?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



**5.0(b)** Also describe ways (*starting with the most important and ending with the least important*) in which the guarantee scheme of the Agribusiness Loan Guarantee Company (ALGC) has helped your clients

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**6.0 Job Creation**

In the table below, indicate the type and number of jobs created as a result of the new loans your institution gave out as a result of support from the Agribusiness Loan Guarantee Company (ALGC)

	Type of Jobs Created as a result of new loans given as a result of support from ALGC (see codes at bottom of table for examples of jobs created)	Number of Jobs Created as a result of new loans given as a result of support from ALGC in.....			Totals
		2011	2012	2013	
1					
2					
3					
4					
5					
6					

**1=Manager; 2=Assist.Manager; 3=Marketing Officer; 4=Supervisor; 5=Trainer; 6=Secretary; 7=Receptionist; 8=Driver; 9=Mechanic; 10=Cleaner; 11=Porter; 12=Change Agents; 13=Other (specify)**

**7.0** List the major constraining factors (up to 5) limiting the performance of the ALGC loan/credit guarantee scheme and suggest mitigation measures in the table below.

	Limiting/Constraining Factors of the ALGC	Suggested mitigation measures
1		
2		
3		

**7.0 (a)** What strategies has your institution put in place to achieve the goal of increased lending to agricultural related SMEs using ALGC support?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**8.0 (a)** Has the ALGC Programme helped your institution to increase the eagerness to provide Agribusiness financing? \_\_\_\_\_ (1=Yes; 2=No)

**8.0 (b)** If yes to 8.0 (a) above, explain how ALGC has increased your eagerness \_\_\_\_\_

**9.0** After your experience with utilizing the ALGC Guarantee Scheme, will your institution continue financing Agribusiness enterprises even without the scheme? \_\_\_\_\_ (1=Yes; 2=No; 3=Don't Know)

**10.0** What is your opinion on your institution's efficiency in the management of the ALGC loan scheme program in the following areas?:

Area of program management	How efficiently is the program being managed in the area of..... (tick as appropriate)					
	Very efficient	Efficient	Inefficient	Very Inefficient	Undecided	Don't Know
1. Payment of Guarantee fees						
2. Understanding of guarantee terms and regulations						
3. Reporting timeliness and Accuracy						
4. Sufficiency of guarantee limits and percentage cover						
5. Sufficiency of percentage cover						

**11.0** How do you rate Agribusiness Loan Guarantee Company (ALGC) on the following aspects?

ALGC Aspects	Very efficient	Efficient	Inefficient	Very Inefficient	Undecided	Don't Know
1. Turnaround time for applications for cover						
2. Turnaround time for claims						
3. Turnaround time for general queries						

**12.0 (a).** Any additional observations or comments regarding ALGC Guarantee scheme that we have not discussed? \_\_\_\_\_ (1=Yes; 2=No)

**12.0 (b)** If yes to 12.0 (a) above, what are the additional observations or comments? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Thank You So much for your time*

# ASSESSMENT OF IMPACTS OF ALGC/LOC INTERVENTIONS AMONG BANANA FARMERS BENEFITING FROM LINE OF CREDIT (LOC) FACILITY

## Introduction to the Respondents

The government of Uganda and its development partners are running a programme aimed at supporting farmers to increase their contribution to agricultural development by increasing market competitiveness and the productivity of land and labour. The ultimate goal of this programme is to reduce poverty, and to create wealth and employment. To achieve this goal, the government and its development partners are working through partnerships with Farmer Organizations such as District Farmers Associations, NGOs, and Small and Medium enterprises (SMEs), and Financial Institutions which work directly with farmers.

I am part of a team of Researchers from Makerere University collecting data to help the government and its development partners to establish the facts on the ground, and to better understand the changes occurring within the agricultural sector in various parts of the country, for purposes of guiding decision-making for future development. **The information you provide will guide future investment in the much-needed interventions in this area; and it will be treated with the highest confidentiality.**

***\*Please Note: For the Treatment group, the respondent must be the beneficiary farmer. For the control group, target respondent is the Household Head or Spouse but can be any knowledgeable adult member of the Household***

### A. GENERAL INFORMATION

A1	District name			Date of Interview	
A2	Sub-county name			Name of Interviewer	
A3	Parish name			Quality of questionnaire responses back-checked by ( <i>Name of Supervisor</i> )	
A4	Village/LC1 name			Date checked	
A5	Name of Implementing Partner			Completeness of all sections in questionnaire checked by ( <i>Name of Supervisor</i> )	
A6	Household name			Date checked	
A7	Name of the <b>Farmer/Respondent</b> and <b>Telephone contact</b>			Enumerator response to Supervisor queries checked by ( <i>Name of Supervisor</i> )	
A8	Relationship of Farmer /Respondent to Household Head ( <b>see codes</b> )			Date checked	
A9	Category of Household /Farmer ( <b>1=Treatment; 2=Control</b> )			Supervisor's final comments on quality of gathered data	
A10	<b>Intervention Component (1=ALGC; 2=LOC)</b>	<b>LOC</b>			
A11	<b>Intervention Enterprise: For Control Households (Those that didn't receive loans for banana production/marketing/processing), STILL FOCUS INTERVIEW ON BANANA</b>	<b>Banana</b>			
A12	Gender of Farmer/ HHd Head ( <b>1=Male; 2=Female</b> )				
A13	Main Occupation of Farmer/ HHd Head ( <b>see codes</b> )		A18	Number of <b>productive adult females</b> in the household	
A14	Age of Household Farmer/ HHd Head (years)		A19	Number of <b>productive adult males</b> in the household	
A15	Highest school grade completed by Farmer/ HHd Head		A20	Number of <b>productive children</b> in the household	
A16	Marital status of Farmer/ HHd Head ( <b>see codes</b> )		A21	Number of <b>unproductive children</b> in the household	
A17	Total No. of people in the Hhd of the Farmer/ Respondent		A22	Number of <b>unproductive adults</b> in the household	

**Relationship codes:** 1=Household head; 2=Spouse; 3=Son/daughter; 4=Parent; 5=Brother/sister; 6=Son/daughter in-law; 7= Grand child; 8= Other relative  
9=Hired worker; 10=Other (specify)

**Marital status codes:** 1=Married; 2=Single; 3=Divorced; 4=Widowed

**Occupation codes:** 1=No occupation; 2= Prod. of crops; 3= Prod. of livestock; 4=Salary earner; 5=Wage earner (casual laborer); 6=Other (specify)

## 2.0. INCOME SOURCES

List the top 5 sources of cash income for your household (starting with the most important one) in 2011 (Last Presidential Election Period) and Now (2013). Rank the Top 3. Capture Banana in last row if not listed among top three

Cash Income Sources (see codes below)					Estimated Income Earned (Ushs)	
Period	Now (2013)	Code	2011	Code	2013	2011
Most important						
Second most important						
Third most important						
Coffee (if not among the top 3)						

Income source codes: 1=Production and sale of crops (specify main crop providing cash income); 2=Production and sale of animals & animal product(specify main animal or animal product providing cash income); 3=Sale of land, 4=Salary, 5=Remittances, 6=Hiring out casual labor (wages), 7=Sale of forest products, 8=Brewing, 9= Trading, 10=Fishing, 11=Other (specify)

## 3.0 ASSET ACCUMULATION

3.1 List all equipment/durable goods and Livestock owned (number and estimated sale value) by your household in 2011 (Last Presidential Election Period) and Now (2013)

Type of equipment (such as motor vehicles, bicycles, radio, farm equipment, etc.	Code	No. of items		Total Value (US\$)		Code	No. of items		Total Value (US\$)	
		HA1	HA2	HA1	HA2		HA1	HA2		
		Now	2011	Now	2011		Now	2011	Now	2011
<b>Farm Equipment</b>						<b>Other Items</b>				
Tractor Plough	1					Bicycle				
Tractor	2					Radio				
Ox-Plough						TV				
Tractor Trailer / Cart						Mobile Phones				
Wheelbarrows						Motorcycle				
Pangas						Vehicles				
Pruning knives						Generator				
Axes						Other equipment (specify)				
Saws						<b>Land</b>				
Secateurs						Total land <b>owned</b> (acres)				
Hand hoe						Total land <b>cultivated</b> (acres)				
Spray pumps						<b>Livestock</b>				
Water tanks						Cattle local				
Weighing scales						Cattle improved				
Other farm equipment (specify)						Goats and Sheep				
Other farm equipment (specify)						Indigenous Chicken				
Other farm equipment (specify)						Improved Chicken				
Other farm equipment (specify)						Pigs				
Other farm equipment (specify)						Other Livestock (specify)				
Other farm equipment (specify)						<b>Materials Used 4 Main House (codes)#</b>	<b>Now</b>		<b>2010</b>	
Other farm equipment (specify)						Walls				
Other farm equipment (specify)						Roof				
Other farm equipment (specify)						Floor				

# Codes for House materials: 1= Concrete, 2=burned bricks, 3=Mud blocks, 4=Mud and straw, 5=Wood, 6=Plastic Shelter, 7=Tiles, 8=Straw (grass, papyrus, banana fibers), 9=Galvanized iron, 10=Mud, 11=Other (specify)

#### 4.0: FINANCIAL SERVICES - CREDIT

**4.1:** Did you (treatment farmer/control HHd) receive a loan from UGAFODE before 2011 (before last Presidential Election) (1 = Yes; 2 = No)

**4.2:** Did you (treatment farmer/control HHd) receive a loan from UGAFODE between 2011-2013 (since last Presidential Election) (1 = Yes; 2 = No)

**4.3:** Did you (treatment farmer/control HHd) receive a loan from other financial institutions before 2011 (before last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

**4.4:** Did you (treatment farmer/control HHd) receive a loan from other financial institutions between 2011-2013 (since last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

If the answer to 4.1, 4.4, 4.3 and/or 4.4 is Yes, list the amounts received from the different financial institutions (starting with UGAFODE) in each year and ask the subsequent questions. [If more than one loan was received from a given financial institution in the same year, record each loan on a separate row in column 4.5]

Year when loan was acquired	4.5 Loan Source (Name of Institution) (Use codes below)	4.6 Amount Received (Ush) (List each loan amount on separate row)	4.7 Interest Rate (%/Yr)	4.8 Loan Period (Months)	4.9 Main Purpose for which loan was sought (Use codes below)	4.10 Main use to which the loan was put? (Use codes below)	4.11 If main use in 4.10 was agric investment specify the enterprise (Use codes below)	4.12 How easy was it for you to access this loan (see codes)	4.13 Were you satisfied with terms & conditions of the loan? (see codes)	4.14 If dissatisfied, main reason why? (see codes)	4.15 Describe how the received loan affected your welfare (see codes)
2010	UGAFODE										
2011	UGAFODE										
2012	UGAFODE										
2013	UGAFODE										

Loan Source codes (4.5): 1=UGAFODE; 2=Commercial bank; 3=MFI; 4=SACCO; 5=Group/Association (Registered/Unregistered); 6=Other (specify)

Codes for Main Purpose/Main use (codes for 4.9/4.10): 1=agric. Investment (specify \_\_\_\_\_); 2=Non-agric. Investment (specify \_\_\_\_\_); 3=Consumption; 4=school fees; 5=medical; 6=other household needs (Specify) \_\_\_\_\_

Enterprise Codes (4.11): 1=Coffee; 2=Banana; 3=Sugarcane; 4=Dairy; 5=Beef Cattle fattening; 6=Other (specify \_\_\_\_\_)

Ease of accessing loan codes (4.12): 1=Very Easy; 2=Easy; 3=Undecided; 4=Difficult; 5=Very Difficult

Satisfaction codes (4.13): 1=Satisfied; 2=Dissatisfied; 3=Indifferent (Neutral):

Reasons for dissatisfaction (code 4.14): 1=High interest rate; 2=Stringent rules; 3=Long process; 4=Hidden information; 5=Got less money than requested; 6=Other (specify) \_\_\_\_\_

Codes for welfare effect (Q4.15): 1=no impact; 2=minor impact; 3=moderate impact; 4=major impact; 5=negative impact

**4.16. If 4.1&4.3=No, why didn't treatment farmer/control HHd receive loan before 2011** 4.16 \_\_\_\_\_  
1=No security/collateral 2=Had outstanding loan 3=Don't Know 4=Did not need credit 5=Credit services unavailable 6=Other (specify)

**4.17. If 4.2&4.4=No, why didn't treatment farmer/control HHd receive loan between 2011-2013** 4.17 \_\_\_\_\_  
1=No security/collateral 2=Had outstanding loan 3=Don't Know 4=Did not need credit 5=Credit services unavailable 6=Other (specify)

4.18. If answer to 4.11 (for the last loan received from UGAFODE BANK before July 1, 2013) is Banana(4.11=2), list the different activities on which the loan money was spent

Codes: 1=Purchase of Fertilizer & Other Chemicals; 2=Renting Land; 3= Labor for production; 4=Labor for Harvesting; 5=Purchase of farm equipment; 6=Lease/Hire of farm equipment; 7=Marketing costs; 8=other(specify)

**##AFTER LISTING THE ACTIVITIES ON WHICH THE LOAN MONEY WAS SPENT, ASK FOLLOW-UP QUESTIONS IN SECTION 5.0 BELOW ABOUT THE ACTIVITIES ON WHICH LOAN MONEY WAS SPENT##**

**5.0. Production/Marketing/Processing of Banana harvested (before 2011 and between 2011-2013) [IGNORE RECENTLY PLANTED GARDENS NOT YET HARVESTED]**

5.1(B):BENEFICIARIES:For loans received from UGAFODE BANK for investing in the BANANA enterprise (for any activities Q4.18=1-8)Between 2011&2013, When was the last time (Season & Year) that the farmer producedBanana USING THE LOAN from UGAFODE #5.1(B)\_\_\_\_\_ (Season)\_\_\_\_\_ (Year)

5.1(C)/CONTROLS Between 2011&2013, When was the last time (Season & Year) that the farmer producedBanana #5.1(C)\_\_\_\_\_ (Season)\_\_\_\_\_ (Year)

5.2:BOTH BENEFICIARIES & CONTROLS: Before 2011, When was the last time (Season and Year) that the farmerproducedBanana #5.2\_\_\_\_ (Season)\_\_\_\_\_ (Year)

5.3: How many separate plots (gardens) of Banana did Beneficiary farmer/control HHd grow in the season and year reportedin 5.1 5.3\_\_\_\_\_ plots

5.4: How many separate plots (gardens) of Banana did Beneficiary farmer/control HHd grow in the season and year reportedin 5.2 5.4\_\_\_\_\_ plots

Answer these questions for Banana grown (as sole crop or intercrop) on all gardens (plots) planted to Banana in the last year and seasonit was planted between 2011 and 2013 (Q5.3) and before 2011 (Q5.4). Complete the left part of the table first.

Season (1=2011-2013; 2=Before 2011)	Plot/ Garden ID (Enter all plots in 5.3 &5.4)	Main variety of Bananag rown	Co de	Cropping method (1=sole crop, 2=Intercrop)	Plot area planted to Banana (acres)	Application of Chemical fertilizer				Application of Organic soil inputs				Total cost of pesticide applied(Us hs)	Total cost of herbicides applied (Ushs)
						Main Type of fertilizer applied	Co de	Quantity of main fertilizer applied (kg)	Total cost (value) of main fertilizer applied (Ush)	Main Type of Organic input applied	Co de	Quantity of main Organic input applied (kg)	Total cost (value) of main Organic input applied (Ush)		
SID	GID	5.5		5.6	5.7	5.8		5.9	5.10	5.11		5.12	5.13	5.14	5.15

#The period 2011-2013 can be referred to as from the last Presidential Election Period up to today; while before 2011 is before the Last Presidential Elections

Fertilizer codes: 1=UREA; 2=DAP; 3=CAN; 4=TSP; 5=SSP; 6=NPK; 6=None; 8=Other (specify)

Organic inputs Codes: 1=Animal manure; 2=Compost; 3=Other (specify)

**5.0 Continued:Banana inputsused, their sources, use of credit services and Hired Labor and Rented Land**

Season (1=2011-2013; 2= Before 2011)	Plot/ Gard en ID	Main source of chemical fertilizer used on plot (Code)	Co de	Perceived quality of chemical fertilizer (1=Very good; 2=Good; 3=Poor; 4=Very poor)	Main source of herbicides/p esticides used on plot (Code)	Co de	Perceived quality of herbicides/ pesticides (1=Very good; 2=Good; 3=Poor; 4=Very poor)	Were any inputs used on this plot received on credit? 1=Yes, 2=No(► 5.25)	Which inputs were received on credit? (1=fertilizer, 2=herbicides/pestici des 3=both fertilizer &herbicid/pesticide 4=other (specify))	Co de	Credit source (1=trader, 2=NGO, 3=Gov't program, 3=farmers' group, 4= other(specify))				Total Value (Ushs) of inputs received on credit and used on plot.	Total Cost of HIRED LABOR (from produ ction to harvesting)( Ushs)	Total cost of HIRED LAND (Ushs/ Year)
											Fertilizer	Co de	Herbicides/ pesticides	Co de			
SID	GID	5.16		5.17	5.18		5.19	5.20	5.21		5.22		5.23		5.24	5.25	5.26

**Codes for Main Source of Chemicals/Fertilizer (5.16 &5.18):** 1=own seed/material, 2=input trader, 3=NGO, 4= District or Lower-Level Farmers Association/group/organization (**specify name**), 5=other (specify))

**5.0 Continued:Banana Harvests and Sales. Complete the left part of the table first.**

Season(1=2011-2013; 2=Before 2011)	Plot/ Garden ID	Quantity Harvested	Units of Quantity Harvested (e.g., Large Bunch=12+clusters; Medium Bunch=8-11 clusters; Small Bunch<8 clusters; 100 kg bags, etc) [Record different bunch sizes on separate row]	Quantity sold (Same Units as 5.28)	Sale price (Same Units as 5.28)	Primary/Main Mode of Sale (1=Collectively thru group, 2=Individually)	Code	Sold to whom/Main Buyer Type? 1=Consumer, 2=Trader, 3=NGO 4=Institution 5=Exporter 6=Processor 6=Broker 8=Other (specify)	Code	Main Reason for selling to main buyer 1=Only buyer available 2=Better prices 3=Nearest 4=Contractual arrangement 5= Other (specify)	Distance (kms) to main Buyer	Mode of Transport to Point of Sale (codes)	Transport Cost (Ushs) to point of sale (if Hired)	If used own means, what would it have cost to hire (Ushs)	How was the revenue from banana Sale used? (List the top three) (codes)
SID	GID	5.27	5.28	5.29	5.30	5.31		5.32		5.33	5.34	5.35	5.36	5.37	5.38

**Codes for 5.35 (Modes of Transport):** 1=foot, 2=bicycle, 3=motorbike, 4=Vehicle, 5=Other(specify)

**Codes for 5.38 (Use of revenue from crop):** 1=Consumption; 2=Investment in Agricultural enterprise; 3=Investment in non-agricultural enterprise;  
4=Medical expenses; 5=Household durables; 6=Clothing/Shoes; 7=Other (specify)

**QUESTIONS 5.39 TO 5.45 ARE FOR BENEFICIARY FARMERS/HOUSEHOLDS ONLY, SKIP THESE FOR CONTROL HOUSEHOLDS**

**5.39:** If loan money from UGAFODE was used to **purchase farm tools/equipment** that would otherwise have been hired(**Q4.18=5**), specify the equipment \_\_\_\_\_; when the equipment was purchased (*month* \_\_\_\_\_ *and year* \_\_\_\_\_) and how much money it cost you to purchase the equipment \_\_\_\_\_ (Ushs)

**5.40:** What are the additional earnings from owning the equipment **specified in 5.39** over and above what you would earn if you didn't have it \_\_\_\_\_ (Ushs/Year)



5.41: What are the annual **maintenance costs** for the purchased farm equipment? \_\_\_\_\_(Ushs/year)

5.42: What are the annual **operating and other costs** for the purchased farm equipment? \_\_\_\_\_(Ushs/year)

5.43: If loan money from UGAFODE was used to **lease or hire farm tools/equipment** that you would otherwise have no access to (Q4.18=6), specify the equipments leased/hired and answer questions below for each time you leased/hired the equipment using UGAFODEloan

Hired/Leased Equipment	Month & year you hired/leased equipment using UGAFODE loan	Total Costs incurred (Ushs)to lease/hire equipment	Total Additional earnings (Ushs) from leasing or hiring equipment above what you would earn if you didn't lease/hire it
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		

5.44: If loan money from UGAFODE was used to pay for Banana **marketing (Q4.18=7)**, answer questions below for each time you marketed banana using UGAFODEloan.

Month and year marketed banana using UGAFODE loan	Quantity of bananamarketed (kgs)	Total Costs incurred (Ushs)(include market fees, transport, agents fees, etc)	Additional earnings (Ushs/bunch) per bunch of banana sold after incurring mkting costs opposed to avoiding them	Total Additional earnings (Ushs) from incurring mkting costs opposed to avoiding them
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				

5.45: In your opinion, **HOW AND BY WHAT MAGNITUDE** has the most previous loan acquired from UGAFODEBenefited the following aspects of your Banana enterprise?

Aspect of the Banana enterprise	How (e.g., improved/increased because...; worsened/decreased because...)	Magnitude of Benefit (Rough Estimate)
1.Banana productivity/yield (Bunches/Acre)		Increment _____ (Bunches/Acre)
2.Access to better markets		1= High; 2=Medium; 3=Low; 4=Don't know
3.Ability to increase area under Banana		Increment _____ (Acres)
4.Banana Income per year		Increment _____ (Ushs/Year)

5. Profitability of Banana enterprise		1= High; 2=Medium; 3=Low; 4=Don't know
6. Bargaining power in the marketing of Banana		1= High; 2=Medium; 3=Low; 4=Don't know
7. Ability to market collectively		1= High; 2=Medium; 3=Low; 4=Don't know
8. Ability to use modern Banana production practices		1= High; 2=Medium; 3=Low; 4=Don't know
9. Other (specify)		1= High; 2=Medium; 3=Low; 4=Don't know

**QUESTIONS 5.46 TO THE END ARE FOR BOTH BENEFICIARY AND CONTROL FARMERS/HOUSEHOLDS**

**5.47:** In your opinion, how would you rate the following attributes of credit to farmers in this area? *(if don't know write DK)*

Item	Between 2011 and 2013				Before 2011			
	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory
1 Availability of credit services								
2 Interest rate charged on credit								
3 Application process/procedure for credit								
4 Information on terms & conditions of credit								
5 Stringency of terms and conditions of credit								
6 Ease of accessing credit								

**5.48/5.49.** What was the distance (km) from your home to the nearest banking institution **in 2013 (Now)** \_\_\_\_\_ **(5.48)** and **in 2010** \_\_\_\_\_ **(5.49)**

**6. 0. Farm Labor/Jobs:**

**6.1.** How many workers in total do you currently employ? \_\_\_\_\_ **(Now)** and in 2010 \_\_\_\_\_ **(2010)**

		<b>Now</b>	<b>2010</b>
<b>6.2</b>	Number of Permanent workers		
<b>6.3</b>	Number of Temporary/short-term workers		
<b>6.4</b>	Monthly payment to Permanent workers <b>(Total in Ushs)</b>		
<b>6.5</b>	On average, for how many months in a year do you use Temporary/short-term workers?		
<b>6.6</b>	<b>Total annual</b> payment to Temporary/short-term workers <b>(Total in Ushs)</b>		

*Thank You So much for your time*

## ASSESSMENT OF IMPACTS OF ALGC/LOC INTERVENTIONS AMONG BEEF CATTLE FARMERS BENEFITING FROM THE LOAN GUARANTEE SCHEME

### Introduction to the Respondents

The government of Uganda and its development partners are running a programme aimed at supporting farmers to increase their contribution to agricultural development by increasing market competitiveness and the productivity of land and labour. The ultimate goal of this programme is to reduce poverty, and to create wealth and employment. To achieve this goal, the government and its development partners are working through partnerships with Farmer Organizations such as District Farmers Associations, NGOs, and Small and Medium enterprises (SMEs), and Financial Institutions which work directly with farmers.

I am part of a team of Researchers from Makerere University collecting data to help the government and its development partners to establish the facts on the ground, and to better understand the changes occurring within the agricultural sector in various parts of the country, for purposes of guiding decision-making for future development. **The information you provide will guide future investment in the much-needed interventions in this area; and it will be treated with the highest confidentiality.**

***\*Please Note: For the Treatment group, the respondent must be the beneficiary farmer. For the control group, target respondent is the Household Head or Spouse but can be any knowledgeable adult member of the Household***

#### A. GENERAL INFORMATION

A1	District name			Date of Interview	
A2	Sub-county name			Name of Interviewer	
A3	Parish name			Quality of questionnaire responses back-checked by ( <i>Name of Supervisor</i> )	
A4	Village/LC1 name			Date checked	
A5	Name of Implementing Partner			Completeness of all sections in questionnaire checked by ( <i>Name of Supervisor</i> )	
A6	Household name				
A7	Name of the <b>Farmer/Respondent</b> and <b>Telephone contact</b>			Date checked	
A8	Relationship of Farmer /Respondent to Household Head ( <b>see codes</b> )			Enumerator response to Supervisor queries checked by ( <i>Name of Supervisor</i> )	
A9	Category of Household /Farmer ( <b>1=Treatment; 2=Control</b> )			Date checked	
A10	<b>Intervention Component</b> (1=ALGC; 2=LOC)	<b>ALGC</b>		Supervisor's final comments on quality of gathered data	
A11	<b>Intervention Enterprise: For Control Households (Those that didn't receive loans for Cattle-fattening/marketing/processing), STILL FOCUS INTERVIEW ON BEEF</b>	<b>Beef Cattle fattening</b>			
A12	Gender of Farmer/ HHd Head ( <b>1=Male; 2=Female</b> )				
A13	Main Occupation of Farmer/ HHd Head ( <b>see codes</b> )		A18	Number of <b>productive adult females</b> in the household	
A14	Age of Household Farmer/ HHd Head (years)		A19	Number of <b>productive adult males</b> in the household	
A15	Highest school grade completed by Farmer/ HHd Head		A20	Number of <b>productive children</b> in the household	
A16	Marital status of Farmer/ HHd Head ( <b>see codes</b> )		A21	Number of <b>unproductive children</b> in the household	
A17	Total No. of people in the Hhd of the Farmer/ Respondent		A22	Number of <b>unproductive adults</b> in the household	

**Relationship codes:** 1=Household head; 2=Spouse; 3=Son/daughter; 4=Parent; 5=Brother/sister; 6=Son/daughter in-law; 7= Grand child; 8= Other relative  
9=Hired worker; 10=Other (specify)

**Marital status codes:** 1=Married; 2=Single; 3=Divorced; 4=Widowed

**Occupation codes:** 1=No occupation; 2= Prod. of crops; 3= Prod. of livestock; 4=Salary earner; 5=Wage earner (casual laborer); 6=Other (specify)

## 2.0. INCOME SOURCES

List the top 5 sources of cash income for your household (starting with the most important one) in 2011 (Last Presidential Election Period) and Now (2013). Rank the Top 3. *Capture Beef Cattle in last row if not listed among top three*

Cash Income Sources (see codes below)					Estimated Income Earned (Ushs)	
Period	Now (2013)	Code	2011	Code	2013	2011
<i>Most important</i>						
<i>Second most important</i>						
<i>Third most important</i>						
<i>Beef Cattle (if not among the top 3)</i>						

Income source codes: **1=Production and sale of crops** (specify main crop providing cash income); **2=Production and sale of animals & animal product** (specify main animal or animal product providing cash income); **3=Sale of land**, **4=Salary**, **5=Remittances**, **6=Hiring out casual labor (wages)**, **7=Sale of forest products**, **8=Brewing**, **9= Trading**, **10=Fishing**, **11=Other** (specify)

## 3.0 ASSET ACCUMULATION

3.1 List all equipment/durable goods and Livestock owned (number and estimated sale value) by your household in 2011 (Last Presidential Election Period) and Now (2013)

Type of equipment (such as motor vehicles, bicycles, radio, farm equipment, etc.	Code	No. of items		Total Value (US\$)		Code	No. of items		Total Value (US\$)	
		Now	2011	Now	2011		Now	2011	Now	2011
<b>Farm Equipment</b>		<b>HA1</b>		<b>HA2</b>		<b>Other Items</b>	<b>HA1</b>		<b>HA2</b>	
Tractor Plough	1					Bicycle				
Tractor	2					Radio				
Ox-Plough						TV				
Tractor Trailer / Cart						Mobile Phones				
Wheelbarrows						Motorcycle				
Cattle Dip						Vehicles				
Sheds (Milking/calf)						Generator				
Cattle Crash						Other equipment (specify)				
Axe						Other (specify)				
Wheelbarrows						<b>Land</b>				
Dehorning bars						Total land owned (acres)				
Spray pumps						Total land cultivated (acres)				
Water tanks						Grazing land (acres)				
Milking cans						<b>Livestock</b>				
Castrating clippers						Cattle local				
Panga/Rakes						Cattle improved				
Water troughs						Goats and Sheep				
Feeding troughs						Indigenous Chicken				
Forage cutter/chopper						Improved Chicken				
Drenching gun						Pigs				
Hand sprayer						Other Livestock (specify)				
Feed mixers						<b>Materials Used 4 Main House (codes)#</b>	<b>Now</b>		<b>2010</b>	
Feed mill						Walls				
Nutrient feeding Charts						Roof				
Other (specify)						Floor				

# Codes for House materials: 1= Concrete, 2=burned bricks, 3=Mud blocks, 4=Mud and straw, 5=Wood, 6=Plastic Shelter, 7=Tiles, 8=Straw (grass, papyrus, banana fibers), 9=Galvanized iron, 10=Mud, 11=Other (specify)

## 4.0: FINANCIAL SERVICES - CREDIT

**4.1:** Did you (treatment farmer/control HHd) receive a loan from **FINCA** before 2011 (before last Presidential Election) \_\_\_\_\_ (1 = Yes; 2 = No)

**4.2:** Did you (treatment farmer/control HHd) receive a loan from **FINCA** between 2011-2013 (since last Presidential Election) \_\_\_\_\_ (1 = Yes; 2 = No)

**4.3:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** before 2011 (before last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

**4.4:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** between 2011-2013 (since last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

**If the answer to 4.1, 4.4, 4.3 and/or 4.4 is Yes, list the amounts received from the different financial institutions (starting with FINCA) in each year and ask the subsequent questions. [If more than one loan was received from a given financial institution in the same year, record each loan on a separate row in column 4.5]**

Year when loan was acquired	4.5 Loan Source (Name of Institution) (Use codes below)	4.6 Amount Received (Ush) (List each loan amount on separate row)	4.7 Interest Rate (%/Yr)	4.8 Loan Period (Months)	4.9 Main Purpose for which loan was sought (Use codes below)	4.10 Main use to which the loan was put? (Use codes below)	4.11 If main use in 4.10 was agric investment specify the enterprise (Use codes below)	4.12. How easy was it for you to access this loan (see codes)	4.13 Were you satisfied with terms & conditions of the loan? (see codes)	4.14 If dissatisfied, main reason why? (see codes)	4.15. Describe how the received loan affected your welfare (see codes)
2010	FINCA										
2011	FINCA										
2012	FINCA										
2013	FINCA										

**Loan Source codes (4.5):** 1=FINCA; 2=Other Commercial bank; 3=MFI; 4=SACCO; 5=Group/Association (Registered/Unregistered); 5=Other (specify)

**Codes for Main Purpose/Main use (codes for 4.9/4.10):** 1=agric. Investment (specify \_\_\_\_\_); 2=Non-agric. Investment (specify \_\_\_\_\_); 3=Consumption; 4=school fees; 5=medical; 6=other household needs (Specify) \_\_\_\_\_

**Enterprise Codes (4.11):** 1=Coffee; 2=Banana; 3=Sugarcane; 4=Dairy; 5=Beef Cattle fattening; 6=Other (specify \_\_\_\_\_)

**Ease of accessing loan codes (4.12):** 1=Very Easy; 2=Easy; 3=Undecided; 4=Difficult; 5=Very Difficult

**Satisfaction codes (4.13):** 1=Satisfied; 2=Dissatisfied; 3=Indifferent (Neutral)

**Reasons for dissatisfaction (code 4.14)** 1=High interest rate; 2=Stringent rules; 3=Long process; 4=Hidden information; 5=Got less money than requested; 6=Other (specify) \_\_\_\_\_

**Codes for welfare effect (Q4.15):** 1=no impact; 2=minor impact; 3=moderate impact; 4=major impact; 5=negative impact

**4.16. If 4.1&4.3=No, why didn't treatment farmer/control HHd receive loan before 2011**      **4.16** \_\_\_\_\_  
 1=No security/collateral    2=Had outstanding loan    3= Don't Know    4=Did not need credit    5=Credit services unavailable    6= Other (specify)

**4.17. If 4.2&4.4=No, why didn't treatment farmer/control HHd receive loan between 2011-2013**      **4.17** \_\_\_\_\_  
 1=No security/collateral    2=Had outstanding loan    3= Don't Know    4=Did not need credit    5=Credit services unavailable    6= Other (specify)

**4.18. Cattle Inventory:** List the number of cattle owned in the various categories in **January 2011 (Last Presidential Elections)** and **NOW (2013)**

Cattle Categories	Cattle ID	Number owned in January 2011 ( Last Presidential Elections Period)	Total value (Shs) Jan 2011	Number owned Dec 2013	Total value (Shs) Dec 2013	Do you Usually fatten and sell... as beef cattle? (i.e for slaughter?) (1=Yes; 2=No)
CNAME	CID	CI1	CI2	CI3	CI4	CI5
Cows – Local	1					
Bulls – Local	2					
Young bulls-Local	3					
Heifer –Local	4					
Calves –Local	5					
Cows – Improved	6					
Bulls – Improved	7					
Young Bulls - Improved	8					
Heifer –Improved	9					
Calves –Improved	10					
Bullocks/Steers	11					

**4.19.** If the answer to 4.11 (for the last loan received from FINCA before July 1, 2013) is Beef Cattle Fattening (4.11=5), list the different activities on which the loan money was spent

1. Purchase stock	5. Purchase land for grazing	9. Pay for Veterinary Serv (Vet. Doctor charges)	13. Purchase farm tool equipment	17. Purchase Transport equipme
2. Purchase process feed	6. Rent Land for grazing	10. Pay for A.I. or Bull Service	14. Lease/Hire Farm tool equipment	18. Marketing costs
3. Purchase nutritie supplements	7. Purchase drugs/deworm	11. Pay labor for producti (feeding, watering, sprayin	15. Construct/Repair fa structures	19. Processing Costs
4. Purchase fodde Grass/Banana Pee	8. Purchase chemicals (acaricides, Vaccines, et	12. Hire Dam/water sour	16. Dig or Repair Dam Water source	20. Other Costs (specify)

**##AFTER LISTING THE ACTIVITIES ON WHICH THE LOAN MONEY WAS SPENT, ASK FOLLOW-UP QUESTIONS IN SECTION 5.0 BELOW ABOUT THE ACTIVITIES ON WHICH LOAN MONEY WAS SPENT##**

**5.0. Production/Marketing/Processing of Beef Cattle (before 2011 and between 2011-2013): (CONSIDER ONLY BEEF CATTLE THAT HAVE BEEN FATTENED AND SOLD DURING THESE PERIODS)**

**5.1(B):BENEFICIARIES:**For loans received from FINCA for investing in the cattle-fattening enterprise (for any activities Q4.19=1-20) Between 2011&2013, When was the last time (Year) that the farmer fattened and soldBeef Cattle USING THE LOAN FROM FINCA #5.1(B)\_\_\_\_\_ (Year)

**5.1(C) CONTROL**Between 2011&2013, When was the last time (Year) that the farmer fattened and soldBeef Cattle #5.1(C)\_\_\_\_\_ (Year)

**5.2:BOTH BENEFICIARIES & CONTROLS:** Before 2011, When was the last time (Year) that the farmerfattened and sold #5.2\_\_\_\_\_ (Year)

**5.3:** How many **beef cattle** did the **Beneficiary farmer/control HHd**fatten and sellin the year reportedin 5.1 5.3 \_\_\_\_\_ *beef cattle*

**5.4:** How many **beef cattle** did **Beneficiary farmer/control HHd**fatten and sellin the year reportedin 5.2 5.4 \_\_\_\_\_ *beef cattle*

5.5 Answer the following questions for **BEEF CATTLE ONLY** fattened and sold in the year that this last occurred between 2011 and 2013 (Q5.3) and before 2011 (Q5.4).

Questions on Beef Cattle fattened and sold in year that this last occurred between 2011 and 2013 (Q5.3) and before 2011 (Q5.4) (SEE FOOTNOTE)		January		February		March		April		May		June		July		August		September		October		November		December	
		2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)
1	Beginning Stock of Beef Cattle																								
2	Number of Beef Cattle Purchased																								
3	Purchase Price (Ushs/animal)																								
4	Cost of processed Feed (Ushs)																								
5	Cost of nutrient Supplements (Ushs)																								
6	Cost of Purchased fodder/grass (Ush)																								
7	Rental cost of Land for grazing (Ushs)																								
8	Purchase of drugs/dewormers (Ushs)																								
9	Cost of chemicals (acaricides, Vaccines, etc) (Ush)																								
10	Vet. Doctor charges (Ushs)																								
11	Cost of A.I/Bull Service (Ushs)																								
12	Labor cost (Ushs) for production (feeding, watering..)																								
13	Hiring Dam/water source (Ushs)																								
14	Number of Beef Cattle Sold																								
15	Sale Price (Ushs/animal)																								
16	Sold to Who/Main Buyer Type (codes)																								
17	Distance (kms) to main Buyer																								
18	Transport Cost (Ush to main point of sale)																								
19	Total value of Milk Sales (Ushs)																								

FOOTNOTE: If Respondent Can't Give Monthly Figures; ask for Estimate of Annual Totals.

Codes for Main Buyer Type: 1=Consumer; 2=Trader; 3=NGO; 4=Institution; 5=Exporter; 6=Processor; 7=Broker; 8=Other

**QUESTIONS 5.6 TO 5.13 ARE FOR BENEFICIARY FARMERS/HOUSEHOLDS ONLY, SKIP THESE FOR CONTROL HOUSEHOLDS**

**5.6:** If loan money from **FINCA** was used to **purchase farm tools/equipment** that would otherwise have been hired(**Q4.19=13**), specify the equipment \_\_\_\_\_; when the equipment was purchased (*month \_\_\_\_\_ and year \_\_\_\_\_*) and how much money it cost you to purchase the equipment \_\_\_\_\_ (Ushs)

**5.7:** What are the additional earnings from owning the equipment **specified in 5.6** over and above what you would earn if you didn't have it \_\_\_\_\_ (Ushs/Year)

**5.8:** What are the annual **maintenance costs** for the purchased farm tool/equipment? \_\_\_\_\_(Ushs/year)

**5.9:** What are the annual **operating and other costs** for the purchased farm tool/equipment? \_\_\_\_\_(Ushs/year)

**5.10:** If loan money from **FINCA** was used to **lease or hire farm tools/equipment** that you would otherwise have no access to (**Q4.19=14**), specify the equipments leased/hired and answer questions below for each time you leased/hired the equipment using FINCAloan

Hired/Leased Equipment	Month & year you hired/leased equipment using FINCA loan	Total Costs incurred (Ushs)to lease/hire equipment	Total Additional earnings (Ushs) from leasing or hiring equipment above what you would earn if you didn't lease/hire it
	<i>Month _____ Year _____</i>		
	<i>Month _____ Year _____</i>		
	<i>Month _____ Year _____</i>		
	<i>Month _____ Year _____</i>		
	<i>Month _____ Year _____</i>		

**5.11:** If loan money from FINCA was used to pay for beef **marketing (Q4.19=18)**, answer questions below for each time you marketed beef using FINCA loan.

Month and year marketed beef using FINCA loan	Quantity of beef marketed (kgs)	Total Costs incurred (Ushs)(include market fees, transport, agents fees, etc)	Additional earnings (Ushs/kg) per kg of beef sold after incurring mkting costs opposed to avoiding them	Total Additional earnings (Ushs) from incurring mkting costs opposed to avoiding them
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				

**5.12:** If loan money from FINCA was used to pay for beef **processing (Q4.19=19)**, answer questions below for each time you processed beef using FINCAloan.

Month and year processed beef using FINCA loan	Quantity of beef processed (kgs)	Total Costs incurred (Ushs)(include processing fees, transport, etc)	Additional earnings (Ushs/kg) per kg of beef sold after processing as opposed to selling unprocessed	Total Additional earnings (Ushs) from selling processed than selling unprocessed.
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				
<i>Month _____ Year _____</i>				



**5.13: In your opinion, HOW AND BY WHAT MAGNITUDE** has the most previous loan acquired from **FINCA** benefited the following aspects of your beef cattle enterprise?

Aspect of the beef cattle enterprise	How (e.g., improved/increased because...; worsened/decreased because...)	Magnitude of Benefit (Rough Estimate)
1. Number of beef cattle sold per year		Increment _____ (animals/Year)
2. Access to better markets for beef cattle		1= High; 2=Medium; 3=Low; 4=Don't know
3. Ability to stock and feed more beef cattle		Increment _____ (animals/Year)
4. Income per year from beef cattle enterprise		Increment _____ (Ushs/Year)
5. Profitability of beef enterprise		1= High; 2=Medium; 3=Low; 4=Don't know
6. Bargaining power in the marketing of beef cattle		1= High; 2=Medium; 3=Low; 4=Don't know
7. Ability to market beef cattle collectively		1= High; 2=Medium; 3=Low; 4=Don't know
8. Ability to use modern practices in beef cattle production		1= High; 2=Medium; 3=Low; 4=Don't know
9. Other (specify)		1= High; 2=Medium; 3=Low; 4=Don't know

**QUESTIONS 5.14 TO THE END ARE FOR BOTH BENEFICIARY AND CONTROL FARMERS/HOUSEHOLDS**

**5.14:** In your opinion, how would you rate the following attributes of credit to farmers in this area? (if don't know write DK)

Item	Between 2011 and 2013				Before 2011			
	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory
1 Availability of credit services								
2 Interest rate charged on credit								
3 Application process/procedure for credit								
4 Information on terms & conditions of credit								
5 Stringency of terms and conditions of credit								
6 Ease of accessing credit								

**5.15/5.16.** What was the distance (km) from your home to the nearest banking institution in 2013 (Now) \_\_\_\_\_ (5.15) and in 2010 \_\_\_\_\_ (5.16)

**6.0. Farm Labor/Jobs:**

**6.1.** How many workers in total do you currently employ? \_\_\_\_\_ (Now) and in 2010 \_\_\_\_\_ (2010)

		Now	2010
<b>6.2</b>	Number of Permanent workers		
<b>6.3</b>	Number of Temporary/short-term workers		
<b>6.4</b>	Monthly payment to Permanent workers (Total in Ushs)		
<b>6.5</b>	On average, for how many months in a year do you use Temporary/short-term workers?		
<b>6.6</b>	Total annual payment to Temporary/short-term workers (Total in Ushs)		

*Thank You So much for your time*

## ASSESSMENT OF IMPACTS OF ALGC/LOC INTERVENTIONS AMONG COFFEE FARMERS BENEFITING FROM THE LOAN GUARANTEE SCHEME

### Introduction to the Respondents

The government of Uganda and its development partners are running a programme aimed at supporting farmers to increase their contribution to agricultural development by increasing market competitiveness and the productivity of land and labour. The ultimate goal of this programme is to reduce poverty, and to create wealth and employment. To achieve this goal, the government and its development partners are working through partnerships with Farmer Organizations such as District Farmers Associations, NGOs, and Small and Medium enterprises (SMEs), and Financial Institutions which work directly with farmers.

I am part of a team of Researchers from Makerere University collecting data to help the government and its development partners to establish the facts on the ground, and to better understand the changes occurring within the agricultural sector in various parts of the country, for purposes of guiding decision-making for future development. **The information you provide will guide future investment in the much-needed interventions in this area; and it will be treated with the highest confidentiality.**

***\*Please Note: For the Treatment group, the respondent must be the beneficiary farmer. For the control group, target respondent is the Household Head or Spouse but can be any knowledgeable adult member of the Household***

### A. GENERAL INFORMATION

A1	District name				<b>Date of Interview</b>	
A2	Sub-county name				<b>Name of Interviewer</b>	
A3	Parish name				Quality of questionnaire responses back-checked by ( <i>Name of Supervisor</i> )	
A4	Village/LC1 name				Date checked	
A5	Name of Implementing Partner				Completeness of all sections in questionnaire checked by ( <i>Name of Supervisor</i> )	
A6	Household name					
A7	Name of the <b>Farmer/Respondent</b> and <b>Telephone contact</b>				Date checked	
A8	Relationship of Farmer /Respondent to Household Head ( <b>see codes</b> )				Enumerator response to Supervisor queries checked by ( <i>Name of Supervisor</i> )	
A9	Category of Household /Farmer ( <i>1=Treatment; 2=Control</i> )				Date checked	
A10	<b>Intervention Component</b> ( <i>1=ALGC; 2=LOC</i> )	<b>ALGC</b>			Supervisor's final comments on quality of gathered data	
A11	<b>Intervention Enterprise: For Control Households (Those that didn't receive loans for coffee production/marketing/processing), STILL FOCUS INTERVIEW ON COFFEE</b>	<b>Coffee</b>				
A12	Gender of Farmer/ HHd Head ( <i>1=Male; 2=Female</i> )					
A13	Main Occupation of Farmer/ HHd Head ( <b>see codes</b> )			A18	Number of <b>productive adult females</b> in the household	
A14	Age of Household Farmer/ HHd Head (years)			A19	Number of <b>productive adult males</b> in the household	
A15	Highest school grade completed by Farmer/ HHd Head			A20	Number of <b>productive children</b> in the household	
A16	Marital status of Farmer/ HHd Head ( <b>see codes</b> )			A21	Number of <b>unproductive children</b> in the household	
A17	Total No. of people in the Hhd of the Farmer/ Respondent			A22	Number of <b>unproductive adults</b> in the household	

**Relationship codes:** 1=Household head; 2=Spouse; 3=Son/daughter; 4=Parent; 5=Brother/sister; 6=Son/daughter in-law; 7= Grand child; 8= Other relative  
9=Hired worker; 10=Other (specify)

**Marital status codes:** 1=Married; 2=Single; 3=Divorced; 4=Widowed

**Occupation codes:** 1=No occupation; 2= Prod. of crops; 3= Prod. of livestock; 4=Salary earner; 5=Wage earner (casual laborer); 6=Other (specify)

## 2.0. INCOME SOURCES

List the top 5 sources of cash income for your household (starting with the most important one) in 2011 (Last Presidential Election Period) and Now (2013). Rank the Top 3. Capture Coffee in last row if not listed among top three

Cash Income Sources (see codes below)					Estimated Income Earned (Ushs)	
Period	Now (2013)	Code	2011	Code	2013	2011
Most important						
Second most important						
Third most important						
Coffee (if not among the top 3)						

Income source codes: 1=Production and sale of crops (specify main crop providing cash income); 2=Production and sale of animals & animal product(specify main animal or animal product providing cash income); 3=Sale of land, 4=Salary, 5=Remittances, 6=Hiring out casual labor (wages), 7=Sale of forest products, 8=Brewing, 9= Trading, 10=Fishing, 11=Other (specify)

## 3.0 ASSET ACCUMULATION

3.1 List all equipment/durable goods and Livestock owned (number and estimated sale value) by your Household in 2011 (Last Presidential Election Period) and Now (2013)

Type of equipment (such as motor vehicles, bicycles, radio, farm equipment, etc.	Code	No. of items		Total Value (US\$)			Code	No. of items		Total Value (US\$)	
		Now	2011	Now	2011			Now	2011	Now	2011
<b>Farm Equipment</b>		<b>HA1</b>		<b>HA2</b>		<b>Other Items</b>		<b>HA1</b>		<b>HA2</b>	
		Now	2011	Now	2011			Now	2011	Now	2011
Tractor Plough	1					Bicycle					
Tractor	2					Radio					
Ox-Plough						TV					
Tractor Trailer / Cart						Mobile Phones					
Wheelbarrows						Motorcycle					
Pangas,						Vehicles					
Axes						Generator					
Saws						Other equipment (specify)					
Secateurs						<b>Land</b>					
Hand hoe						Total land owned (acres)					
Spray pumps						Total land cultivated (acres)					
Water tanks						<b>Livestock</b>					
Collapsible driers						Cattle local					
Drying shade/platform						Cattle improved					
Drying/Grading racks						Goats and Sheep					
Coffee Pulpers						Indigenous Chicken					
Washing stations for coffee						Improved Chicken					
Screens or Sieves						Pigs					
Cocoons						Other Livestock (specify)					
Weighing scales						<b>Materials Used 4 Main House (codes)#</b>		<b>Now</b>		<b>2010</b>	
Tarpaulin						Walls					
Moisture Meter						Roof					
Other farm equipment (specify)						Floor					

# Codes for House materials: 1= Concrete, 2=burned bricks, 3=Mud blocks, 4=Mud and straw, 5=Wood, 6=Plastic Shelter, 7=Tiles, 8=Straw (grass, papyrus, banana fibers), 9=Galvanized iron, 10=Mud, 11=Other (specify)

#### 4.0: FINANCIAL SERVICES - CREDIT

**4.1:** Did you (treatment farmer/control HHd) receive a loan from **Centenary Bank** before 2011 (before last Presidential Election) (1 = Yes; 2 = No)

**4.2:** Did you (treatment farmer/control HHd) receive a loan from **Centenary Bank** between 2011-2013 (since last Presidential Election) (1 = Yes; 2 = No)

**4.3:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** before 2011 (before last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

**4.4:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** between 2011-2013 (since last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

If the answer to 4.1, 4.4, 4.3 and/or 4.4 is Yes, list the amounts received from the different financial institutions (starting with Centenary Bank) in each year and ask the subsequent questions. [If more than one loan was received from a given financial institution in the same year, record each loan on a separate row in column 4.5]

Year when loan was acquired	4.5 Loan Source (Name of Institution) (Use codes below)	4.6 Amount Received (Ush) (List each loan amount on separate row)	4.7 Interest Rate (%/Yr)	4.8 Loan Period (Months)	4.9 Main Purpose for which loan was sought (Use codes below)	4.10 Main use to which the loan was put? (Use codes below)	4.11 If main use in 4.10 was agric investment specify the enterprise (Use codes below)	4.12. How easy was it for you to access this loan (see codes)	4.13 Were you satisfied with terms & conditions of the loan? (see codes)	4.14 If dissatisfied, main reason why? (see codes)	4.15. Describe how the received loan affected your welfare (see codes)
2010	Centenary Bank										
2011	Centenary Bank										
2012	Centenary Bank										
2013	Centenary Bank										

**Loan Source codes (4.5):** 1=Centenary Bank; 2=Other Commercial bank; 3=MFI; 4=SACCO; 5=Group/Association (Registered/Unregistered); 5=Other (specify)

**Codes for Main Purpose/Main use (codes for 4.9/4.10):** 1=agric. Investment (specify \_\_\_\_\_); 2=Non-agric. Investment (specify \_\_\_\_\_); 3=Consumption; 4=school fees; 5=medical; 6=other household needs (Specify) \_\_\_\_\_

**Enterprise Codes(4.11):** 1=Coffee; 2=Banana; 3=Sugarcane; 4=Dairy; 5=Beef Cattle fattening; 6=Other (specify \_\_\_\_\_)

**Ease of accessing loan codes (4.12):** 1=Very Easy; 2=Easy; 3=Undecided; 4=Difficult; 5=Very Difficult

**Satisfaction codes (4.13):** 1=Satisfied; 2=Dissatisfied; 3=Indifferent (Neutral);

**Reasons for dissatisfaction (code 4.14)** 1=High interest rate; 2=Stringent rules; 3=Long process; 4=Hidden information; 5=Got less money than requested; 6=Other (specify) \_\_\_\_\_

**Codes for welfare effect (Q4.15):** 1= no impact, 2=minor impact; 3=moderate impact, 4=major impact, 5=negative impact

**4.16. If 4.1&4.3=No, why didn't treatment farmer/control HHd receive loan before 2011** **4.16** \_\_\_\_\_  
 1=No security/collateral 2=Had outstanding loan 3= Don't Know 4=Did not need credit 5=Credit services unavailable 6= Other (specify)

**4.17. If 4.2&4.4=No, why didn't treatment farmer/control HHd receive loan between 2011-2013** **4.17** \_\_\_\_\_  
 1=No security/collateral 2=Had outstanding loan 3= Don't Know 4=Did not need credit 5=Credit services unavailable 6= Other (specify)

4.18. If answer to 4.11(for the last loan received from CENTENARY BANK before July 1, 2013)) is Coffee (4.11=1), list the different activities on which the loan money was spent

Codes: 1=Purchase of Fertilizer & Other Chemicals; 2=Renting Land; 3= Labor for production; 4=Labor for Harvesting; 5=Purchase of farm equipment; 6=Lease/Hire of farm equipment; 7=Processing costs; 8=Marketing costs; 9=other(specify)

**##AFTER LISTING THE ACTIVITIES ON WHICH THE LOAN MONEY WAS SPENT, ASK FOLLOW-UP QUESTIONS IN SECTION 5.0 BELOW ABOUT THE ACTIVITIES ON WHICH LOAN MONEY WAS SPENT##**

**5.0. Production/Marketing/Processing of Coffee harvested (before 2011 and between 2011-2013) [IGNORE RECENTLY PLANTED GARDENS NOT YET HARVESTED]**

**5.1(B):BENEFICIARIES:** For loans received from CENTENARY BANK for investing in the COFFEE enterprise (for any activities Q4.18=1-8)Between 2011&2013, When was the last time (Season & Year) that the farmer produced coffee USING THE LOAN from CENTENARY #5.1(B) \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.1(C)CONTROLS:** Between 2011&2013, When was the last time (Season & Year) that the farmer produced Coffee #5.1(C) \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.2:BOTH BENEFICIARIES & CONTROLS: Before 2011,** When was the last time (Season and Year) that the farmer produced Coffee #5.2 \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.3:** How many separate plots (gardens) of Coffee did Beneficiary farmer/control HHd grow in the season and year reported in 5.1 5.3 \_\_\_\_\_ plots

**5.4:** How many separate plots (gardens) of Coffee did Beneficiary farmer/control HHd grow in the season and year reported in 5.2 5.4 \_\_\_\_\_ plots

Answer these questions for Coffee grown (as sole crop or intercrop) on all gardens (plots) planted to Coffee in the last year and season it was planted between 2011 and 2013 (Q5.3) and before 2011 (Q5.4). Complete the left part of the table first.

Season (1=2011-2013; 2=Before 2011)	Plot/ Garden ID (Enter all plots in 5.3 & 5.4)	Main variety of coffee grown	Co de	Cropping method (1=sole crop, 2=Intercrop)	Plot area planted to Coffee (acres)	Application of Chemical fertilizer				Application of Organic soil inputs				Total cost of pesticide applied(Us hs)	Total cost of herbicides applied (Ushs)
						Main Type of fertilizer applied	Co de	Quantity of main fertilizer applied (kg)	Total cost (value) of main fertilizer applied (Ush)	Main Type of Organic input applied	Co de	Quantity of main Organic input applied (kg)	Total cost (value) of main Organic input applied (Ush)		
SID	GID	5.5		5.6	5.7	5.8		5.9	5.10	5.11		5.12	5.13	5.14	5.15

#The period 2011-2013 can be referred to as from the last Presidential Election Period up to today; while before 2011 is before the Last Presidential Elections

Fertilizer codes: 1=UREA; 2=DAP; 3=CAN; 4=TSP; 5=SSP; 6=NPK; 6=None; 8=Other (specify)

Organic inputs Codes: 1=Animal manure; 2=Compost; 3=Other (specify)

### 5.0 Continued: Coffee inputs used, their sources, use of credit services and Hired Labor and Rented Land

Season (1=2011-2013; 2= Before 2011)	Plot/ Garden ID	Main source of chemical fertilizer used on plot (Code)	Co de	Perceived quality of chemical fertilizer (1=Very good; 2=Good; 3=Poor; 4=Very poor)	Main source of herbicides/p esticides used on plot (Code)	Co de	Perceived quality of herbicides/ pesticides (1=Very good; 2=Good; 3=Poor; 4=Very poor)	Were any inputs used on this plot received on credit? 1=Yes, 2=No(▶5.25)	Which inputs were received on credit? (1=fertilizer, 2=herbicides/pesti des 3=both fertilizer &herbicide/pesticide 4=other (specify))	Co de	Credit source (1=trader, 2=NGO, 3=Gov't program, 3=farmers' group, 4= other(specify))				Total Value (Ushs) of inputs received on credit and used on plot.	Total Cost of HIRED LABOR (from produ ction to harvesting)( Ushs)	Total cost of HIRED LAND (Ushs/ Year)
											Fertilizer	Co de	Herbicides/ pesticides	Co de			
SID	GID	5.16		5.17	5.18		5.19	5.20	5.21		5.22		5.23		5.24	5.25	5.26

**Codes for Main Source of Chemicals/Fertilizer (5.16 &5.18):** 1=own seed/material, 2=input trader, 3=NGO, 4= District or Lower-Level Farmers Association/group/organization (**specify name**), 5=other (specify))

**5.0 Continued: Coffee Harvests and Sales. Complete the left part of the table first.**

Season(1=2011-2013; 2=Before 2011)	Plot/ Garden ID	Quantity Harvested	Units of Quantity Harvested (e.g., Bags; baskets; Ddebes, etc)	Conversion factor to Kgs (e.g., 1 bag = 50 kgs or 100 kgs)	Form in which coffee was sold (P=Processed; UP=Unprocessed)	Quantity sold (Kgs)	Sale price (Ushs/Kgs)	Primary/Main Mode of Sale (1=Collectively thru group, 2=Individually)	Code	Sold to whom/Main Buyer Type? 1=Consumer, 2=Trader, 3=NGO 4=Institution 5=Exporter 6=Processor 8=Other (specify)	Code	Main Reason for selling to main buyer 1=Only buyer available 2=Better prices 3=Nearest 4=Contractual arrangement 5= Other (specify)	Distance (kms) to main Buyer	Mode of Transport to Point of Sale (codes)	Transport Cost (Ushs) to point of sale (if Hired)	If used own means , what would it have cost to hire (Ushs)	If coffee was <b>sold in processed form</b> (6.33=P), what was the total Processing Cost (Ushs)	How was the revenue from coffee Sale used? (List the top three) (codes)
SID	GID	5.27	5.28	5.29	5.30	5.31	5.32	5.33		5.34		5.35	5.36	5.37	5.38	5.39	5.40	5.41

**Codes for 5.37 (Modes of Transport):** 1=foot, 2=bicycle, 3=motorbike, 4=Vehicle, 5=Other(specify)

**Codes for 5.41(Use of revenue from crop):** 1=Consumption; 2=Investment in Agricultural enterprise; 3=Investment in non-agricultural enterprise;  
4=Medical expenses; 5=Household durables; 6=Clothing/Shoes; 7=Other (specify)

**QUESTIONS 5.42 TO 5.49 ARE FOR BENEFICIARY FARMERS/HOUSEHOLDS ONLY, SKIP THESE FOR CONTROL HOUSEHOLDS**

**5.42:** If loan money from Centenary Bank was used to **purchase farm tools/equipment** that would otherwise have been hired(**Q4.18=5**), specify the equipment \_\_\_\_\_;  
when the equipment was purchased (**month** \_\_\_\_\_ **and year** \_\_\_\_\_) and how much money it cost you to purchase the equipment \_\_\_\_\_ (Ushs)

**5.43:** What are the additional earnings from owning the equipment **specified in 5.42** over and above what you would earn if you didn't have it \_\_\_\_\_ (Ushs/Year)

**5.44:** What are the annual **maintenance costs** for the purchased farm equipment? \_\_\_\_\_(Ushs/year)

5.45: What are the annual **operating and other costs** for the purchased farm equipment? \_\_\_\_\_ (Ushs/year)

5.46: If loan money from Centenary Bank was used to **lease or hire farm tools/equipment** that you would otherwise have no access to (Q4.18=6), specify the equipments leased/hired and answer questions below for each time you leased/hired the equipment using Centenary Bank loan

Hired/Leased Equipment	Month & year you hired/leased equipment using Centenary Bank loan	Total Costs incurred (Ushs)to lease/hire equipment	Total Additional earnings (Ushs) from leasing or hiring equipment above what you would earn if you didn't lease/hire it
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		

5.47: If loan money from Centenary was used to pay for coffee **processing(Q4.18=7)**, answer questions below for each time you processed coffee using Centenary Bank loan.

Month and year processed coffee using Centenary Bank loan	Quantity of coffee processed (kgs)	Total Costs incurred (Ushs)(include processing fees, transport, etc)	Additional earnings (Ushs/kg) per kg of coffee sold after processing as opposed to selling unprocessed	Total Additional earnings (Ushs) from selling processed than selling unprocessed.
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				

5.48: If loan money from Centenary was used to pay for coffee **marketing (Q4.18=8)**, answer questions below for each time you marketed coffee using Centenary Bank loan.

Month and year marketed coffee using Centenary Bank loan	Quantity of coffee marketed (kgs)	Total Costs incurred (Ushs)(include market fees, transport, agents fees, etc)	Additional earnings (Ushs/kg) per kg of coffee sold after incurring mkting costs opposed to avoiding them	Total Additional earnings (Ushs) from incurring mkting costs opposed to avoiding them
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				

5.49: In your opinion, **HOW AND BY WHAT MAGNITUDE** has the most previous loan acquired from **Centenary Bank** Benefited the following aspects of your coffee enterprise?

Aspect of the Coffee enterprise	How (e.g., improved/increased because...; worsened/decreased because...)	Magnitude of Benefit (Rough Estimate)
1.Coffee productivity/yield (Kgs/Acre)		Increment _____ (Kgs/Acre)
2.Access to better markets		1= High; 2=Medium; 3=Low; 4=Don't know
3.Ability to increase area under coffee		Increment _____ (Acres)
4.Coffee Income per year		Increment _____ (Ushs/Year)
5. Profitability of coffee enterprise		1= High; 2=Medium; 3=Low; 4=Don't know



6. Bargaining power in the marketing of coffee		1= High; 2=Medium; 3=Low; 4=Don't know
7. Ability to market collectively		1= High; 2=Medium; 3=Low; 4=Don't know
8. Ability to use modern coffee production practices		1= High; 2=Medium; 3=Low; 4=Don't know
9. Other (specify)		1= High; 2=Medium; 3=Low; 4=Don't know

**QUESTIONS 5.50 TO THE END ARE FOR BOTH BENEFICIARY AND CONTROL FARMERS/HOUSEHOLDS**

**5.50:** In your opinion, how would you rate the following attributes of credit to farmers in this area? (if don't know write DK)

Item	Between 2011 and 2013				Before 2011			
	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory
1 Availability of credit services								
2 Interest rate charged on credit								
3 Application process/procedure for credit								
4 Information on terms & conditions of credit								
5 Stringency of terms and conditions of credit								
6 Ease of accessing credit								

**5.51/5.52.** What was the distance (km) from your home to the nearest banking institution in 2013 (Now) \_\_\_\_\_ (5.51) and in 2010 \_\_\_\_\_ (5.52)

**6. 0. Farm Labor/Jobs:**

**6.1.** How many workers in total do you currently employ? \_\_\_\_\_ (Now) and in 2010 \_\_\_\_\_ (2010)

		Now	2010
<b>6.2</b>	Number of Permanent workers		
<b>6.3</b>	Number of Temporary/short-term workers		
<b>6.4</b>	Monthly payment to Permanent workers (Total in Ushs)		
<b>6.5</b>	On average, for how many months in a year do you use Temporary/short-term workers?		
<b>6.6</b>	Total annual payment to Temporary/short-term workers (Total in Ushs)		

*Thank You So much for your time*

## ASSESSMENT OF IMPACTS OF ALGC/LOC INTERVENTIONS AMONG DAIRY FARMERS BENEFITING FROM LINE OF CREDIT (LOC) FACILITY

### Introduction to the Respondents

The government of Uganda and its development partners are running a programme aimed at supporting farmers to increase their contribution to agricultural development by increasing market competitiveness and the productivity of land and labour. The ultimate goal of this programme is to reduce poverty, and to create wealth and employment. To achieve this goal, the government and its development partners are working through partnerships with Farmer Organizations such as District Farmers Associations, NGOs, and Small and Medium enterprises (SMEs), and Financial Institutions which work directly with farmers.

I am part of a team of Researchers from Makerere University collecting data to help the government and its development partners to establish the facts on the ground, and to better understand the changes occurring within the agricultural sector in various parts of the country, for purposes of guiding decision-making for future development. **The information you provide will guide future investment in the much-needed interventions in this area; and it will be treated with the highest confidentiality.**

***\*Please Note: For the Treatment group, the respondent must be the beneficiary farmer. For the control group, target respondent is the Household Head or Spouse but can be any knowledgeable adult member of the Household***

### A. GENERAL INFORMATION

A1	District name			<b>Date of Interview</b>
A2	Sub-county name			<b>Name of Interviewer</b>
A3	Parish name			Quality of questionnaire responses back-checked by ( <i>Name of Supervisor</i> )
A4	Village/LC1 name			Date checked
A5	Name of Implementing Partner			Completeness of all sections in questionnaire checked by ( <i>Name of Supervisor</i> )
A6	Household name			
A7	Name of the <b>Farmer/Respondent</b> and <b>Telephone contact</b>			Date checked
A8	Relationship of Farmer /Respondent to Household Head ( <b>see codes</b> )			Enumerator response to Supervisor queries checked by ( <i>Name of Supervisor</i> )
A9	Category of Household /Farmer ( <b>1=Treatment; 2=Control</b> )			Date checked
A10	<b>Intervention Component</b> ( <b>1=ALGC; 2=LOC</b> )	<b>LOC</b>		Supervisor's final comments on quality of gathered data
A11	<b>Intervention Enterprise: For Control Households (Those that didn't receive loans for dairy production/marketing/processing), STILL FOCUS INTERVIEW ON DAIRY</b>	<b>Dairy</b>		
A12	Gender of Farmer/ HHd Head ( <b>1=Male; 2=Female</b> )			
A13	Main Occupation of Farmer/ HHd Head ( <b>see codes</b> )		A18	Number of <b>productive adult females</b> in the household
A14	Age of Household Farmer/ HHd Head (years)		A19	Number of <b>productive adult males</b> in the household
A15	Highest school grade completed by Farmer/ HHd Head		A20	Number of <b>productive children</b> in the household
A16	Marital status of Farmer/ HHd Head ( <b>see codes</b> )		A21	Number of <b>unproductive children</b> in the household
A17	Total No. of people in the Hhd of the Farmer/ Respondent		A22	Number of <b>unproductive adults</b> in the household

**Relationship codes:** 1=Household head; 2=Spouse; 3=Son/daughter; 4=Parent; 5=Brother/sister; 6=Son/daughter in-law; 7= Grand child; 8= Other relative  
9=Hired worker; 10=Other (specify)

**Marital status codes:** 1=Married; 2=Single; 3=Divorced; 4=Widowed

**Occupation codes:** 1=No occupation; 2= Prod. of crops; 3= Prod. of livestock; 4=Salary earner; 5=Wage earner (casual laborer); 6=Other (specify)

## 2.0. INCOME SOURCES

List the top 5 sources of cash income for your household (starting with the most important one) in 2011 (Last Presidential Election Period) and Now (2013). Rank the Top 3. Capture Dairy in last row if not listed among top three

Cash Income Sources (see codes below)					Estimated Income Earned (Ushs)	
Period	Now (2013)	Code	2011	Code	2013	2011
Most important						
Second most important						
Third most important						
Dairy (if not among the top 3)						

Income source codes: 1=Production and sale of crops (specify main crop providing cash income); 2=Production and sale of animals & animal product (specify main animal or animal product providing cash income); 3=Sale of land, 4=Salary, 5=Remittances, 6=Hiring out casual labor (wages), 7=Sale of forest products, 8=Brewing, 9= Trading, 10=Fishing, 11=Other (specify)

## 3.0 ASSET ACCUMULATION

3.1 List all equipment/durable goods and Livestock owned (number and estimated sale value) by your household in 2011 (Last Presidential Election Period) and Now (2013)

Type of equipment (such as motor vehicles, bicycles, radio, farm equipment, etc.)	Code	No. of items		Total Value (USh)		Code	No. of items		Total Value (USh)	
		Now	2011	Now	2011		Now	2011	Now	2011
<b>Farm Equipment</b>		<b>HA1</b>		<b>HA2</b>		<b>Other Items</b>	<b>HA1</b>		<b>HA2</b>	
		Now	2011	Now	2011		Now	2011	Now	2011
Tractor Plough	1					Bicycle				
Tractor	2					Radio				
Ox-Plough						TV				
Tractor Trailer / Cart						Mobile Phones				
Wheelbarrows						Motorcycle				
Cattle Dip						Vehicles				
Sheds (Milking/calf)						Generator				
Cattle Crash						Other equipment (specify)				
Axe						Other equipment (specify)				
Wheelbarrows						<b>Land</b>				
Dehorning bars						Total land owned (acres)				
Spray pumps						Total land cultivated (acres)				
Water tanks						<b>Livestock</b>				
Milking cans						Cattle local				
Cooling units						Cattle improved				
Liquid N cans (AI)						Goats and Sheep				
Water troughs						Indigenous Chicken				
Feeding troughs						Improved Chicken				
Forage cutter/chopper						Pigs				
Drenching gun						Other Livestock (specify)				
Hand sprayer						<b>Materials Used 4 Main House (codes)#</b>	<b>Now</b>		<b>2010</b>	
Feed mixers						Walls				
Feed mill						Roof				
Nutrient feeding charts						Floor				
Other (specify)										

# Codes for House materials: 1= Concrete, 2=burned bricks, 3=Mud blocks, 4=Mud and straw, 5=Wood, 6=Plastic Shelter, 7=Tiles, 8=Straw (grass, papyrus, banana fibers), 9=Galvanized iron, 10=Mud, 11=Other (specify)

4.0: FINANCIAL SERVICES – CREDIT

4.1: Did you (treatment farmer/control HHd) receive a loan from Centenary Bank before 2011 (before last Presidential Election) (1 = Yes; 2 = No)

4.2: Did you (treatment farmer/control HHd) receive a loan from Centenary Bank between 2011-2013 (since last Presidential Election) (1 = Yes; 2 = No)

4.3: Did you (treatment farmer/control HHd) receive a loan from other financial institutions before 2011 (before last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

4.4: Did you (treatment farmer/control HHd) receive a loan from other financial institutions between 2011-2013 (since last Presidential Election) (1 = Yes [name the institutions \_\_\_\_\_]; 2 = No)

If the answer to 4.1, 4.2, 4.3 and/or 4.4 is Yes, list the amounts received from the different financial institutions (starting with Centenary Bank) in each year and ask the subsequent questions. [If more than one loan was received from a given financial institution in the same year, record each loan on a separate row in column 4.5]

Year when loan was acquired	4.5 Loan Source (Name of Institution) (Use codes below)	4.6 Amount Received (Ush) (List each loan amount on separate row)	4.7 Interest Rate (%/Yr)	4.8 Loan Period (Months)	4.9 Main Purpose for which loan was sought (Use codes below)	4.10 Main use to which the loan was put? (Use codes below)	4.11 If main use in 4.10 was agric investment specify the enterprise (Use codes below)	4.12. How easy was it for you to access this loan (see codes)	4.13 Were you satisfied with terms & conditions of the loan? (see codes)	4.14 If dissatisfied, main reason why? (see codes)	4.15. Describe how the received loan affected your welfare (see codes)
2010	Centenary Bank										
2011	Centenary Bank										
2012	Centenary Bank										
2013	Centenary Bank										

Loan Source codes (4.5): 1=Centenary Bank; 2=Other Commercial bank; 3=MFI; 4=SACCO; 5=Group/Association (Registered/Unregistered); 6=Other (specify)

Codes for Main Purpose/Main use (codes for 4.9/4.10): 1=agric. Investment (specify \_\_\_\_\_); 2=Non-agric. Investment (specify \_\_\_\_\_); 3=Consumption; 4=school fees; 5=medical; 6=other household needs (Specify \_\_\_\_\_)

Enterprise Codes (4.11): 1=Coffee; 2=Banana; 3=Sugarcane; 4=Dairy; 5=Beef Cattle fattening; 6=Other (specify \_\_\_\_\_)

Ease of accessing loan codes (4.12): 1=Very Easy; 2=Easy; 3=Undecided; 4=Difficult; 5=Very Difficult

Satisfaction codes (4.13): 1=Satisfied; 2=Dissatisfied; 3=Indifferent (Neutral)

Reasons for dissatisfaction (code 4.14): 1=High interest rate; 2=Stringent rules; 3=Long process; 4=Hidden information; 5=Got less money than requested; 6=Other (specify \_\_\_\_\_)

Codes for welfare effect (Q4.15): 1=no impact, 2=minor impact, 3=moderate impact, 4=major impact, 5=negative impact

4.16. If 4.1&4.3=No, why didn't treatment farmer/control HHd receive loan before 2011 4.16 \_\_\_\_\_

1=No security/collateral 2=Had outstanding loan 3=Don't Know 4=Did not need credit 5=Credit services unavailable 6=Other (specify)

4.17. If 4.2&4.4=No, why didn't treatment farmer/control HHd receive loan between 2011-2013 4.17 \_\_\_\_\_

1=No security/collateral 2=Had outstanding loan 3=Don't Know 4=Did not need credit 5=Credit services unavailable 6=Other (specify)

**4.18. Cattle Inventory:** List the number of cattle owned in the various categories in **January 2011 (Last Presidential Elections)** and **NOW (2013)**

Cattle Categories	Cattle ID	Number owned in <b>January 2011</b> ( <i>Last Presidential Elections Period</i> )	Number owned <b>Dec 2013</b>	Total value (Shs) <b>Dec 2013</b>	Total value (Shs) <b>Nov 2013</b>
<b>CNAME</b>	<b>CID</b>	<b>C11</b>	<b>C12</b>	<b>C13</b>	<b>C14</b>
Cows – Local	1				
Bulls – Local	2				
Young bulls-Local	3				
Heifer –Local	4				
Calves –Local	5				
Cows – Improved	6				
Bulls – Improved	7				
Young Bulls - Improved	8				
Heifer –Improved	9				
Calves –Improved	10				
Bullocks/Steers	11				

**4.19.** If the answer to **4.11** (for the last loan received from **CENTENARY BANK** before **July 1, 2013**) is **Dairy (4.11=4)**, list the different activities on which the loan money was spent

1. Purchase stock	5. Purchase land for grazing	9. Pay for Veterinary Serv (Vet. Doctor charges)	13. Purchase farm tool equipment	17. Purchase Transport equipme
2. Purchase process feed	6. Rent Land for grazing	10. Pay for A.I. or Bull Service	14. Lease/Hire Farm tool equipment	18. Marketing costs
3. Purchase nutritie supplements	7. Purchase drugs/deworm	11. Pay labor for producti (feeding, watering, sprayin	15. Construct/Repair fa structures	19. Processing Costs
4. Purchase fodde Grass/Banana Pee	8. Purchase chemicals (acaricides, Vaccines, etc	12. Hire Dam/water sour	16. Dig or Repair Dam Water source	20. Other Costs (specify)

**##AFTER LISTING THE ACTIVITIES ON WHICH THE LOAN MONEY WAS SPENT, ASK FOLLOW-UP QUESTIONS IN SECTION 5.0 BELOW ABOUT THE ACTIVITIES ON WHICH LOAN MONEY WAS SPENT##**

**5.0. Production/Marketing/Processing of Dairy Products (before 2011 and between 2011-2013): (CONSIDER ONLY MILKING COWS DURING THESE PERIODS)**

**5.1(B):BENEFICIARIES:**For loans received from **CENTENARY BANK** for investing in the **DAIRY** enterprise (for any activities **Q4.19=1-20**) Between **2011&2013**, When was the last time (Year) that the farmer **produced and sold Milk and Milk Products USING THE LOAN FROM Centenary Bank** #5.1(B) \_\_\_\_\_ (Year)

**5.1(C)/CONTROLS:** **Between 2011&2013**, When was the last time (Year) that the farmer **produced and sold Milk** #5.1(C) \_\_\_\_\_ (Year)

**5.2:BOTH BENEFICIARIES & CONTROLS:** **Before 2011**, When was the last time (Year) that the farmer **produced and sold Milk and Milk Products** #5.2 \_\_\_\_\_ (Year)

**5.3:** In the Table below, list the different milk products **produced and sold** by the **Beneficiary farmer/control HHd** in the years reported in **5.1 and 5.2** above

Milk Product	Code	Did You Produce?(1=Yes; 2=No)		Did You Sell?(1=Yes; 2=No)	
		2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)
<i>Fresh Milk</i>					
<i>Second most important product (by volume)(specify _____)</i>					
<i>Third most important product (by volume)(specify _____)</i>					

5.4 Answer the following questions for **MILKING COWS ONLY** and Milk Products Produced and sold in the year that this last occurred between 2011-2013 (Q5.1) and before 2011 (Q5.2).

Questions on Milking Cattle and Milk Products Produced Listed in Q5.3 above		January		February		March		April		May		June		July		August		September		October		November		December	
		2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)
1	Beginning Stock of Milking Cattle																								
2	Number of Milking Cattle Purchased																								
3	Purchase Price (Ushs/animal)																								
4	Cost of processed Feed (Ushs)																								
5	Cost of nutrient Supplements (Ushs)																								
6	Cost of Purchase fodder/grass (Ush)																								
7	Rental cost of Land for grazing (Ushs)																								
8	Purchase of drugs/dewormers (Ushs)																								
9	Cost of chemicals (acaricides, Vaccines, etc) (Ush)																								
10	Vet. Doctor charges (Ushs)																								
11	Cost of A.I./Bull Service (Ushs)																								
12	Labor cost (Ushs) for production (feeding, watering..)																								
13	Hiring Dam/water source (Ushs)																								
14	<b>Quantity of Fresh Milk sold(Liters)</b>																								
15	Sale Price (Ushs/Liter)																								
16	<b>Sold to Who/Main Buyer Type</b> (codes)																								
17	Distance (kms) to main Buyer																								
18	Transport Cost (Ushs) to <b>main</b> point of sale (if Hired)																								
19	If used own means, what would it have cost to hire (Ushs)																								
<p>FOOT NOTE: If Respondent Can't Give Monthly Figures; ask for Estimate of Annual Totals. Codes for Main Buyer Type: 1=Consumer; 2=Trader; 3=NGO; 4=Institution; 5=Exporter; 6=Processor; 7=Broker; 8=Other</p>																									

Questions on Milking Cows and Milk Products Produced Listed in Q5.3 above		January		February		March		April		May		June		July		August		September		October		November		December	
		2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)	2011-2013 (Q5.1)	Before 2011 (Q5.2)
20	Quantity of Second Most Important Milk Product sold(Specify _____) (Units _____)																								
21	Sale Price (Ushs/Liter)																								
22	Sold to Who/Main Buyer Type (codes)																								
23	Distance (kms) to main Buyer																								
24	Transport Cost (Ushs) to main point of sale (if Hired)																								
25	If used own means , what would it have cost to hire (Ushs)																								
30	Quantity of Third Most Important Milk Product sold(Specify _____) (Units _____)																								
31	Sale Price (Ushs/Liter)																								
32	Sold to Who/Main Buyer Type (codes)																								
33	Distance (kms) to main Buyer																								
34	Transport Cost (Ushs) to main point of sale (if Hired)																								
35	If used own means , what would it have cost to hire (Ushs)																								
40	Number of Cattle Sold (ALL TYPES)																								
41	Total Value of Cattle Sales (Ushs)																								

Codes for Main Buyer Type: 1=Consumer; 2=Trader; 3=NGO; 4=Dairy Cooperative; 4=Institution; 5=Exporter; 6=Processor; 7=Broker; 8=Other (specify)

**QUESTIONS 5.5 TO 5.12 ARE FOR BENEFICIARY FARMERS/HOUSEHOLDS ONLY, SKIP THESE FOR CONTROL HOUSEHOLDS**

**5.5:** If loan money from Centenary Bank was used to **purchase farm tools/equipment** that would otherwise have been hired (**Q4.19=13**), specify the equipment \_\_\_\_\_; when the equipment was purchased (*month* \_\_\_\_\_ *and year* \_\_\_\_\_) and how much money it cost you to purchase the equipment \_\_\_\_\_ (Ushs)

**5.6:** What are the additional earnings from owning the equipment **specified in 5.5** over and above what you would earn if you didn't have it \_\_\_\_\_ (Ushs/Year)

**5.7:** What are the annual **maintenance costs** for the purchased farm equipment? \_\_\_\_\_ (Ushs/year)

**5.8:** What are the annual **operating and other costs** for the purchased farm equipment? \_\_\_\_\_ (Ushs/year)

**5.9:** If loan money from Centenary Bank was used to **lease or hire farm tools/equipment** that you would otherwise have no access to (**Q4.19=14**), specify the equipments leased/hired and answer questions below for each time you leased/hired the equipment using Centenary Bank loan

Hired/Leased Equipment	Month & year you hired/leased equipment using Centenary Bank loan	Total Costs incurred (Ushs) to lease/hire equipment	Total Additional earnings (Ushs) from leasing or hiring equipment above what you would earn if you didn't lease/hire it
	<i>Month</i> _____ <i>Year</i> _____		
	<i>Month</i> _____ <i>Year</i> _____		
	<i>Month</i> _____ <i>Year</i> _____		
	<i>Month</i> _____ <i>Year</i> _____		
	<i>Month</i> _____ <i>Year</i> _____		

**5.10:** If loan money from Centenary was used to pay for dairy **marketing (Q4.19=18)**, answer questions below for each time you marketed dairy products using Centenary loan.

Month and year marketed Dairy Product using Centenary Bank loan	Quantity of dairy product marketed (Specify Units _____)			Total Costs incurred (Ushs) (include market fees, transport, agents fees, etc)			Additional earnings (Ushs/Unit _____) of dairy product sold after incurring mktng costs opposed to avoiding them			Total Additional earnings (Ushs) from incurring mktng costs opposed to avoiding them		
	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												

**5.11:** If loan money from Centenary was used to pay for dairy **processing (Q4.19=19)**, answer questions below for each time you processed dairy using Centenary Bank loan.

Month and year processed Dairy Product using Centenary Bank loan	Quantity of dairy product Processed (Specify Units _____)			Total Costs incurred (Ushs) (include processing fees, transport, etc)			Additional earnings (Ushs/Unit _____) of dairy product sold after incurring processing costs opposed to avoiding them			Total Additional earnings (Ushs) from selling processed than selling unprocessed.		
	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>	<i>Milk (Ltrs)</i>	<i>2<sup>nd</sup> Product</i>	<i>3<sup>rd</sup> Product</i>
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												
<i>Month</i> _____ <i>Year</i> _____												



**5.12: In your opinion, HOW AND BY WHAT MAGNITUDE** has the most previous loan acquired from **Centenary Bank** Benefited the following aspects of your dairy enterprise?

Aspect of the Dairy enterprise	How (e.g., improved/increased because...; worsened/decreased because...)	Magnitude of Benefit (Rough Estimate)
1.Dairy productivity/yield (Liters/year)		Increment _____ (Liters/Year)
2.Access to better markets		1= High; 2=Medium; 3=Low; 4=Don't know
3.Ability to stock and feed more Cows and Heifers		Increment _____ (cows/Year)
4. Income per year from dairy enterprise		Increment _____ (Ushs/Year)
5. Profitability of dairy enterprise		1= High; 2=Medium; 3=Low; 4=Don't know
6. Bargaining power in the marketing of dairy products		1= High; 2=Medium; 3=Low; 4=Don't know
7. Ability to market collectively		1= High; 2=Medium; 3=Low; 4=Don't know
8.Ability to use modern dairy production practices		1= High; 2=Medium; 3=Low; 4=Don't know
9. Other (specify)		1= High; 2=Medium; 3=Low; 4=Don't know

**QUESTIONS 5.13 TO THE END ARE FOR BOTH BENEFICIARY AND CONTROL FARMERS/HOUSEHOLDS**

**5.13:**In your opinion, how would you rate the following attributes of credit to farmers in this area? (if don't know write DK)

Item	Between 2011 and 2013				Before 2011			
	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory
1 Availability of credit services								
2 Interest rate charged on credit								
3 Application process/procedure for credit								
4 Information on terms & conditions of credit								
5 Stringency of terms and conditions of credit								
6 Ease of accessing credit								

**5.14/5.15.** What was the distance (km) from your home to the nearest banking institution in 2013 (Now) \_\_\_\_\_ (5.14) and in 2010 \_\_\_\_\_ (5.15)

**6. 0. Farm Labor/Jobs:**

**6.1.** How many workers in total do you currently employ? \_\_\_\_\_ (Now) and in 2010 \_\_\_\_\_ (2010)

		Now	2010
<b>6.2</b>	Number of Permanent workers		
<b>6.3</b>	Number of Temporary/short-term workers		
<b>6.4</b>	Monthly payment to Permanent workers (Total in Ushs)		
<b>6.5</b>	On average, for how many months in a year do you use Temporary/short-term workers?		
<b>6.6</b>	Total annual payment to Temporary/short-term workers (Total in Ushs)		

*Thank You So much for your time*

## ASSESSMENT OF IMPACTS OF ALGC/LOC INTERVENTIONS AMONG SUGARCANE FARMERS BENEFITING FROM LINE OF CREDIT (LOC) FACILITY

### Introduction to the Respondents

The government of Uganda and its development partners are running a programme aimed at supporting farmers to increase their contribution to agricultural development by increasing market competitiveness and the productivity of land and labour. The ultimate goal of this programme is to reduce poverty, and to create wealth and employment. To achieve this goal, the government and its development partners are working through partnerships with Farmer Organizations such as District Farmers Associations, NGOs, and Small and Medium enterprises (SMEs), and Financial Institutions which work directly with farmers.

I am part of a team of Researchers from Makerere University collecting data to help the government and its development partners to establish the facts on the ground, and to better understand the changes occurring within the agricultural sector in various parts of the country, for purposes of guiding decision-making for future development. **The information you provide will guide future investment in the much-needed interventions in this area; and it will be treated with the highest confidentiality.**

***\*Please Note: For the Treatment group, the respondent must be the beneficiary farmer. For the control group, target respondent is the Household Head or Spouse but can be any knowledgeable adult member of the Household***

### A. GENERAL INFORMATION

A1	District name			<b>Date of Interview</b>
A2	Sub-county name			<b>Name of Interviewer</b>
A3	Parish name			Quality of questionnaire responses back-checked by ( <i>Name of Supervisor</i> )
A4	Village/LC1 name			Date checked
A5	Name of Implementing Partner			Completeness of all sections in questionnaire checked by ( <i>Name of Supervisor</i> )
A6	Household name			
A7	Name of the <b>Farmer/Respondent</b> and <b>Telephone contact</b>			Date checked
A8	Relationship of Farmer /Respondent to Household Head ( <b>see codes</b> )			Enumerator response to Supervisor queries checked by ( <i>Name of Supervisor</i> )
A9	Category of Household /Farmer ( <b>1=Treatment; 2=Control</b> )			Date checked
A10	<b>Intervention Component</b> (1=ALGC; 2=LOC)	<b>LOC</b>		Supervisor's final comments on quality of gathered data
A11	<b>Intervention Enterprise: For Control Households (Those that didn't receive loans for sugarcane production/marketing/processing), STILL FOCUS INTERVIEW ON SUGARCANE</b>	<b>Sugarcane</b>		
A12	Gender of Farmer/ HHd Head ( <b>1=Male; 2=Female</b> )			
A13	Main Occupation of Farmer/ HHd Head ( <b>see codes</b> )		A18	Number of <b>productive adult females</b> in the household
A14	Age of Household Farmer/ HHd Head (years)		A19	Number of <b>productive adult males</b> in the household
A15	Highest school grade completed by Farmer/ HHd Head		A20	Number of <b>productive children</b> in the household
A16	Marital status of Farmer/ HHd Head ( <b>see codes</b> )		A21	Number of <b>unproductive children</b> in the household
A17	Total No. of people in the Hhd of the Farmer/ Respondent		A22	Number of <b>unproductive adults</b> in the household

**Relationship codes:** 1=Household head; 2=Spouse; 3=Son/daughter; 4=Parent; 5=Brother/sister; 6=Son/daughter in-law; 7= Grand child; 8= Other relative  
9=Hired worker; 10=Other (specify)

**Marital status codes:** 1=Married; 2=Single; 3=Divorced; 4=Widowed

**Occupation codes:** 1=No occupation; 2= Prod. of crops; 3= Prod. of livestock; 4=Salary earner; 5=Wage earner (casual laborer); 6=Other (specify)

## 2.0. INCOME SOURCES

List the top 5 sources of cash income for your household (starting with the most important one) in 2011 (Last Presidential Election Period) and Now (2013). Rank the Top 3. Capture Sugarcane in last row if not listed among top three

Cash Income Sources (see codes below)					Estimated Income Earned (Ushs)	
Period	Now (2013)	Code	2011	Code	2013	2011
Most important						
Second most important						
Third most important						
Sugarcane (if not among the top 3)						

Income source codes: 1=Production and sale of crops (specify main crop providing cash income); 2=Production and sale of animals & animal product(specify main animal or animal product providing cash income); 3=Sale of land, 4=Salary, 5=Remittances, 6=Hiring out casual labor (wages), 7=Sale of forest products, 8=Brewing, 9= Trading, 10=Fishing, 11=Other (specify)

## 3.0 ASSET ACCUMULATION

3.1 List all equipment/durable goods and Livestock owned (number and estimated sale value) by your Household in 2011 (Last Presidential Election Period) and Now (2013)

Type of equipment (such as motor vehicles, bicycles, radio, farm equipment, etc.)	Code	No. of items		Total Value (USh)			Code	No. of items		Total Value (USh)	
		HA1	HA2	HA1	HA2			HA1	HA2	HA1	HA2
Farm Equipment		Now	2011	Now	2011	Land		Now	2011	Now	2011
Tractor Plough	1					Total land owned (acres)					
Tractor	2					Total land cultivated (acres)					
Ox-Plough											
Wheelbarrows						<b>Livestock</b>					
Pangas,						Cattle local					
Slashers,						Cattle improved					
Spades						Goats and Sheep					
Axe						Indigenous Chicken					
Hand hoes						Improved Chicken					
Spray pumps						Pigs					
Water tanks						Other Livestock (specify)					
Sugarcane crusher						Other (specify)					
Drums											
Tractor Trailer / Loader											
Walking tractor						<b>Materials Used 4 Main House (codes)#</b>		<b>Now</b>		<b>2010</b>	
<b>Other Items</b>		<b>Now</b>	<b>2010</b>	<b>Now</b>	<b>2010</b>						
Bicycle						Walls					
Radio						Roof					
TV						Floor					
Mobile Phones											
Motorcycle											
Vehicles											
Generator											
Other (specify)											

# Codes for House materials: 1= Concrete, 2=burned bricks, 3=Mud blocks, 4=Mud and straw, 5=Wood, 6=Plastic Shelter, 7=Tiles, 8=Straw (grass, papyrus, banana fibers), 9=Galvanized iron, 10=Mud, 11=Other (specify)

#### 4.0: FINANCIAL SERVICES - CREDIT

**4.1:** Did you (treatment farmer/control HHd) receive a loan from **OPPORTUNITY UGANDA** before 2011 (before last Presidential Election) (1 = Yes; 2 = No)

**4.2:** Did you (treatment farmer/control HHd) receive a loan from **OPPORTUNITY UGANDA** between 2011-2013 (since last Presidential Election) (1 = Yes; 2 = No)

**4.3:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** before 2011 (before last Presidential Election) (1 = Yes) [name the institutions] \_\_\_\_\_ ] (1=Yes; 2 = No)

**4.4:** Did you (treatment farmer/control HHd) receive a loan from **other financial institutions** between 2011-2013 (since last Presidential Election) (1 = Yes) [name the institutions] \_\_\_\_\_ ] (1=yes; 2 = No)

If the answer to 4.1, 4.4, 4.3 and/or 4.4 is Yes, list the amounts received from the different financial institutions (starting with **OPPORTUNITY UGANDA**) in each year and ask the subsequent questions. [If more than one loan was received from a given financial institution in the same year, record each loan on a separate row in column 4.5]

Year when loan was acquired	4.5 Loan Source (Name of Institution) (Use codes below)	4.6 Amount Received (Ush) (List each loan amount on separate row)	4.7 Interest Rate (%/Yr)	4.8 Loan Period (Months)	4.9 Main Purpose for which loan was sought (Use codes below)	4.10 Main use to which the loan was put? (Use codes below)	4.11 If main use in 4.10 was <b>agric investment</b> specify the enterprise (Use codes below)	4.12. How easy was it for you to access this loan (see codes)	4.13 Were you <b>satisfied</b> with terms & conditions of the loan? (see codes)	4.14 If dissatisfied, main reason why? (see codes)	4.15. Describe how the received loan affected your welfare (see codes)
2010	Opportunity Uganda										
2011	Opportunity Uganda										
2012	Opportunity Uganda										
2013	Opportunity Uganda										

**Loan Source codes (4.5):** 1=Opportunity Uganda; 2=Other Commercial bank; 3=MFI; 4=SACCO; 5=Group/Association (Registered/Unregistered); 5=Other (specify)

**Codes for Main Purpose/Main use (codes for 4.9/4.10):** 1=agric. Investment (specify \_\_\_\_\_); 2=Non-agric. Investment (specify \_\_\_\_\_); 3=Consumption; 4=school fees; 5=medical; 6=other household needs (Specify) \_\_\_\_\_

**Enterprise Codes(4.11):** 1=Coffee; 2=Banana; 3=Sugarcane; 4=Dairy; 5=Beef Cattle fattening; 6=Other (specify \_\_\_\_\_)

**Ease of accessing loan codes (4.12):** 1=Very Easy; 2=Easy; 3=Undecided; 4=Difficult; 5=Very Difficult

**Satisfaction codes (4.13):** 1=Satisfied; 2=Dissatisfied; 3=Indifferent (Neutral):

**Reasons for dissatisfaction (code 4.14)** 1=High interest rate; 2=Stringent rules; 3=Long process; 4=Hidden information; 5=Got less money than requested; 6=Other (specify) \_\_\_\_\_

**Codes for welfare effect (Q4.15):** 1= no impact, 2=minor impact; 3=moderate impact, 4=major impact, 5=negative impact

**4.16. If 4.1&4.3=No, why didn't treatment farmer/control HHd receive loan before 2011**      **4.16** \_\_\_\_\_  
 1=No security/collateral    2=Had outstanding loan    3= Don't Know    4=Did not need credit    5=Credit services unavailable    6= Other (specify)

**4.17. If 4.2&4.4=No, why didn't treatment farmer/control HHd receive loan between 2011-2013**      **4.17** \_\_\_\_\_  
 1=No security/collateral    2=Had outstanding loan    3= Don't Know    4=Did not need credit    5=Credit services unavailable    6= Other (specify)

4.18. If answer to 4.11 (for the last loan received from OPPORTUNITY UGANDA BANK before July 1, 2013) is Sugarcane (4.11=3), list the different activities on which the loan money was spent \_\_\_\_\_

Codes: 1=Purchase of Fertilizer & Other Chemicals; 2=Renting Land; 3= Labor for production; 4=Labor for Harvesting; 5=Purchase of farm equipment; 6=Lease/Hire of farm equipment; 7=Processing costs; 8=Marketing costs; 9=other(specify)

**##AFTER LISTING THE ACTIVITIES ON WHICH THE LOAN MONEY WAS SPENT, ASK FOLLOW-UP QUESTIONS IN SECTION 5.0 BELOW ABOUT THE ACTIVITIES ON WHICH LOAN MONEY WAS SPENT##**

**5.0. Production/Marketing/Processing of Sugarcane harvested (before 2011 and between 2011-2013) [IGNORE RECENTLY PLANTED GARDENS NOT YET HARVESTED]**

**5.1(B):BENEFICIARIES:**For loans received from OPPORTUNITY UGANDA for investing in the sugarcane enterprise (for any activities Q4.18=1-8)Between 2011&2013, When was the last time (Season & Year) that the farmer produced Sugarcane USING LOAN FROM OPPORTUNITY UGANDA BANK #5.1(B) \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.1(C) CONTROLS:**Between 2011&2013, When was the last time (Season & Year) that the farmer produced Sugarcane #5.1(C) \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.2:BOTH BENEFICIARIES & CONTROLS: Before 2011,** When was the last time (Season and Year) that the farmer produced Sugarcane #5.2 \_\_\_\_\_ (Season) \_\_\_\_\_ (Year)

**5.3:** How many separate plots (gardens) of Sugarcane did Beneficiary farmer/control HHd grow in the season and year reported in 5.1 5.3 \_\_\_\_\_ plots

**5.4:** How many separate plots (gardens) of Sugarcane did Beneficiary farmer/control HHd grow in the season and year reported in 5.2 5.4 \_\_\_\_\_ plots

Answer these questions for Sugarcane grown (as sole crop or intercrop) on all gardens (plots) planted to Sugarcane in the last year and season it was planted between 2011 and 2013 (Q5.3) and before 2011 (Q5.4). *Complete the left part of the table first.*

Season (1=2011-2013; 2=Before 2011)	Plot/ Garden ID (Enter all plots in 5.3 &5.4)	Main variety of s/cane grown	Co de	Cropping method (1=sole crop, 2=Intercrop)	Plot area planted to Sugarcane (acres)	Application of Chemical fertilizer				Application of Organic soil inputs				Total cost of pesticide applied (Ushs)	Total cost of herbicides applied (Ushs)
						Main Type of fertilizer applied	Co de	Quantity of main fertilizer applied (kg)	Total cost (value) of main fertilizer applied (Ush)	Main Type of Organic input applied	Co de	Quantity of main Organic input applied (kg)	Total cost (value) of main Organic input applied (Ush)		
<i>SID</i>	<i>GID</i>	5.5		5.6	5.7	5.8		5.9	5.10	5.11		5.12	5.13	5.14	5.15

**#The period 2011-2013 can be referred to as from the last Presidential Election Period up to today; while before 2011 is before the Last Presidential Elections**

**Fertilizer codes:** 1=UREA; 2=DAP; 3=CAN; 4=TSP; 5=SSP; 6=NPK; 6=None; 8=Other (specify) ; **Organic inputs Codes:** 1=Animal manure; 2=Compost; 3=Other (specify)

### 5.0 Continued: Sugarcane inputs used, their sources, use of credit services and Hired Labor and Rented Land

Season (1=2011-2013; 2= Before 2011)	Plot/ Garden ID	Main source of chemical fertilizer used on plot (Code)	C o d e	Perceived quality of chemical fertilizer( 1=Very good; 2=Good; 3=Poor; 4=Very poor)	Main source of herbicides/ pesticides used on plot (Code)	C o d e	Perceived quality of herbicides/ pesticides(1 =Very good; 2=Good; 3=Poor; 4=Very poor)	Were any inputs used on this plot received on credit? 1=Yes, 2=No (► 5.25)	Which inputs were received on credit? (1=fertilizer, 2=herbicides/pesti des 3=both fertilizer & herbicide/pesticide 4=other (specify)	C o d e	Credit source (1=trader, 2=NGO, 3=Gov't program, 3=farmers' group, 4= other(specify))				Total Value (Ushs) of inputs received on credit and used on plot.	Total Cost of HIRED LABOR (fr om product ion to harvesting) (Ushs)	Total cost of HIRED LAND (Ushs/ Year)
											Fertilizer	Co de	Herbicides/ pesticides	Co de			
<b>SID</b>	<b>GI D</b>	5.16		5.17	5.18		5.19	5.20	5.21		5.22		5.23		5.24	5.25	5.26

Codes for Main Source of Chemicals/Fertilizer (5.16 & 5.18): 1=own seed/material, 2=input trader, 3=NGO, 4= District or Lower-Level Farmers Association/group/organization (specify name), 5=other (specify))

**5.0 Continued: Sugarcane Harvests and Sales. Complete the left part of the table first.**

Season(=2011-2013; 2=Before 2011)	Plot/ Garden ID	Quantity Harvested	Units of Quantity Harvested (e.g., Tons; Kgs; Bundles, etc)	Conversion factor to Kgs (e.g., 1 bundle = 50 kgs or 100 kgs)	Form in which Sugarcane was sold(1=Processed; 2=Unprocessed)	Quantity sold (Kgs)	Sale price (Ushs/Kgs)	Primary/Main Mode of Sale (1=Collectively thru group, 2=Individually)	Code	Sold to whom/Main Buyer Type? 1=Consumer, 2=Trader, 3=NGO 4=Institution 5=Exporter 6=Processor 8=Other (specify)	Code	Main Reason for selling to main buyer 1=Only buyer available 2=Better prices 3=Nearest 4=Contractual arrangement 5= Other (specify)	Distance (kms) to main Buyer	Mode of Transport to Point of Sale (codes)	Transport Cost (Ushs) to point of sale (if Hired)	If used own means, what would it have cost to hire (Ushs)	If sugarcane was sold in processed form (5.30=1), what was the total Processing Cost (Ushs)	How was the revenue from this Sugarcane sale used? (List the top three) (codes)
SID	GID	5.27	5.28	5.29	5.30	5.31	5.32	5.33		5.34		5.35	5.36	5.37	5.38	5.39	5.40	5.41

**Codes for 5.28 (Units of sugarcane produced):** 1=Tons, 2=Kg, 3=Bundles; 4=Other (specify)

**Codes for 5.37 (Modes of Transport):** 1=foot, 2=bicycle, 3=motorbike, 4=Vehicle, 5=Other(specify)

**Codes for 5.41(Use of revenue from crop):** 1=Consumption; 2=Investment in Agricultural enterprise; 3=Investment in non-agricultural enterprise; 4=Medical expenses; 5=Household durables; 6=Clothing/Shoes;7=Other (specify)

**QUESTIONS 5.42 TO 5.49 ARE FOR BENEFICIARY FARMERS/HOUSEHOLDS ONLY, SKIP THESE FOR CONTROL HOUSEHOLDS**

**5.42:** If loan money from **Opportunity Uganda** was used to **purchase farm tools/equipment** that would otherwise have been hired(Q4.18=5), specify the equipment \_\_\_\_\_; when the equipment was purchased (*month* \_\_\_\_\_ *and year* \_\_\_\_\_) and how much money it cost you to purchase the equipment \_\_\_\_\_ (Ushs)

**5.43:** What are the additional earnings from owning the equipment **specified in 5.42** over and above what you would earn if you didn't have it \_\_\_\_\_ (Ushs/Year)

**5.44:** What are the annual **maintenance costs** for the purchased farm equipment? \_\_\_\_\_ (Ushs/year)

5.45: What are the annual **operating and other costs** for the purchased farm equipment? \_\_\_\_\_ (Ushs/year)

5.46: If loan money from **Opportunity Uganda** was used to **lease or hire farm tools/equipment** that you would otherwise have no access to (**Q4.18=6**), specify the equipments leased/hired and answer questions below for each time you leased/hired the equipment using **Opportunity Uganda** loan

Hired/Leased Equipment	Month & year you hired/leased equipment using Opportunity Uganda loan	Total Costs incurred (Ushs) to lease/hire equipment	Total Additional earnings (Ushs) from leasing or hiring equipment above what you would earn if you didn't lease/hire it
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		
	Month _____ Year _____		

5.47: If loan money from **Opportunity Uganda**, was used to pay for sugarcane **processing (Q4.18=7)**, answer questions below for each time you processed sugarcane using **Opportunity Uganda** loan.

Month and year processed sugarcane using Opportunity Uganda loan	Quantity of sugarcane processed (Kgs)	Total Costs incurred (Ushs) (include processing fees, transport, etc)	Additional earnings (Ushs) per kg or Litre of sugarcane product sold after processing as opposed to selling unprocessed	Total Additional earnings (Ushs) from selling processed than selling unprocessed.
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				

5.48: If loan money from **Opportunity Uganda** was used to pay for sugarcane **marketing (Q4.18=8)**, answer questions below for each time you marketed sugarcane using **Opportunity Uganda** loan.

Month and year marketed sugarcane using Opportunity Uganda loan	Quantity of sugarcane marketed (kgs/L)	Total Costs incurred (Ushs) (include market fees, transport, agents fees, etc)	Additional earnings (Ushs/kg) per Kg/L of sugarcane sold after incurring mktg costs as opposed to avoiding them	Total Additional earnings (Ushs) from incurring mktg costs as opposed to avoiding them
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				
Month _____ Year _____				

5.49: In your opinion, **HOW AND BY WHAT MAGNITUDE** has the most previous loan acquired from **Opportunity Uganda** Benefited the following aspects of your sugarcane enterprise?

Aspect of the sugarcane enterprise	How (e.g., improved/increased because...; worsened/decreased because...)	Magnitude of Benefit (Rough Estimate)
1. Sugarcane productivity/yield (Kgs/Acre)		Increment _____ (Kgs/Acre)
2. Access to better markets		1= High; 2=Medium; 3=Low; 4=Don't know



3.Ability to increase area under sugarcane		Increment_____ (Acres)
4.Suagrcane income per year		Increment _____ (Ushs/Year)
5. Profitability of sugarcane enterprise		1= High; 2=Medium; 3=Low; 4=Don't know
6. Bargaining power in the marketing of sugarcane		1= High; 2=Medium; 3=Low; 4=Don't know
7. Ability to market collectively		1= High; 2=Medium; 3=Low; 4=Don't know
8.Ability to use modern sugarcane production practices		1= High; 2=Medium; 3=Low; 4=Don't know
9. Other (specify)		1= High; 2=Medium; 3=Low; 4=Don't know

**QUESTIONS 5.50 TO THE END ARE FOR BOTH BENEFICIARY, AND CONTROL FARMERS/HOUSEHOLDS**

**5.50:**In your opinion, how would you rate the following attributes of credit to farmers in this area? (*if don't know write DK*)

Item	Between 2011 and 2013				Before 2011			
	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory	Very satisfactory	Satisfactory	Indifferent	Unsatisfactory
1 Availability of credit services								
2 Interest rate charged on credit								
3 Application process/procedure for credit								
4 Information on terms & conditions of credit								
5 Stringency of terms and conditions of credit								
6 Ease of accessing credit								

**5.51/5.52.** What was the distance (km) from your home to the nearest banking institution **in 2013 (Now)** \_\_\_\_\_ (**5.51**) and **in 2010** \_\_\_\_\_ (**5.52**)

**6. 0. Farm Labor/Jobs:**

**6.1.** How many workers in total do you currently employ? \_\_\_\_\_ (**Now**) and in 2010 \_\_\_\_\_ (**2010**)

		Now	2010
<b>6.2</b>	Number of Permanent workers		
<b>6.3</b>	Number of Temporary/short-term workers		
<b>6.4</b>	Monthly payment to Permanent workers ( <b>Total in Ushs</b> )		
<b>6.5</b>	On average, for how many months in a year do you use Temporary/short-term workers?		
<b>6.6</b>	<b>Total annual</b> payment to Temporary/short-term workers ( <b>Total in Ushs</b> )		

*Thank You So much for your time*