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The U.S. Government's Global Hunger & Food Security Initiative



VSLA LEARNING STUDY FINAL REPORT

CONSULTANCY ASSIGNMENT TO ASSESS THE IMPACT OF VSLAs ON
SMALLHOLDER INVESTMENTS AND APPLICATION OF IMPROVED
PRACTICES THAT IMPROVE YIELDS AND INCOMES



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ADVANCE VSLA LEARNING STUDY FINAL REPORT

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DISCLAIMER

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ACRONYM LIST

ACDEP	Association of Church-based Development NGOs
ADVANCE	Agriculture Development and Value Chain Enhancement
VAA	Village-level agri-input agents
FAW	Fall Armyworm
FGD	Focus Group Discussion
FI	Financial Institution
FtF	Feed the Future
GHS	Ghana Cedi / Ghanaian Cedi
KII	Key Informant Interview
MoFA	Ministry of Food and Agriculture
NBFI	Non-banking Financial Institution
NGO	Non-governmental Organization
OB	Outgrower Business
RCB	Rural and Community Bank
SHF	Smallholder Farmer
SPSS	Statistical Package for the Social Sciences
USAID	United States Agency for International Development
VSLA	Village Savings and Loan Association
WEAI	Women's Empowerment in Agriculture Index

EXECUTIVE SUMMARY

A major component of the USAID-funded Agricultural Development and Value Chain Enhancement project (USAID's ADVANCE project) is the facilitation of access to financial services by outgrower businesses (OBs), smallholders, firms, and farmer-based organizations (FBOs) for investment in production, technology adoption, and management services. The concept of village savings and loan associations (VSLAs), which the project adapted in 2015, aimed to reduce risk while enabling OBs to expand their businesses and reach more outgrowers. In addition to the standard VSLA model, USAID's ADVANCE project implemented an innovative approach by linking VSLAs with agricultural input dealers, and encouraged them to market their products during share-outs, thus promoting the purchase of improved seed, fertilizers, and other productivity-enhancing inputs.

This innovation partly contributed to the formation of more VSLAs. During FY18, the project facilitated the formation of 300 new VSLAs with 7,142 members (3,347 women), bringing the total to 1,124 VSLAs with 24,457 members, 67 percent of whom are women (see FY18 Annual Report, page 7). These groups accumulated total savings of \$669,492 (GHS 3,149,256) between May and June 2018, as of share-out. This is 41 percent more than the previous year. Since the project started promoting the VSLAs concept in 2015, members have saved GHS 5,766,878, and the groups disbursed GHS 1,885,632 to 12,237 smallholder farmers (8,007 women and 4,230 men) as loans.

The VSLA has become an important source of funding for both household expenditure and farm enterprise, particularly for rural women, who are more marginalized regarding access to finance. During the FY2018 share-out, \$175,192 (GHS 788,750), representing 26 percent of the amount saved, was used to purchase production inputs on the spot. The project carried out follow-up monitoring, indicating that 4,043 farmers (2,508 of them being women) used an additional \$136,612 (GHS 615,055.00) to pay for land preparation covering 3,085 hectares.

This study which assessed the impact of VSLAs on smallholder investments and adoption of practices that improved yield and income, is part of a learning process focused on understanding the smallholder-level impacts of project interventions on farmer yields, technology adoption, and women's empowerment.

The study utilized a mixed-methods approach, drawing on quantitative and qualitative data. Trained enumerators collected quantitative data through a field survey. The research team selected a sample of 673 smallholder farmers (473 VSLA and a control group of 200 non-VSLA members) for data gathering. The researchers drew the sampled respondents from the 2017 gross margin studies sample frame, which is based on a random sample of all project beneficiaries, including VSLA and non-VSLA members. Field staff collected qualitative data through in-depth interviews and focus group discussions with smallholder farmers, including VSLA and non-VSLA members, OBs, input dealers, and community leaders, supplementing and contextualizing the quantitative data. The study was carried out in the project area's three northern Ghanaian regions, including the Brong Ahafo and Ashanti Regions.

Key Findings

The activities of VSLAs have contributed to positive changes for smallholder farmers participating in savings groups. Agricultural inputs are now easily accessed by smallholder farmers through the input sale arrangements at VSLAs share-out. VSLA members demonstrate an improved savings culture, as well as increased and improved access to credit. This translates into improved yields, the ability to hire more labor, increased incomes, investments in alternative income generating activities, the promotion of gender equality at the household level, and increased investments in children's education. The key findings are outlined below.

- Improved access to financial products and capital, including loans, among smallholder farmers participating in savings groups. The majority of VSLA members (77.0 percent) reported saving in the past season, compared to 24 percent of smallholder farmers who did not participate in

savings groups. VSLA participants attribute the savings to their membership in savings groups. More female VSLA members (72.7 percent) reported making their own decisions about how to allocate their savings than non-VSLA members who are women (55.6 percent). There was a significant difference in the proportion of VSLA (21.1 percent) and non-VSLA members (6.2 percent) who received loans.

- The average amount saved in the past season was relatively higher among smallholder farmers who did not belong to the VSLA (GHS 1109.03 / \$ 264.05) than those who belonged to the savings groups (GHS 610.56/ \$ 145.37). However, there were more VSLA members (77%) who indicated saving within the past season compared to their non VSLA counterparts (24%). The comparatively higher average amount of savings among non VSLA members may be attributed to the fact that they are not restricted by share values that their counterparts VSLA members pay weekly. Even if they are not making regular savings, their one-time savings with credit unions and other FIs may be higher than the contributions that VSLA members are obliged to make within a cycle. In addition, the non VSLA members are mostly men while the VSLA were mostly women, driving down the average of the VSLA savings as men saved much higher amounts than the women across board. The study also found that the average amount saved by female VSLA members (GHS 564.05 / \$134.30) was higher than the average amount saved by female non-VSLA members (GHS 450.94 / \$107.37). VSLA members' savings culture was found to have been improved by their membership of the association; the membership has exposed them to several engagements with development organizations and agents that have emphasized the importance of savings
- Apart from saving through a VSLA (100 percent), some members also saved with rural banks (7.6 percent), commercial banks (5 percent) and non-banking financial institutions (NBFIs) (4 percent). VSLA members revealed that their association's process makes savings easier than the "cumbersome banking process". Others attested that their previous experience with some financial institutions deterred them from saving, but that the introduction of the VSLA encouraged them to save again.

VSLAs procedures and practices. The study established that most VSLA members have a very good understanding of the basic procedures and practices of their associations, and by extension, the constitution that bind members. The study found that associations put in place elaborate safety procedures, particularly regarding members' contributions, and members appeared satisfied with the status quo. The study also revealed minimal conflicts among members, and VSLA leadership with the capacity to deal with issues that could threaten an association.

- The study found increased investments in and use of agricultural inputs by smallholder farmers participating in VSLAs, as savings groups accepted the use of organizing input sales during share-out. There is a positive correlation between individual savings and amount invested in agriculture. For all agricultural inputs, VSLA members in the last season (2017), invested an average of GHS 971.79 (\$231.38) compared to their non-VSLA counterparts, who invested an average of GHS 661.85 (\$157.58), ($p=0.037$). Smallholder farmers in savings groups enjoyed greater choice in their inputs purchase than their counterparts who do not use group savings. Among VSLA members, the majority mainly invested their savings in agriculture (purchase of inputs, hiring tractor and labor services) (86.1 percent) and children's education (28.7 percent).
- Investments in quality-of-life improvements such as investments in children's education and apprenticeship, alternative livelihoods, health and nutrition. The study found a comparatively improved quality of life among VSLA participants and their families had comparatively improved quality of life as a result of investments compared with non VSLA members.
- Higher application rates of improved technologies and management practices facilitated by increased savings from VSLAs. There is a significant difference between farmers participating in savings groups and non-members in their application of improved technologies and practices. However, application of pest management practices did not vary significantly across both groups.

Regarding the application of soil related technologies, 95.1% of VSLA members applied soil related technologies compared to 65.4% of non-VSLA members ($p=0.000$). There was a significant difference between VSLA (34%) and non-VSLA members (24%) in their use of improved seeds across all crops ($p=0.007$)

- VSLA membership increased the agency of female participants compared to women who do not belong to savings groups. Women in VSLAs reported higher levels of comfort with public speaking compared to their counterparts who do not belong to savings groups. In general, women members of VSLAs reported higher rates of joint decision making on both major and minor household expenditures. Examples of major household expenditures include the purchase of a large appliance for the house, a motor bike, or a TV, while minor household expenditures include food for daily consumption and other household needs. Additionally, women in VSLA groups reported proportionately higher sole decision making in both major (11 percent VSLA women, 3.5 percent non-VSLA women, $p=0.047$) and minor (19.2 percent VSLA women, 7.2 percent non-VSLA women, $p=0.056$) household expenditures.
- Positive outlook on the future potential of VSLAs. The majority of VSLA members and leaders emphasized that they are optimistic that their groups will thrive and grow. This is attributed to VSLA members' understanding of the VSLA concept, the capacities they developed through operating their associations with very little or no challenges, and the benefits derived by individual members.

Conclusion

The overall study objective was to assess the impact of VSLAs on smallholder investments in agriculture in general, in crop production, and application of new and/or improved practices to improve yields and incomes. The study confirmed that VSLAs significantly improved smallholder farmers' investments and application of improved technologies. This led to improved living conditions among smallholder farmers, especially women who are VSLA participants, in the areas of child education, health and nutrition, and investment in alternative livelihoods, among others. The study also confirms the sustainability of the project's innovative approach linking VSLAs to agricultural input dealers. This is grounded in the mutual trust among members, VSLA members' well-developed understanding of the concept, and the benefits derived from the linkages. Finally, VSLA membership enhanced women's participation in decision making at the community and household levels. Women members are empowered to act on behalf of protecting their wellbeing and that of other women and children.

Recommendations

Access to VSLA 'Boxes.' With VSLAs becoming increasingly accepted among smallholder farmers, and non-members willing to come together to constitute VSLA groups, it is recommended that new groups have easy access to VSLA toolkits and capacity building to set up their associations. Peer coaching and experience sharing must also be facilitated among the groups, particularly related to the safety of members' contributions and conflict management. This will further contribute to the sustainability of VSLAs.

Enhancing linkages with formal financial institutions. There is the need to promote frequent engagement between VSLAs and formal financial institutions, particularly to build VSLAs' trust and confidence in these institutions. VSLA members generally consider procedures by formal financial institutions to be "cumbersome." i.e. very time consuming and often potential clients are not able to meet the requirements of the FIs. These formal financial institutions need to work in tandem with VSLAs to promote banking products that are flexible, practical, and easily accessible by smallholder farmers. Some VSLAs already collaborate with formal financial institutions. These collaborations should be developed into systems that can support the use of VSLA savings as collateral for loans, and other financial support such as input credit.

Enhance social networking among VSLAs. Networking among VSLA members and, by extension, networking with OBs and other development agents should be nurtured. This may be done by encouraging VSLAs to formalize some of these networks and to have regular engagements. The benefits derived from these networks could be enormous, particularly in the areas of knowledge and information sharing. It may lead to an increase in the use of improved technologies among smallholder farmers in the project area, enhancing productivity and improving incomes.

Market for farm produce. Smallholder farmers still complained about inadequate market for maize and soy, particularly at the peak season, the harvest period. The management of storage facilities' capacities is an area of potential that is not fully utilized at the local level and in the maize and soybean value chains. At the local level, the use of storage facilities can enhance smallholder farmers' competitiveness, especially those in groups such as VSLAs. The OBs who work in tandem with VSLAs require enhanced storage and warehousing facilities and best practices to provide options and marketing opportunities for smallholder farmers. In this regard, OBs should consider adopting an adapted inventory credit system.

Access to Inputs. Farmers have come to accept the concept of input promotions during share out, the project should work with the input firms who have been involved in the community sales to take ownership of the process through the use of community dealers established during the process. This will ensure sustainable supply of inputs to the farmers.

Tractor Services. Access to mechanization services should be enhanced in the intervention communities, as many farmers complained about the inadequate availability and timeliness of services. Additional tractor services could be provided by VSLA group initiatives or by OBs, and could be enhanced through planned and effective collaboration with private plant pool owners or district-level Department of Agriculture Mechanization Units.

Share-out. VSLA share-out have had tremendous impact on technology adoption, yield, and incomes, but many VSLA participants expressed a need for more capacity building to improve upon these results. Therefore, support should be given to VSLA leadership to innovate when planning sharing arrangements. Some percentage (such as 10 percent) of the total contributions could be left in a 'kitty' to build a capital base for the group over time. This would require the associations' leadership to complete further capacity building in 'shares' management due to the complexity of modified share-outs.

I.0 INTRODUCTION

I.1. Background of Project

The USAID-funded Agricultural Development and Value Chain Enhancement project (USAID's ADVANCE project) works with various actors along the maize, soybean, and rice value chains in Ghana. It is implemented by ACDI/VOCA as lead organization, with partners including Technoserve, the Association of Church-based Development NGOs (ACDEP), and PAB Consult. A major component of USAID's ADVANCE project is the facilitation of access to financial services by outgrower businesses (OBs), smallholders, firms, and farmer-based organizations (FBOs) for investment in production, technology adoption, and management services.

The concept of village savings and loan associations (VSLAs), which the project adapted in 2015, aimed to encourage smallholder farmers, particularly women, to save and invest in their farms to improve productivity and incomes, while enabling OBs to expand their businesses and reach out to more outgrowers. Since the introduction of the concept, project beneficiaries have accepted VSLAs, and its effects have been significant.

For instance, during FY18, the project facilitated the formation of 300 new VSLAs with 7,142 members (3,347 women), bringing the total to 1,124 VSLAs with 24,457 members, 67 percent of whom are women (see the FY18 Annual Report, page 7). These groups accumulated total savings of \$669,492 (GHS 3,149,256) between May and June 2018, as of share-out. This is 41 percent more than the previous year. Since the inception of VSLAs in 2015, members saved GHS 5,766,878, and the groups disbursed GHS 1,885,632 to 12,237 smallholder farmers (8,007 women and 4,230 men) as loans. The VSLA has become an important source of funding for both household expenditure and farm enterprise, particularly for rural women, who are more marginalized regarding access to finance. During the FY2018 share-out, \$175,192 (GHS 788,750), representing 26 percent of the amount saved, was used to purchase production inputs on the spot. The project carried out follow-up monitoring, indicating that 4,043 farmers (2,508 of them being women) used an additional \$136,612 (GHS 615,055.00) to pay for land preparation covering 3,085 hectares.

VSLAs consist of groups of 20–35 smallholder farmers who meet regularly, not only to save but also to borrow from their savings. Members purchase weekly shares for the entire saving period at an agreed-upon value, based on the group's constitution. The core purpose of the model is to ensure that farmers primarily use their VSLA savings to purchase inputs. Indeed, OB, smallholders, firms, and FBOs mainly access financial services for investment in production, technology adoption, and management services. Encouraging women's participation is an important aspect of the concept. As women use financial leverage as a means to empowerment, VSLAs promote resilience at the household and community levels.

In addition to the standard VSLA model pioneered by CARE International, USAID's ADVANCE project implements an innovative approach that links VSLAs with agricultural input dealers, inviting dealers to attend share-outs, ultimately promoting the purchase of improved seed, fertilizer, and other productivity-enhancing inputs. This approach furthers the goal of farmers investing their savings into inputs. The project estimates that VSLAs invested over \$384,287.65 (GHS 1,730,063), or 30 percent of their savings, in inputs during share-out between 2016 and 2018. However, the impact of USAID's ADVANCE project's VSLA initiative on farmer yields, technology adoption, and women's empowerment has not been sufficiently studied to document trends and plan exit strategies to sustain the interventions and guide the design of future interventions. For this reason, the project commissioned this study.

I.2. Context and Rationale

The study was undertaken within the context of assessing VSLAs impact on smallholder investments and the application of improved practices that improve yields and incomes. USAID's ADVANCE project began facilitating the implementation of the VSLA model in 2015, and achieved reasonable results in the subsequent years. However, the full impacts of the VSLA initiative are not yet measured. Therefore, the study aimed to assess and document the impact of VSLAs on farmer yields, technology adoption, and women's empowerment, and recommend exit strategies that will sustain current and guide future interventions.

I.3. Purpose and Expected Use of the Study

The study's purpose is encompassed in the context and rationale stated above. In addition to the project's efforts to monitor OB performance, including the level of finance and investment facilitated for outgrowers, the study aims to further elucidate the smallholder-level impacts of project interventions on farmer yields, technology adoption, and women's empowerment. As indicated above, the study is also expected to help the project plan exit strategies that will sustain current interventions and guide future interventions.

I.4. Study Objectives

The study's overall objective is to assess the impact of VSLAs on smallholder investments in agricultural crop production and application of new and/or improved practices to improve yields and incomes. The assignment's specific objectives included assessing the impacts of savings made under the VSLAs scheme on:

1. Individual-level savings among beneficiary farmers within the project's coverage
2. Access to, and use of, inputs by farmers after share-out
3. The level of new investments by farmers in crop production
4. Use of new ideas and adoption of improved practices by smallholders
5. Female agency (that is when women acquire the power to act freely, exercise their rights, and fulfil their potential as full and equal members of society)

The following hypotheses were tested:

1. Individual savings levels are higher among VSLA members than community members who do not use any group savings scheme.
2. There is a positive relationship between individual VSLA savings and the amount of money invested in agriculture and other livelihood activities, and socioeconomic needs.
3. Organization of input sales during share-out increased the investment in and use of agricultural inputs by members.
4. Increased savings from VSLAs facilitated the adoption of new ideas and improved technology and practices.
5. VSLA membership increases the agency of female members and encourages them to be more socially and economically active.

I.5. Organization of the Report

This final report is organized into six sections. Section one introduces the background of the study, and section two presents the methodology and data collection techniques. Section three discusses the main findings, and section four presents key observations. Section five lists the study's conclusions, and section six describes the lessons learned and recommendations.

2.0 STUDY METHODOLOGY AND DATA COLLECTION TECHNIQUES

This study forms part of a larger participatory research project, comprising five studies executed by four different consulting firms. The approach enabled consultants to work together with the USAID's ADVANCE project team, allowing each member of the partnership to benefit from synergies generated through the multidisciplinary backgrounds of the various consulting firms. The methods adopted by the various consultants include the following:

- Development of data gathering tools
- Sampling and sample size determination
- Enumerator training
- Data gathering
- Data cleaning and analysis
- Report writing

2.1 Development of Data Gathering Tools

The research team prepared draft qualitative and quantitative data gathering tools in line with the objectives and hypotheses of the VSLAs study (see section 1.4). The qualitative instrument comprised four sets of questionnaires designed to target different stakeholders; the first set solicited information from community leaders, the next two from VSLA and non-VSLA members, and the fourth set from input dealers and OBs. The team also designed quantitative questionnaires for sampled VSLA and non-VSLA members.

After the project completed a review of the questionnaires and the team incorporated comments, the project and all consultants attended a harmonization engagement to turn the data gathering instruments prepared for the five studies into a unified instrument that could be uploading onto tablets and administered by trained enumerators.

2.2 Sampling and Sample Size Determination

For the quantitative survey, the team selected a predetermined sample size of 673 smallholder farmers (473 VSLA and a control group of 200 non-VSLA members) for data gathering. The team drew the sample from a database of the comprehensive characteristics of more than 2000 smallholder farmers from a 2017 gross margin study. The sample frame had one major defect—its ratio of men to women was 70:30. However, the actual ratio of men to women in VSLA membership is 24:76. Therefore, it is important to note that the following margins of error were considered to correct the deficit when using the total population of VSLA membership of 24,457:

1. The margin of error for VSLA and non-VSLA members is calculated as 4.55 percent and 7.06 percent, respectively.
2. With a total VSLA population of 24,457, a sample of 328 men and 145 women leads to a margin of error of 5.48 percent for the sample of men and 8.27 percent for the sample of women, with a 95 percent confidence level.
3. With the same confidence level and a non-VSLA population of 79,227, a sample of 143 male non-VSLA members leads to a margin of error of 8.35 percent, and a sample of 57 female non-VSLA members leads to a margin of error of 13.24 percent.

The research team selected stakeholders for the qualitative survey from the following categories: community leaders, VSLA and non-VSLA members, input dealers, and OBs. Field staff gathered data from these stakeholders through focus group discussions (FGDs), key informant interviews, and in-depth

interviews. In all, field staff conducted 14 FGDs with male stakeholders and 18 FGDs with female stakeholders, as well as 10 key informant and eight in-depth interviews.

2.3 Enumerator Training

A two-day enumerator training, held on November 13–14, 2018, aimed to prepare 43 field enumerators to collect quantitative data by administering structured questionnaires to sampled beneficiaries of the project.

The training used formal methods, including PowerPoint presentations by facilitators followed by question-and-answer sessions, general discussions, and experience sharing, interwoven by short breaks. Facilitators used a participatory manner, allowing each participant to share thoughts and ideas with their colleagues. P&H Enterprises and Consultants (P&H) presented information on the VSLA study, including the background, objectives, methodology, and questionnaires for data gathering. During the training, field enumerators pre-tested the data gathering instruments, becoming conversant with the questions and tablets used for data collection. Some enumerators, who did not attend field pre-testing activities, participated in role play activities to simulate the situation in the field, to improve their understanding of the data gathering tools, and enhance their capacity to administer the questionnaires.

2.4 Data Gathering

The trained enumerators gathered quantitative data using tablets. The enumeration areas comprised USAID's ADVANCE project implementation areas, including the three Northern regions (Northern, Upper West, and Upper East regions), and the regions of Brong Ahafo and Ashanti. The respondents comprised VSLA and a control group of non-VSLA members. The data gathering lasted from November 14–28, 2018.

P&H gathered qualitative data in communities predetermined by the client. The consultant and client selected respondents from a list of predetermined stakeholders (see section 2.2), including community leaders, VSLA and non VSLA members, input dealers, and OBs. The consultant gathered data from these stakeholders through FGDs, key informant interviews, and in-depth interviews. In addition, enumerators documented important observations to be used as personal anecdotes in the report. Enumerators considered gender issues in all the interviews. For example, during FGDs, women's and men's groups participated in separate interviews. The consultant adopted similar approaches for other stakeholders whenever possible.



A cross section of male and female FGD participants

2.5 Data Cleaning and Analysis

Enumerators collected quantitative data in real time using tablets, and uploaded the data onto a server hosted by the project. The data was processed in Microsoft Excel and shared with the consultant. P&H used SPSS to clean and analyze the data, guided by inputs from the client at an initial data analysis engagement. Disaggregation ensured that the data reflected the key variables required by the client. P&H employed both descriptive and inferential statistics to analyze the quantitative data, and conducted all data analyses using a weighted analysis to account for the unequal probability of selection. P&H submit final data sets with the final report to the client.

P&H recorded and transcribed qualitative data from interviews and focus group discussions, and used thematic analysis to identify relevant constructs, concepts, and categories across transcripts. The team then completed a comprehensive analysis by comparing and synthesizing the qualitative data with quantitative survey data. P&H also used informal discussions to probe issues and concerns, and included relevant observations as anecdotal data to supplement the interpretation of the quantitative data.

2.6 Study Limitations

The following were the main limitations of the study:

Respondents used the recall method to provide information on savings, cost of inputs, and sales. Some of the information received might not be accurate in the absence of documented records; enumerators used probing and prompting to encourage farmers to give as accurate information as possible.

There was no representation of female non-VSLA farmers in the Upper West Region in the quantitative sample, as the sample frame did not include data on this category of respondents. To compensate, the team ensured that qualitative interviews included an adequate representation of female non-VSLA farmers.

The consultant could not follow up with a greater number of the enumerators during the quantitative data collection process as planned initially due to logistical constraints. However, the USAID's ADVANCE project's team of regional technical staff provided some backstopping to the enumerators.

In some communities, it was challenging to reach ADVANCE beneficiaries who were not VSLA members. In some instances, farmers included in the 2017 gross margin survey sample as non-VSLA members are now members of a VSLA. Field staff therefore replaced those respondents in interviews.

The study's sample size showed a predominance of men over women in the distribution of VSLA members. However, in reality women's membership is much higher than men, 76 to 24 percent. As indicated above, the ratio of the sample used came from an annual survey used to estimate the gross margins of crops produced by smallholder farmers. In this general typology of smallholders, there is a predominance of males. In the qualitative data gathering, enumerators made efforts to ensure that respondents reflected the real male-female proportions in VSLA membership, and P&H completed a weighted analysis to correct the above limitation.

3.0 MAIN FINDINGS

This chapter presents key findings of this USAID’s ADVANCE project knowledge management and learning study to assess the impact of VSLAs on smallholder investments and the application of improved practices that improve yields and incomes. The results and findings answer the five analysis questions of the study (see Section 1.4). The analysis synthesizes the study’s qualitative and quantitative findings. Data is disaggregated by respondent type (VSLA and non-VSLA members), region, and gender.

3.1 Smallholder Farmer Characteristics and Demographics

This section summarizes the demographic and socioeconomic characteristics of households sampled in the survey. The Ghana Statistical Services defines a household as a unit or group of people who usually slept in the same dwelling and shared the cost of their meals for at least nine of the 12 months preceding the interview (GSS, 2013).

Distribution of Respondents by Sex and Type

Enumerators sampled 673 total respondents, of which 70 percent were men and 30 percent were women¹. Out of the total number of respondents sampled for the survey, 462 (68.6 percent) were from the Northern region, 89 (13.2 percent) from the Upper East region, 26 (3.9 percent) from the Upper West region, 77 (11.4 percent) from Brong Ahafo, and 19 (2.8 percent) from Ashanti region. Regarding respondent type, the VSLA sample comprised 69.3 percent men and 30.7 percent women, while the non-VSLA member sample included 71.5 percent men and 28.5 percent female.

Table 1. Percentage distribution of respondents by region

Region	VSLA members (N=473)		Non-VSLA (N=200)	
	Men	Women	Men	Women
Northern	74.7	25.3	67.7	32.3
Upper East	48.6	51.4	68.5	31.5
Upper West	12.0	88.0	100.0	0.0
Brong Ahafo	73.8	26.2	80.0	20.0
Ashanti	75.0	25.0	90.9	9.1
Total	69.3	30.7	71.5	28.5

Household Structure and Marital Status

Figure 1: Household Type presents the household structure of respondents across the study area. In line with Feed the Future (FtF) indicators for a population-based survey, the interviewed households are categorized into four structures: (a) households with male and female adults (92 percent); (b) households with a male adult and no female adult (3.1 percent); (c) households with a female adult and no male adult (4.9 percent); and (d) child-headed households (METSS, 2014). Results of the study show that majority of the households (98.2 percent) comprised men and women, 1.2 percent included only female adult(s), and 0.6 percent included only male adult(s), with no variations across the regions. The majority of respondents (83.8 percent) came from male-headed, while 16.2 percent came from female-headed households.

¹The study’s sample size showed a predominance of men over women in the distribution of VSLA members. However, in reality women’s membership is much higher than men, 76 to 24 percent. As indicated earlier in this report, the ratio of women to men is not reflected in the sample, which came from an annual survey used to estimate the gross margins of crops produced by smallholder farmers.

Most the respondents are in monogamous marriages (57.8 percent), while 36.1 percent are in polygamous unions, 3 percent are single, and 2.1 percent are widowed. The remaining 1 percent are either divorced/separated or in an informal/ consensual relationship.

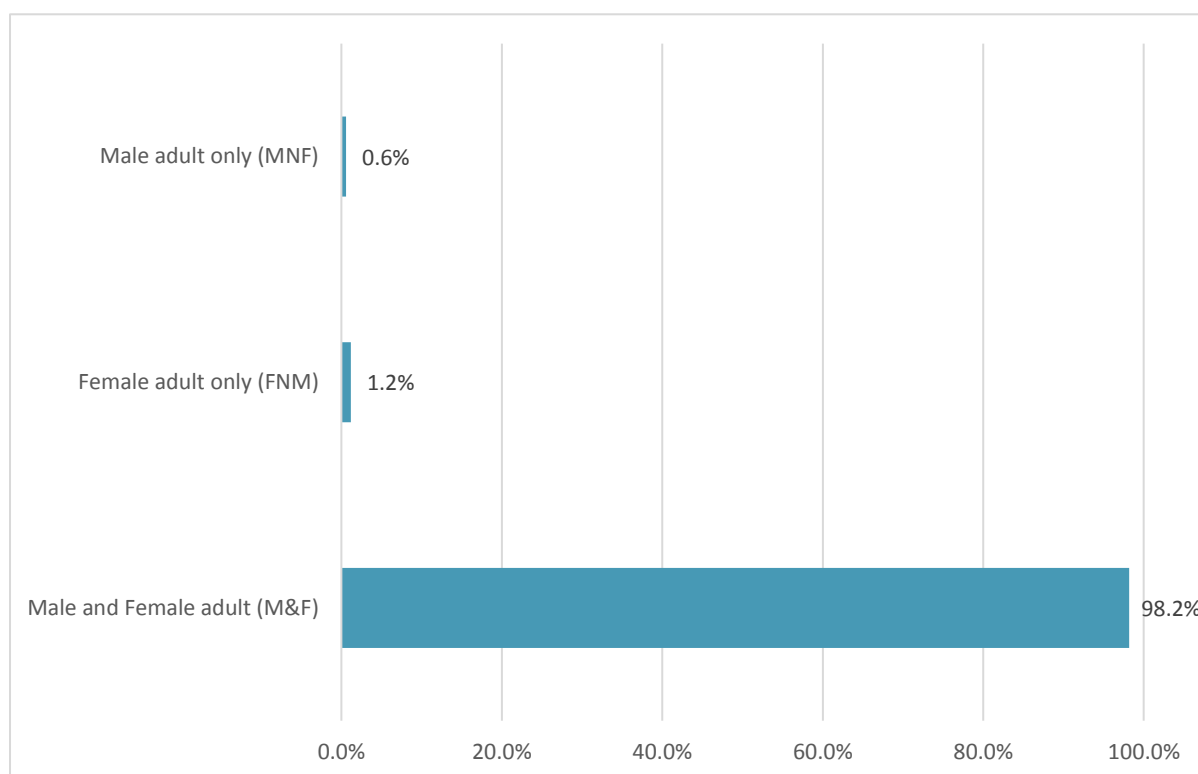


Figure 1: Household Type

Household Size

Households with male and female adults had an average size of 11 compared to eight for households with only male adult, and eight for households with only female adults. The household size of VSLA members was higher (11) than those who did not belong to any savings group (9), a statistically significant difference ($p=0.001$). A regional comparison shows that average household size is significantly higher in the Northern Region than in the Upper East, Brong Ahafo, and Ashanti Regions. Household size plays a critical role in agricultural decision making among farm households. It serves as a potential indicator for labor supply, and influences the adoption of agricultural practices such as soil and water conservation measures. For instance, in Tanzania, the Food and Agriculture Organization found that large households were more likely to adopt labor-intensive agricultural practices such as row planting (FAO, 2016).

Table 2. Average household size by region

Region	Average People	Number Homes	Standard Deviation
Northern	12.2	462	7.58
Upper East	9.9	89	7.14
Upper West	11.3	26	7.27
Brong Ahafo	8.2	77	4.80
Ashanti	7.1	19	3.39
Total	11.3	673	7.31

Age Distribution of Respondents

The majority (93 percent) of respondents fell within the economically active age of 18 to 59 years, while about 7 percent were 60 years or older. The youngest survey respondent was 18 years old, and the oldest was 89 years old, with an average age of 41 years for sampled respondents.

Among all respondents, men were 41 years old on average, and women were 39 years old. The average age of VSLA members was 40 years and 42 years for non-VSLA members. Youth (ages 18–29) made up approximately 14 percent of the total sample (15.5 percent among VSLA members and 10.5 percent among non-VSLA members). A regional comparison shows the average age of respondents was higher in the Brong Ahafo region (44 years) than in the Northern (40 years), Upper East (42 years), Upper West (41 years), and Ashanti (43 years) regions.

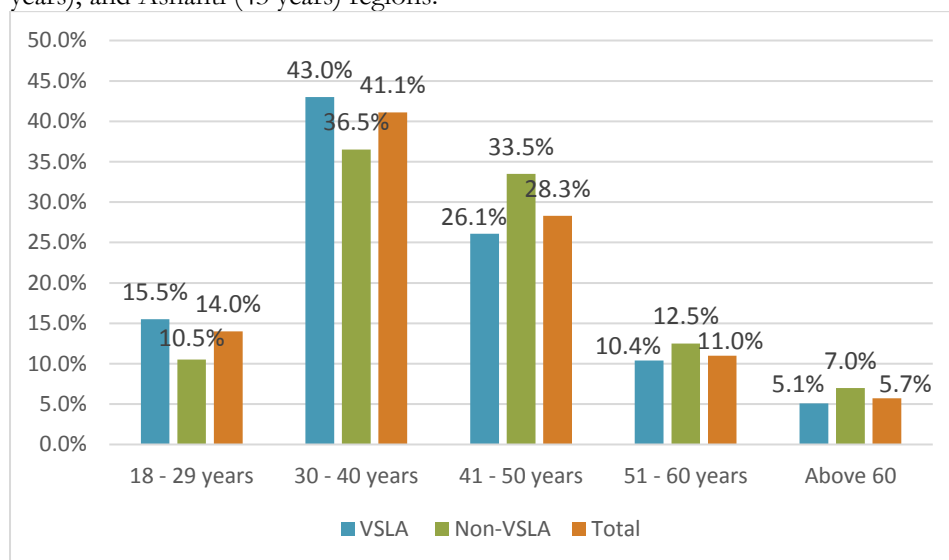


Figure 2: Age distribution of respondents

Religion of Respondents

More than half of survey respondents (59.7 percent) were Muslims, 34.9 percent were Christians, 4.8 percent belong to traditional religions, and the remaining 0.6 percent had no religious affiliation. Across regions, respondents from Northern (70.1 percent) and Upper West (57.7 percent) regions were predominantly Muslims, whereas Christians were dominant in the Upper East (60.7 percent), Brong Ahafo (59.7 percent) and Ashanti (52.6 percent) regions.

It is interesting to note that interviews with female VSLA members in the northern regions, where Islam is the predominant region, revealed that the religion did not restrict most women’s membership. Most interviewed women indicated that their husbands felt supportive of their wives’ VSLA membership. A male respondent remarked that, “the VSLAs are supporting our wives to help the entire family, so we encourage their participation.”

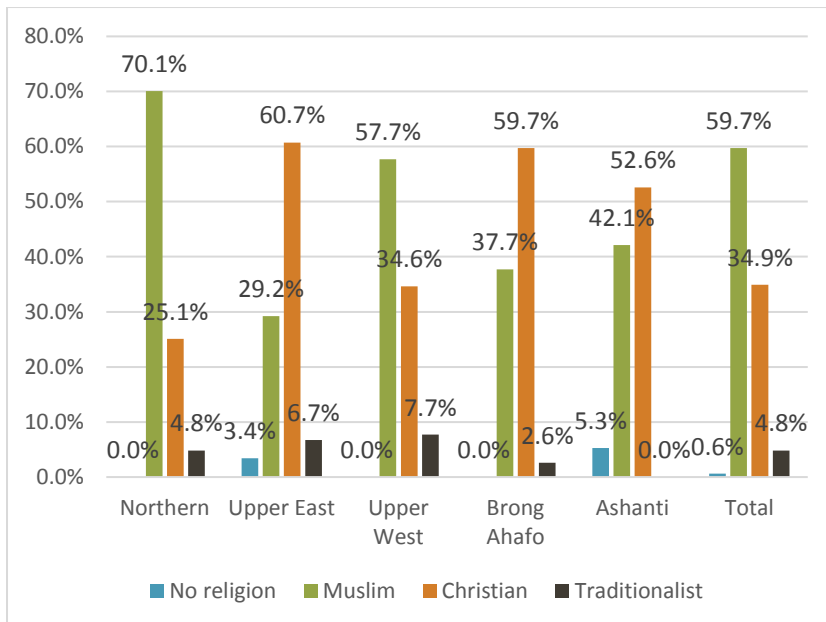


Figure 3. Religious affiliation of respondents

3.2 Savings and Access to Credit

Agricultural financing, particularly smallholder agriculture, has become one of the major challenges facing the agricultural sector in Ghana (World Bank 2012; Asiedu- Mante 2011). Traditional mainstream banks, as well as rural banks and NBFIs, consider agricultural investments as “unbearable” risk, and tend to concentrate on other sectors, especially trade in consumer products. Studies have shown that factors such as sociocultural restrictions, religious preconceptions, and lack of education make respondents’ access to credit more challenging, particularly among rural women, who have been marginalized and are hardly represented in the financial mainstream and decision making (Zoynu & Fahmida, 2013). However, credit is an important resource that impacts asset levels and business growth for smallholder farmers and enterprises. Credit allows farmers to expand their operations, improve agricultural productivity, and apply new technologies. This section provides information on savings and credit access among smallholder farmers in savings groups, among those who do not use any savings group, and about how smallholder farmers invest their savings and credit.

Both male and female smallholder farmers in VSLA groups attested that there has been an improvement in their savings culture after joining savings groups. Membership in VSLAs exposes farmers to the importance of savings, good loan repayment behavior, and to other development organizations and agents who also emphasize the importance of savings. Indeed, some VSLA members emphasized that VSLA operations has compelled them to save. Respondents also reported that membership in VSLAs enhanced farmers’ access to other forms of credit, including input credit, supply credit, and other in-kind credit services from key value chain actors. Among sampled smallholder farmers, a greater proportion of VLSA members reported either saving or having access to a credit facility in the past season than non-members. However, average savings was higher among non VSLA members than among VSLA members.



VSLA Savings Box

3.2.1 Savings among VSLA and non-VSLA members

Among all respondents who had membership in a savings group, the majority (76.9 percent) reported saving in the past season, whereas approximately one-fourth (24 percent) of non-VSLA members reported the same ($p=0.000$). During FGDs, VSLA members often spoke about how the formation of the

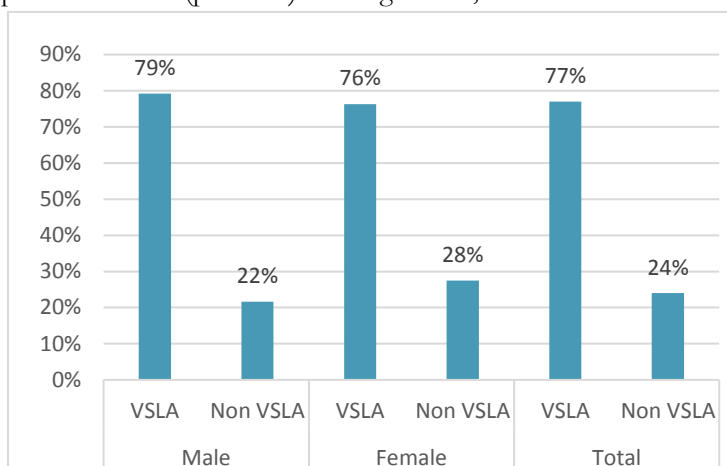


Figure 4: Smallholder farmers’ savings status

savings group helped them save. For example, a male farmer noted that, “This box has become like our bank. Besides the group contributions, anytime you have money you can save it there, and anytime you need money you can tell the group members that I need my money to go and do this or that.” Respondents indicated that this savings serves as their major source of financing for production.

Before participating in VSLA groups, farmers relied on the sale of domestic animals at the beginning of the farming season to finance their production activities. Some farmers also mentioned that they financed production by storing some farm produce to sell at a later time. Most women respondents in the north indicated that, prior to the organization of VSLAs, they mainly financed production with income from the sale of charcoal, firewood, and shea nuts. FGDs and interviews revealed that VSLA members were motivated to save at higher rates to gain better access to credit and other benefits from the association. For example, several women respondents confirmed that they could pay for emergency expenditures, health insurance premiums, and their children’s schools fees using their VSLA savings.

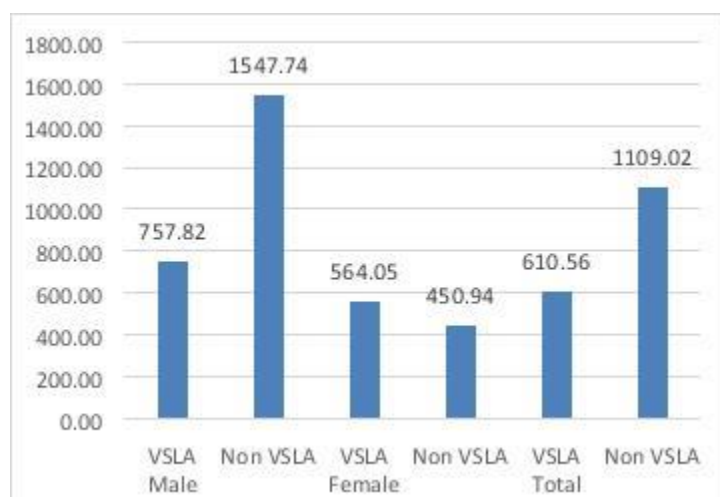


Figure 5. Average amount saved by smallholder farmers

Apart from saving with the VSLA (100 percent), some members also saved with rural banks (7.6 percent), commercial banks (5 percent) and NBFIs (4 percent). VSLA members generally prefer VSLA procedures to the “cumbersome banking process” of formal financial institutions. Others attested that their previous experience with formal financial institutions deterred them from saving until the introduction of the VSLA. These responses illustrate the level of trust that members have in VSLAs. Among non-VSLA members who reported savings, the majority (56 percent) had savings with rural banks, and 17 percent indicated they were saving with a commercial bank. In an interview with some non-VSLA members, they mentioned that rural and community

banks were more accessible than commercial banks in their communities. A significant proportion of non-VSLA members (26.8 percent) reported saving in their homes.

As shown in figure 5, the average amount saved was relatively higher among non VSLA members (GHS 1109.03 / \$264.05) than VSLA members (GHS 610.56 / \$ 145.37), ($p=0.256$). The comparatively higher average amount of savings among non VSLA members may be attributed to the fact that they are not restricted by shares that their counterparts VSLA members pay weekly. Even if they are not making

regular savings, their one-time savings with credit unions and other financial institutions may be higher than the contributions that VSLA members are obliged to make within a cycle. In addition, the non VSLA members are mostly men while the VSLA were mostly women, driving down the average of the VSLA savings as men saved much higher amount than the women across board. On average, female VSLA members' savings were relatively higher than non-members, with an average savings of GHS 564.05 (\$ 134.30) with a margin of error of plus or minus 356.29 compared to an average of GHS 450.94 (\$ 107.37) with a margin of error of plus or minus 347.33, although this difference was not statistically significant ($p=0.497$). This may be explained by the higher numbers of female VSLA members compared to the non VSLA female counterparts in most of the communities studied.

On the other hand, male farmers who belonged to the savings group reported an average savings of GHS 757.82 (\$ 180.43) with a margin of error of 148 compared to an average savings of GHS 1547.74 (\$ 368.51) with a margin of error of plus or minus 561.42) for men who did not belong to any savings group ($p=0.421$), as shown in Figure 5. Further analysis shows a positive correlation (correlation coefficient = +0.562, significant at 1% level) between individual savings and amount of money invested in agriculture. This suggests that as farmers' savings increase, they are more likely to increase their investment in agriculture

When deciding how to utilize savings, the majority of smallholder farmers (78 percent of VSLA members and 63 percent of non-members) reported making their own decision. A larger percentage of female VSLA members (72.7 percent) reported personal agency in decisions about using savings than their counterparts that did not participate in savings groups (22.5 percent) ($p=0.045$).

3.2.2 Access to Credit

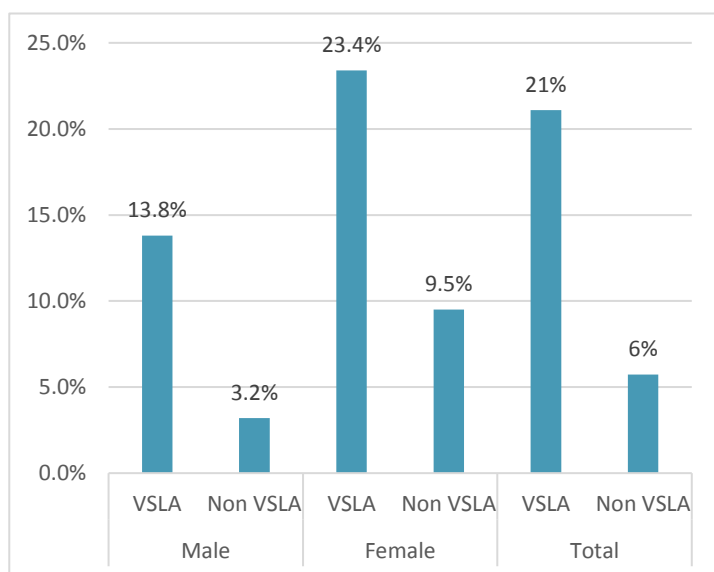


Figure 6: Percentage of respondents who accessed credit

The study results show a significant difference in the proportion of VSLA members (21 percent) and non-VSLA members (6 percent) who received loans (see discussions below). Just a small proportion of male VSLA members (13.8 percent) and their non-VSLA counterparts (3.2 percent) indicated that they received loans in the past season ($p=0.002$). A higher proportion of female VSLA members (23.4 percent) received loans within the same period than female non-members (9.5 percent), ($p=0.034$). Farmers in the savings groups confirmed and spoke highly of the loan component associated with being a member of a VSLA. Members attested that after joining, a farmer is qualified to get a loan if needed, but that the loan amount will depend on the

member's level of contribution. Indeed, members emphasized that VSLA loan procedures are easier to navigate than going to banks, helping most of them to afford quality education for their wards and to buy farming inputs. Some farmers mentioned group arrangements to provide them with tractor services and farming inputs, which they reimburse at a later time or after harvest.

Leveraging their VSLA membership, some members noted they received loans from financial institutions linked with their groups. For the majority of VSLA members, these arrangements have been a relief. VSLAs, rural and community banks, family members or friends, and NBFIs provided the majority of loans to farmers during the past season. Among these sources of financing, VSLAs and rural and community banks were the main loan providers. The majority of VSLA members (86.8 percent) indicated that they received loans from their VSLA. Additionally, 8.8 percent of VSLA members received loans from rural and community Banks, 3.8 percent received loans from family members or friends, and 0.5 percent received loans from an NBF. Among non-VSLA members, 70 percent received loans from rural

and community banks, followed by NBFIs (10 percent) and family members or friends (10 percent). Indeed, some VSLA members mentioned that they were better positioned to offer “soft loans” to their friends who are not VSLA members.

3.2.3 Investment of savings

The majority of VSLA members (86.1 percent) invested their savings in crop production (purchase of inputs and hiring tractor and labor services), followed by investments in children’s education and apprenticeships, health and nutrition, and investment in alternative livelihoods, particularly petty trading. Generally, respondents underscored the improvements in their families’ quality of life as a result of these investments. A female respondent from Peninamisa in the Brong Ahafo Region stated, “I am very proud that I have been able to finance the education of my daughter through Senior High School with savings from VSLA. And at the point when it was very difficult, i.e., registering her to sit for the final examinations, I used my share-out money to pay it off. She has completed successfully, and the entire family is very delighted.”

Respondents shared similar responses related to investments in health and nutrition. For example, a female respondent at Daffiel in Sawla-Tuna-Kalba district in the Northern region said, “My family members can eat well, take care of our health insurance premiums, and very happy because we can also dress well. In the past, we were unable to meet these family needs and often resulted in quarrels amongst family members. With the VSLA intervention, I am able to support my husband to meet these needs and we are very happy together.”

3.3 Access to, Use, and Expenditure on Agricultural Inputs

This section details smallholder farmers’ access to and use of agricultural inputs, including certified seeds, fertilizer, insecticide, and weedicide. During FGDs, smallholder farmers with VSLA membership shared that agrochemicals are more readily available than in the past. The examples below demonstrate the VSLAs’ contributions to the changing availability of inputs.

Overall, the study shows that VSLAs enhanced the purchasing power of smallholder farmers and, consequently, the proliferation of community input agents and the availability of agricultural inputs.

Except for weedicide application, study data show a significant difference in the proportion of VSLA and non-VSLA members’ use of inputs (see Table 3).

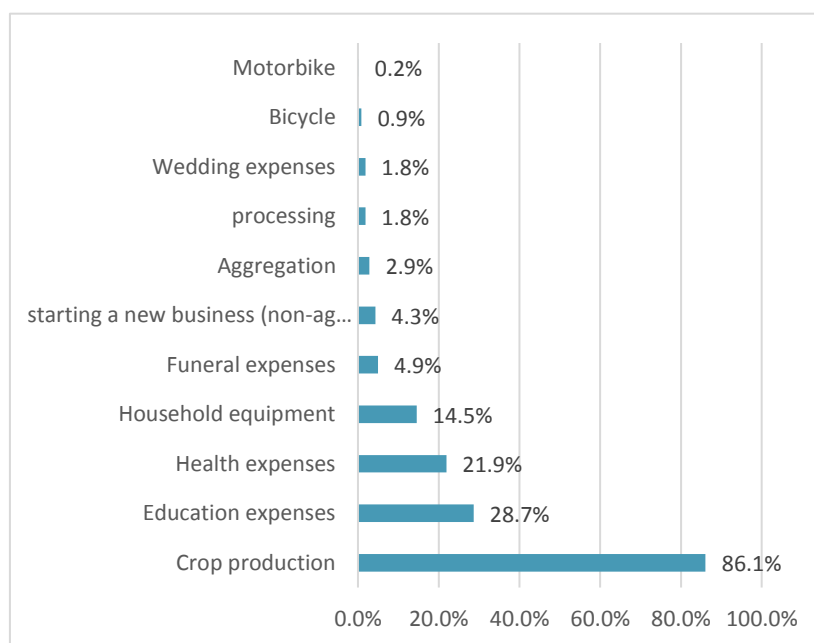


Figure 7: How VSLA members invested their savings

Table 3. Input use among VSLA and Non-VSLA members

Input	VSLA members (%)	Non-VSLA members (%)	P-Value
Improved seed	33.9	24.2	0.004
Fertilizer	81.4	75.8	0.007
Insecticide	63.6	51.3	0.003
Weedicide	91.6	90.1	0.452
Tractor service	87.3	76.4	0.001

The study data illustrates that VSLAs accepted the use of organizing input sales during share-out. For example, in the Kintampo area, the VSLAs made arrangements for input dealers from Techiman to display a variety of inputs in communities. Study participants identified similar arrangements in other regions. VSLA members emphasized that the organization of input sales after share-out ensured the timely supply and quality of inputs. A female farmer in Daffiel in the Sawla-Tuna-

Kalba district stated, “The advantage of this arrangement is that the input is brought to our

doorstep, you get to know who is supplying, and this also ensures timely supply and quality of input.”

Smallholder farmers’ access to inputs improved as a result of the increase in activities of input dealers and their agents in communities. Smallholder farmers and OBs both underscored the relevance of the community-based input agent. Input dealers in the regional and district capitals play an essential role by supplying their agents in communities, who in turn sell agrochemicals to farmers. Some outgrowers reported that they sometimes make arrangements with input dealers for the supply of agrochemicals through mechanisms whereby credit is offered in form of inputs for members to payback with cash or in-kind or both. The study results show that input credit is relatively more accessible to VSLA members (13.5 percent) than non-VSLA members (8.2 percent). VSLAs’ elevated savings rates and organized nature make the association more viable and attractive to development agencies and agro-related businesses. Farmers in savings groups expressed greater choice in their inputs purchase than their counterparts who do not use group savings. For all inputs, VSLA members invested an average of GHS 971.79 (\$231.38) compared to their non-VSLA counterparts, who invested an average of GHS 661.85 (\$157.58), ($p=0.037$). Average investments in inputs was relatively higher among male VSLA farmers (GHS 1347.61 / \$ 320.86; with a margin of error of plus or minus 168.21) than male farmers who did not belong to the VLSA (GHS 801.41 / \$ 190.81; with a margin of error of plus or minus 172.82) ($p=0.000$). Among the female smallholder farmers, the average amount invested in inputs was estimated at GHS 853.10 (\$ 203.12) for those who belonged to the savings group with a margin of error of plus or minus 136.34 and GHS 452.53 (\$ 107.75) with a margin of error of plus or minus 101.47 for their counterparts who were not VSLA members ($p=0.001$).

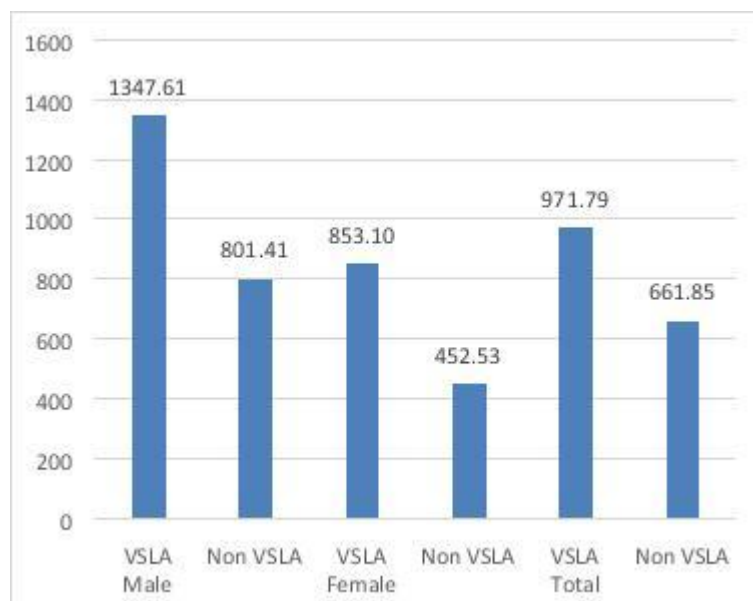


Figure 8: Smallholders' Investment in All Inputs (GHC)

3.3.1 Seed Use and Expenditures

Interviews with smallholder farmers suggest that they made improvements in the use of improved seed. Some outgrowers attributed their enhanced access to and use of seeds to the activities of community input agents, which made inputs readily available in their community, while others mentioned arrangements with input dealers at the regional and district capitals. Farmers emphasized that monies from their VSLA share-outs enhanced their purchasing power to procure improved seed. An OB in Navrongo in the Upper East region stated, “Previously farmers will just go to their sacks and fetch some grains from there and plant, but now we can buy the seeds and plant.” However, the high cost of improved seeds remains a challenge for many farmers.

The study data revealed a significant difference between VSLA and non-VSLA members in their use of certified seeds across all crops ($p=0.035$). Study results showed that 33.9 percent of VSLA members used improved seeds in the past season, compared to 24.2 percent of non-VSLA members. During the same period, 37 percent of VSLA-member farmers reported access to regularly available improved seeds, while 34 percent of their non-VSLA member counterparts reported the same

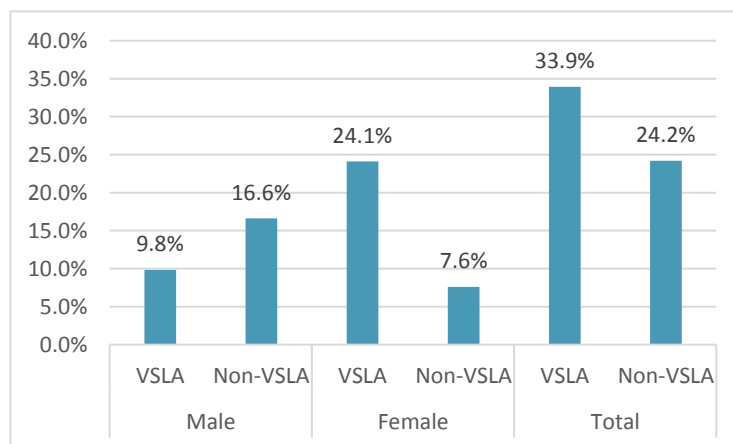


Figure 9. Application of improved seeds

($p=0.623$). Some FGD participants attributed this improvement to arrangements their VSLA made with input suppliers in which the supplier provides seeds to the group, which then redistributes them to members according to their expressed needs.

A total of 48.3 percent of VSLA members reported a greater choice of seeds, compared to 23.4 percent of non-VSLA members ($p=0.007$). The data indicates a significant difference between the proportion of female VSLA members (29.3 percent) who indicated greater access to improved seeds compared to female non-VSLA members (12.4 percent) ($p=0.015$). Also, more male VSLA members (19 percent) reported greater access to improved seeds than male non-VSLA members (11 percent), ($p= 0.027$). However, compared to three years ago, an increased number of both VSLA and non-VSLA members could access improved seeds in their community—the number of VSLA members who reported having access to certified seeds in their community increased by 20.9 percent, from 43 percent to 52 percent, whereas the number of non-VSLA members increased by 13.3 percent, from 45 percent to 51 percent. When asked to rank the quality of improved seeds used in the past season, the majority of VSLA members (53.2 percent) who used an improved seed rated the quality as high, 23.8 percent rated it as medium, and 22.9 percent rated it as low. Among non-VSLA members, 43.7 percent rated the quality of improved seeds as high, 27.1 percent rated it as medium, and 29.1 percent rated it as low. A total of 38.8 percent of female VSLA members rated the quality of improved seeds as high, compared to 12.4 percent of female non-VSLA members ($p=0.002$). However, there was no significant difference between the proportion of male VSLA members (14.5 percent) and non-members (31.3 percent) who rated the quality of improved seeds as high ($p=0.168$).

Major outlets where farmers procured improved seeds included agrodealer shops outside their communities, community input agents, and community agrodealer shops. However, the study data showed a significant difference between the outlets used by VSLA and non-VSLA members in the procurement of improved seeds. Whereas 22 percent of VSLA members indicated community input agents as their major source of certified seeds in the past season, 15 percent of non-VSLA members reported the same. Among male smallholder farmers, only 1 percent of non VSLA members reported community input agents as their major source of seed, compared to 6 percent of their VSLA counterparts ($p=0.016$). Also, 16 percent of female VSLA members and 14 percent of non-VSLA members sourced improved seeds from community input agents in the past season ($p=0.156$). A higher proportion of both groups procured improved seeds from agrodealer shops outside their communities (49.7 percent for VSLA members and 48.7 percent for non-VSLA members). The majority of VSLA members (51 percent) who applied improved seed reported satisfaction with their access to certified seeds (4 or 5 rating on a scale of 1–5), compared to 43 percent of non-VSLA members ($p=0.048$).

The average per farmer expenditure of VSLA members who reported the use of improved seeds in the past season was an estimated GHS 307.74 (\$73.27), compared to GHS 254.01 (\$60.48) for non-VSLA members ($p=0.247$). On average, smallholder farmers with VSLA membership spent GHS 100 (\$23.81) per acre on improved seeds, compared to GHS 79.94 (\$19.03) per acre for non-VSLA members ($p=0.039$). Male VSLA members spent GHS 31.82 (\$7.58), with a margin of error of plus or minus 9.63, per acre on improved seeds, compared to their non-VSLA member counterparts who spent an average of GHS 51.19 (\$ 12.19), with a margin of error of plus or minus 15.80 ($p=0.040$). In contrast, the average expenditure per acre on improved seeds was relatively higher among female VSLA members (GHS 68.20 / \$16.24, with a margin of error of plus or minus 18.75, than non-VSLA members (GHS 28.75 / \$6.85, with a margin of error of plus or minus 10.28 ($p=0.028$).

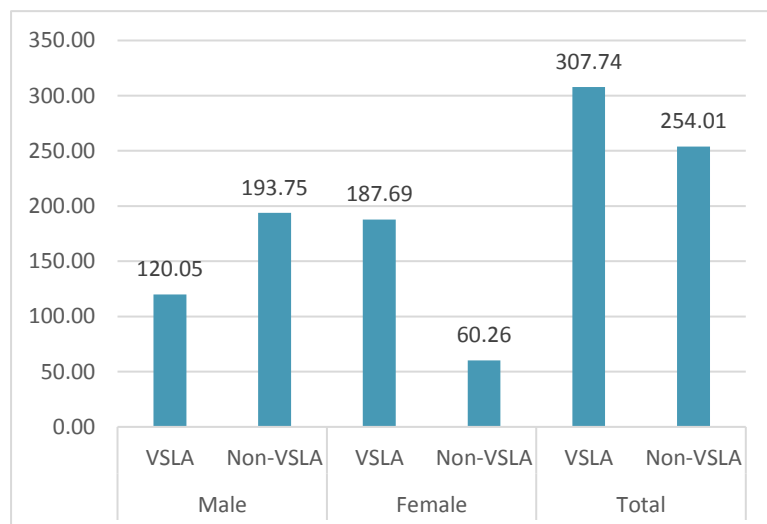


Figure 10. Average expenditure on seeds (GHC)

3.3.2 Fertilizer Use and Expenditures

Discussions with smallholder farmers across the region indicated that some benefited from fertilizer subsidies offered by the Government of Ghana. However, farmers mentioned that the per-farmer entitlement was insufficient, and they still purchased from relatively expensive private input dealers. In regards to fertilizer purchase, non-VSLA members indicated that they perceive that their VSLA member counterparts have an advantage over them, since they gain access to funds during VSLA share-outs at the beginning of the planting season. In an FGD with non-VSLA male farmers in Nakpanzoo, in the Northern region, one farmer stated, “When the season starts you can see some difference between the women in the group and those of us who are not there. They have money and are able to get the money at the beginning of the season so they can buy all the fertilizer and other inputs that they need.” Both VSLA and non-VSLA members mentioned that they received training on appropriate methods of fertilizer application, which increased their productivity and efficiency. In an FGD with some male farmers in Disiga, in the Northern region, one farmer stated, “Now we know that for fertilizer you don’t need to just spread it but you have to dibble it. So with these skills it means efficient use of resources.”

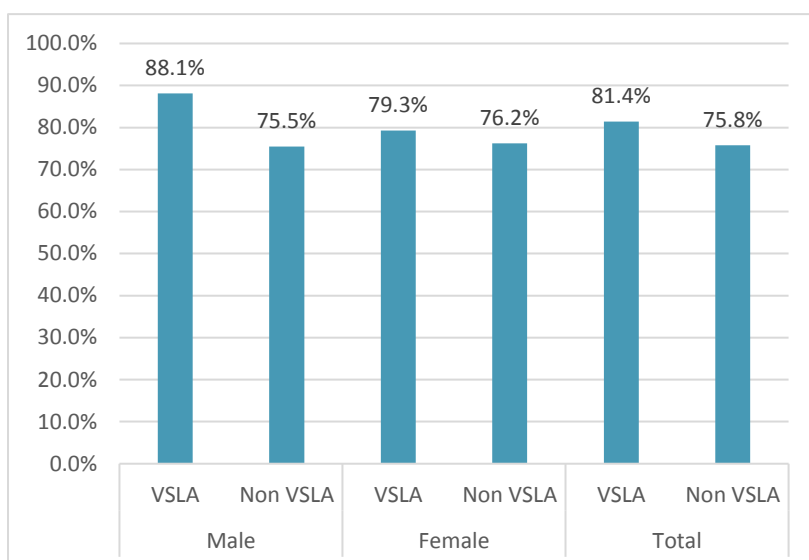


Figure 11: Smallholders' Application of Fertilizer

improving production and efficiency of farmers. Regarding smallholders choice of fertilizer, the majority of farmers in VSLA (54%) report they have greater choice compared to 46% of non VSLA members ($p=0.000$). In the same period, the average quantity of fertilizer applied per smallholder farmer was estimated at 384.50kg for VSLA members and 295.83kg for non-VSLA members ($p=0.048$). The average quantity of fertilizer applied by male smallholder farmers who belonged to the savings group was 511.25Kg compared to 343.16Kg for their non-VSLA counterparts ($p=0.216$). There was a significant difference ($p=0.026$) between the average quantity of fertilizer applied by women with VSLA membership (344.47Kg) and the quantity applied by women who did not belong to the VSLA (224.84kg). The average quantity of fertilizer applied per acre was 123.18Kg/acre for VSLA members and 77.71Kg/acre for farmers who did not belong to the savings group ($p=0.037$). Indeed some farmers reported that they are now able to apply the required quantities of fertilizer since their access to finance has been improved through share out and credit from the VSLA. During an FGD in Buoti in the Upper West region one female farmer said, “At first you will not get money to buy more than two bags of the fertilizer but now you are getting the money and you can buy four or five bags of the fertilizer for the farm and you can buy different types for the first and second applications because you have the money.”

The study showed a significant difference ($p=0.023$) between the quantity of fertilizer applied per acre by female VSLA members (126.33kg/acre) compared to non-VSLA members (89.9 kg/acre). Male VSLA members applied an estimated average quantity of 110.27 kg/acre, compared to 70.82kg/acre for non-VSLA members ($p=0.058$). In regards to quality, 71 percent of VSLA members ranked the fertilizer they



Figure 12: Average Expenditure on fertilizer (GHS)

used as high quality, compared to 69 percent of their non-VSLA counterparts ($p=0.615$). In an interview, a female OB in Daffiel in the Sawla-Tuna-Kalba district emphasized that arrangements with input dealers ensure access to quality inputs. Since this inputs arrangement allows OBs to trace fertilizer by supplier, input suppliers are increasingly mindful of the quality of service they offer to farmers. The majority of VSLA members (59.4 percent) who applied fertilizer were generally satisfied (4 or 5 rating on a scale of 1–

The results show a significant difference in the proportion of VSLA (81.4%) and non-VSLA members (75.8%) in their application of fertilizer in the past season ($p=0.013$). On timely access to fertilizer, there was no significant difference between VSLA and non-VSLA members' as 58% of VSLA members and 56% of farmers who did not belong to the savings group indicated they had timely access to fertilizer ($p=0.707$). Smallholder farmers emphasized that availability of fertilizer at the required time is crucial to

5) with their access to fertilizer in the past season, compared to 55.4 percent of non-VSLA members ($p=0.180$). More than half (57.1 percent) of female VSLA members who used fertilizer were satisfied with their access to the input, compared to 47.6 percent of their female non-VSLA member counterparts ($p=0.025$). Similarly, the proportion of male smallholder farmers who belonged to a VSLA group (65.6%) who reported their satisfaction with access to fertilizer was relatively higher compared to 60.6% of those who were not VSLA members ($p=0.326$).

The average VSLA member spent an estimated GHS 488.38 (\$111.28) on fertilizer in the last season, compared to GHS 465.38 (\$110.80) by non-VSLA members ($p=0.474$). VSLA members spent an estimated average of GHS 148.37 (\$35.33) on fertilizer per acre, compared to GHS 115.85 (\$27.58) by non-VSLA members ($p=0.040$). Women VSLA members spent an estimated average of GHS 145.19 (\$34.57) per acre on fertilizer, with a margin of error of plus or minus 15.92, compared to GHS 114.22 (\$27.19) by female non-VSLA members, with a margin of error of plus or minus 25.73 ($p=0.070$). Also, the average expenditure per acre on fertilizer was relatively higher among male farmers who belonged to the VSLA (GHS 158.46 / \$37.73; with a margin of error of plus or minus 18.89) compared to GHS 116.94 (\$27.84) per acre, with a margin of error of plus or minus 25.30, for their counterparts who did not belong to any savings group ($p=0.044$).

3.3.3 Insecticide Use and Expenditure

The Agricultural Sector of Ghana has been fighting the Fall Armyworm (FAW) since April 2016. FAW devastated several crops, particularly maize. The MoFA provided agrochemicals, particularly insecticides, to smallholder farmers to fight the worm. However, farmers without access to MoFA inputs needed to buy insecticides from private input dealers. Some farmers mentioned that the MoFA did not provide an adequate quantity of insecticide, while other farmers purchased insecticides for other purposes on their farms. Some smallholder farmers, both VSLA and non-VSLA members, previously received training through other community members to properly use insecticide, including when to apply the chemical, how to dress appropriately, and the proper disposal of insecticide containers. For instance, a male farmer in Gowrie in the Upper East Region stated, “ADVANCE has trained some gangs in the community and people consult them on how to spray, the time you spray, how to identify the pest, and the type of chemical to use.”

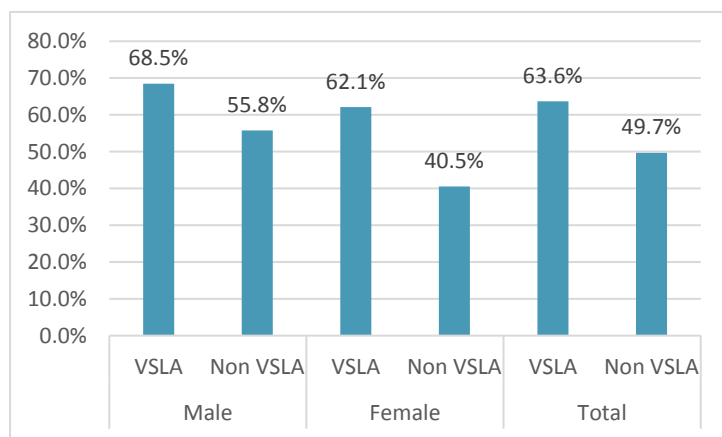


Figure 13: Smallholders' application of Insecticides

The study showed a significant difference in the proportion of VSLA (63.6 percent) and non-VSLA members (49.7 percent) who used insecticide ($p=0.003$). The results also show that VSLA members have increased access to insecticides in their communities. There was a 20.8 percent increase in the proportion of VSLA members who reported having access to insecticides in their community in the last three years, increasing from 53.6 percent to 64.8 percent. The comparable increase in non-VSLA members' access to insecticides rose 3.7 percent, from 58.8 percent to 61

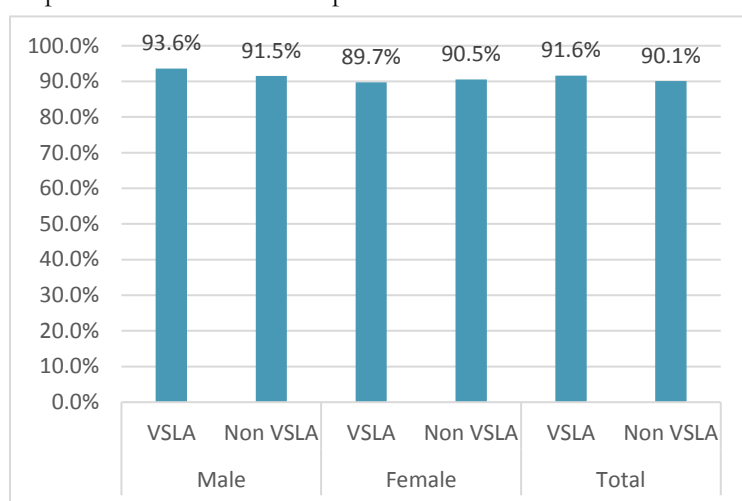
percent. The majority of VSLA members (55.7 percent) reported they had greater choice when purchasing insecticides, compared to 41.5 percent of non-VSLA members ($p=0.008$). When asked to rate the quality of insecticides, 56 percent of VSLA members, compared to 54 percent of non-VSLA members ranked the quality of insecticide as high ($p=0.195$). More than half of VSLA members (52.2 percent) who applied insecticide were generally satisfied (4 or 5 rating on a scale of 1–5) with their access to insecticide, compared to 46.9 percent of non-VSLA members ($p=0.653$). About 50 percent of women VSLA members who applied insecticide were satisfied with their access to the input, compared to 33.3 percent of their female non-VSLA member counterparts ($p=0.038$). Similarly, the proportion of male smallholder

farmers in the VSLA groups (59.1%) who reported their satisfaction with access to insecticides was relatively higher compared to 55.9% of those who were not VSLA members ($p=0.653$).

VSLA members spent an estimated average of GHS 67.84 (\$ 16.15) on insecticides during the past season, compared to GHS 63.48 (\$ 15.11) for non-VSLA members ($p=0.372$). On average, VSLA members spent GHS 19.19 (\$4.57) per acre on insecticides, compared to GHS 16.72 (\$3.98) per acre for non-VSLA members ($p=0.470$). Female smallholder farmers who belonged to the VSLA expended an average of GHS 18.41 (\$ 4.30) per acre on insecticides, with a margin of error of plus or minus 2.43, compared to their non-VSLA counterparts with an average of GHS 14.46 (\$ 3.38) per acre, and a margin of error of 2.72 ($p=0.095$). There was no significant difference between male farmers in the VSLA and those who were not members in terms of their average expenditure per acre on insecticides, with an average of GHS 17.23 (\$ 4.03) per acre, with a margin of error of 1.40, for those in the VSLA and GHS 17.64 (\$ 4.12), with a margin of error of 2.84, for the non-VSLA member ($p=0.631$).

3.3.4 Weedicide Use and Expenditure

Weedicide use has become an integral part of Ghanaian agricultural activities. Smallholder farmers emphasized that access to input dealers has enhanced their weedicide application. Arrangements made by



VSLAs also enhance smallholder farmers' access to and use of weedicides. During a FGD with women farmers, one farmer noted that, "Using the weedicide is very helpful and you have to get it on time. The benefit in the VSLA is you will get the weedicide when you receive your money, before you will take the money home and end up using it for some other things."

Figure 15. Smallholder application of weedicide

The availability and use of weedicides yield direct results in time savings and skill development in the use of agrochemicals, especially in spraying. The study revealed that the time-saving benefits of weedicides reached all members of a farming household, and young men benefited from the development of spraying skills.

Among all the inputs, weedicide showed relatively higher usage among smallholder farmers across the regions. There was no significant difference in the proportion of VSLA and non-VSLA members who applied weedicide, although the percentage of VSLA members (91.6 percent) who applied weedicide is slightly higher than non-VSLA members (90.1 percent) ($p=0.682$). However, regarding their choice of inputs when buying weedicides, the majority of VSLA members (54 percent) indicated they have a greater choice compared to 45 percent of non-VSLA members ($p=0.005$). The study showed a significant difference ($p=0.047$) in the proportion of women VSLA members (51.7 percent) who reported greater access to weedicides than those who did not belong to the VSLA (38.1 percent). A total of 62.1 percent of male VSLA members reported they have greater access to weedicides, compared to 48.9 percent of their non-VSLA member counterparts ($p=0.002$).

The majority of VSLA members (68 percent) and non-VSLA members (71 percent) rated the weedicides used to be high quality ($p=0.351$). Farmers reported their major weedicide sources to be agrodealer shops outside their community, agrodealer shops in their communities, and community input agents.

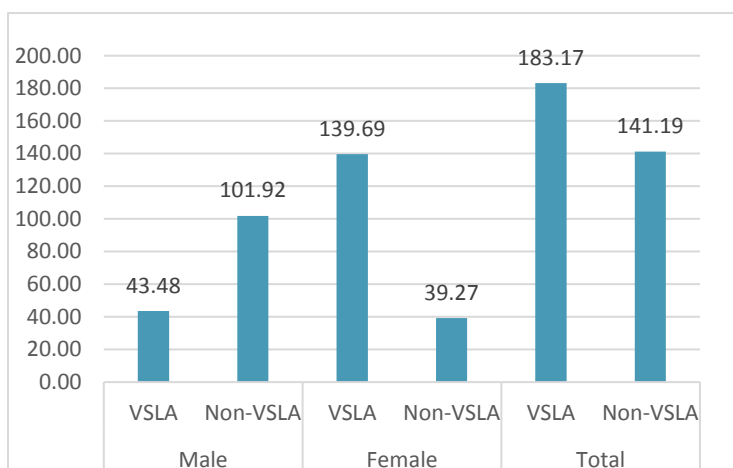


Figure 16. Average expenditure on weedicide (GHC)

A larger percentage (25.6 percent) of VSLA members indicated community input agents as their major source of weedicides in the past season, compared to 13.9 percent of non-VSLA members ($p=0.057$). A higher proportion of both VSLA and non-VSLA members procured weedicides from agrodealer shops outside their community (43 percent of VSLA members and 47 percent of non-VSLA members). The majority of both VSLA (58 percent) and non-VSLA members (53.6 percent) were generally satisfied (4 or 5 rating on a scale of 1–5) with their access to weedicides ($p=0.691$). The proportion of female VSLA members (57.2 percent) who indicated their satisfaction with weedicide access was relatively higher than non-VSLA members (44.8 percent) ($p=0.477$). A greater proportion of male VSLA members (60.7 percent) reported their satisfaction with access to weedicides, compared to 59.5 percent of non-VSLA members ($p=0.642$). VSLA members spent an average of GHS 177.89 (\$42.35) on weedicide during the past season, compared to GHS 141.19 (\$33.62) for non-VSLA members ($p=0.480$). VSLA members spent an average of GHS 41.92 (\$9.98) on weedicide per acre, compared to GHS 27.95 (\$6.65) by non-VSLA members ($p=0.063$). Male VSLA members spent an average of GHS 33.83 (\$8.05), on weedicide per acre, with a margin of error of plus or minus 4.29, compared to GHS 33.83 (\$8.05), by non-VSLA members, with a margin of error of plus or minus 4.80, ($p=0.246$). Women VSLA members spent an average of GHS 44.47 (\$10.59) on weedicide per acre, with a margin of error of plus or minus 11.52 compared to GHS 25.66 (\$6.11) by female non-VSLA members, with a margin of error of plus or minus 5.02 .01 ($p=0.046$).

3.3.5 Access to and Satisfaction with Mechanized services

Discussions with smallholder farmers and some OBs underscored that provision of mechanical tillage is crucial to improving production and efficiency of farmers. Most smallholder farmers reported that VSLAs enhanced their access to tractor services, particularly for ploughing. Farmers accounted for this by citing various factors, including acquiring ploughing services with monies from their VSLA share-out, VSLAs making strategic arrangements to provide tractor services to members. For instance, in the Kintampo area in Brong Ahafo region, VSLA leadership sourced a tractor from a private service provider to provide services to VSLA members. The VSLA charges nominal fees to the

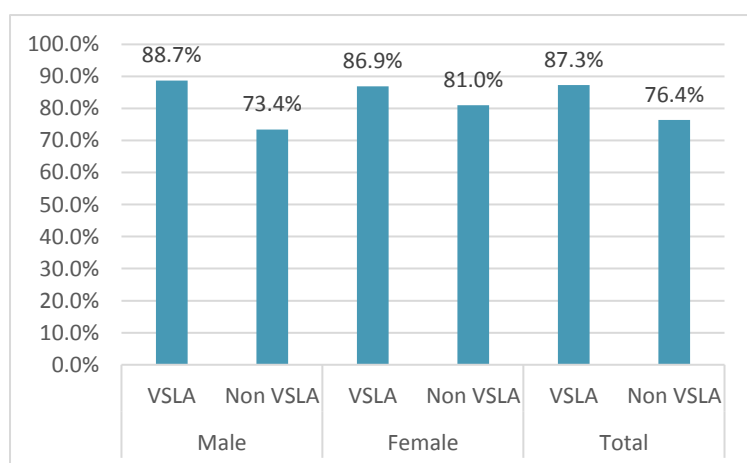


Figure 17. Smallholders' utilization of mechanization services

cost, which later get added to the group's account as a benefit to the association. Some outgrowers attributed their enhanced access to tractor services to grants provided to their OBs by the project, making tractor services readily available in their communities. These arrangements afforded smallholder farmers the opportunity to plant on time. During FGDs, both male and female smallholder farmers emphasized that a key challenge to productivity, especially in the three northern regions, is securing tractor service

during the period when they need to work their land. In an interview, some non-VSLA members asserted that they observed changes in VSLA members' access to tractor service. A non-VSLA member in Buoti in the Upper West Region stated, "We have seen that the women in the group are not having tractor challenges now and it is easy for them to get the tractor to plough on time than those who are not in the group. If the season starts Yahaya [an OB] will go and plough their land first before he will go and plough other people's farm because we do first come first serve, but we also give priority to those who can pay cash immediately."

Notwithstanding the improvement in farmers' access to tractor services, the mechanization level is generally low across the regions. Most smallholder farmers can only dream of using combine harvesters, threshers and drying services. To emphasize this point, one male VSLA member in Bui, in the Upper East region, stated, "Currently my rice is still on the field and we are waiting for the combine up till now. If we can get that and the thresher, we can harvest and the thresher will just thresh for us but now it's not available."

The study showed a significant difference in the proportion of VSLA members who used tractor service compared to their non-VSLA member counterparts ($p=0.001$). Study results show that 87.3 percent of VSLA members used tractor services, compared to 76.4 percent of non-VSLA members. Despite the increase in access to tractor services, smallholder farmers still report a high farmer-to-tractor ratio. The majority of VSLA (73.8 percent) and non-VSLA members (64.1 percent) reported being very satisfied or

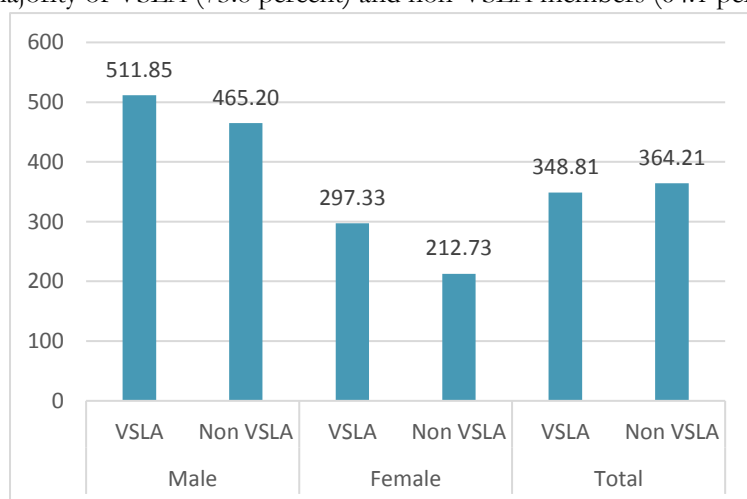


Figure 18: Average Expenditure on Tractor Services (GHS)

completely satisfied (rating of 4 or 5 on scale of 1–5) with the tractor services available to them ($p=0.022$). Farmers cited timely access to tractor services, quality of service received, and flexibility in payment as their reasons for satisfaction with tractor services. VSLA members spent an average of GHS 348.66 (\$ 83.01) on tractor services, compared to GHS 368.62 (\$ 87.77) for non-VSLA members ($p=0.224$). Respondents reported using tractor services for ploughing (84.8 percent), threshing (12.4 percent), harrowing (1.5 percent), carting (1 percent), and planting (0.3 percent), with no

difference between VSLA and non-VSLA members. However, the few smallholder farmers who reported using tractors in planting were VSLA members in the Upper East and Northern regions.

"Previously, you would have to either plough on credit or you may not have the money to plough at all. And sometimes, before you will get money for the tractor service, the farming season would have passed, which means you would have missed the rains and you are better off not farming. But currently with the VSLA, the share-out is done just before the farming season, so you can have your money and plan for the ploughing services, inputs, and everything, and this has helped us a lot."

- A female VSLA member in Northern region

3.4 Application of Improved Practices and Crop Yields

This section deals with technologies and their level of application among the surveyed farmers. Most respondents confirmed that they received some training from USAID’s ADVANCE project on technologies, included pest management, soil-related technologies, crop genetics, and improved management practices. The results show a significant difference in the adoption of all technologies between VSLA member farmers and non-members. This section also focuses on the differences in crop yield between VSLA and non-VSLA members.

3.4.1 Application of Improved Practices

Among the technologies considered by the study, respondents applied pest management at relatively higher rates than other technologies. Across all the sampled farmers, the majority (77 percent) indicated that they applied pest management technology. A total of 92.7 percent of VSLA members applied pest management technologies, compared to 91.8 percent for non-VSLA members ($p=0.670$). Similarly, a relatively higher proportion of female VSLA members and male non-VSLA members applied pest management technology than their counterparts, although the difference was not significant (see Table 4). A larger proportion of VSLA members (95.1 percent) applied a soil-related technology, compared to 65.4 percent of their non-VSLA counterparts ($p=0.000$). Among female VSLA members, 94.5 percent indicated they applied a soil-related technology, compared to 70.2 percent of their non-VSLA counterparts ($p=0.001$). However, the proportion of male non-VSLA members who applied a soil related technology was 62.2 percent, compared 97.3 percent of their VSLA member counterparts ($p=0.000$). The study showed a significant difference between VSLA and non-VSLA members in their use of improved seeds across all crops ($p=0.035$). Results of the study showed that 34 percent of VSLA members used improved seed in the past season, compared to 24 percent of non-VSLA members. The proportion of female VSLA members who used an improved seed was 31.7 percent, compared to 19 percent of their non-VSLA member counterparts ($p=0.048$). The proportion of male VSLA members who used improved seed was 41 percent, compared to 27.7 percent of non-VSLA member counterparts ($p=0.012$).

Table 4. Application of improved technologies

Technologies	Male (%)			Female (%)			Total (%)		
	VSLA	Non-VSLA	P-Value	VSLA	Non-VSLA	P-Value	VSLA	Non-VSLA	P-Value
Crop genetics	41.0	27.7	0.012	31.7	19.0	0.048	33.9	24.2	0.035
Pest management	95.7	92.6	0.164	91.7	90.5	0.503	92.7	91.8	0.670
Soil related	97.3	62.2	0.000	94.5	70.2	0.001	95.1	65.4	0.000

The study further assessed farmers’ application of management practices, including recordkeeping, pricing and costing, farm crop budgeting, and market price updates. Among all the management practices, farmers adopted market price updates at relatively higher rates (75.2 percent), followed by pricing and costing (43 percent), recordkeeping (25 percent), and farm crop budgeting (18 percent). A relatively larger proportion of VSLA members applied these improved farm business management practices than non-VSLA members, except for market price updates, applied by 42 percent of non-VSLA members, compared to 33.2 percent of VSLA members. The study showed a significant difference in the proportion of VSLA and non-VSLA members who applied farm crop budgeting and recordkeeping. A total of 18 percent of VSLA members applied recordkeeping in their farm operations, compared to 7.4 percent of non-VSLA members ($p=0.000$). Farmers shared that their application of improved practices was enhanced by their participation in training programs organized by USAID’s ADVANCE project. For instance, most farmers in the north referenced participating in the “sell more for more” training and confirmed that their VSLA groups encouraged adherence to these principles, increasing their incomes. Also, the difference in their adoption of farm crop and budgeting was significant, at one percent.

During FGDs VSLA members confirmed that they can buy and apply improved technologies as a result of their improved access to credit and their savings with the VSLA. For instance, some FGD participants emphasized that their improved savings culture helps them to meet their households' basic needs, and to allocate financial resources to improved technologies, particularly those that are capital intensive. Some members mentioned that VSLA membership enhanced their access to purchased inputs, while others mentioned that credit and savings from VSLAs enhanced their ability to apply labor intensive practices such as row planting. The experience of a woman farmer in Bui, in the Upper East region, illustrates the importance of VSLA share-outs and credit services for the application of improved practices. She stated,

“Looking at me, you can see that I am already weak and cannot do all the work by myself. They [ADVANCE] trained us on how to do row planting in rice which we did not know initially, but this requires that you hire people. So without the VSLA contribution I will not be able to hire labor for that and buy the inputs too.”

3.4.2 Crop Yields

Qualitative interviews with VLSA members across the project's regions suggests that VSLA membership benefits translate into enhanced productivity. Smallholder farmers participating in VSLAs reported that this is due, in part, to their application of improved technologies facilitated by savings and loans from their groups. Other farmers cited increased access to timely mechanization and input services, due to special arrangements among their VSLA groups and input dealers and tractor service providers. Emphasizing this point, most farmers attested to the fact that they have been able to increase their farm sizes due to their enhanced access to finance and productive resources. In an FGD, one female participant noted that, “We used to harvest just about three and half bags [350kg] of maize on an acre but now you can get at least seven [700kg] or eight bags [800kg] on an acre because you will get money for the seed, buy the

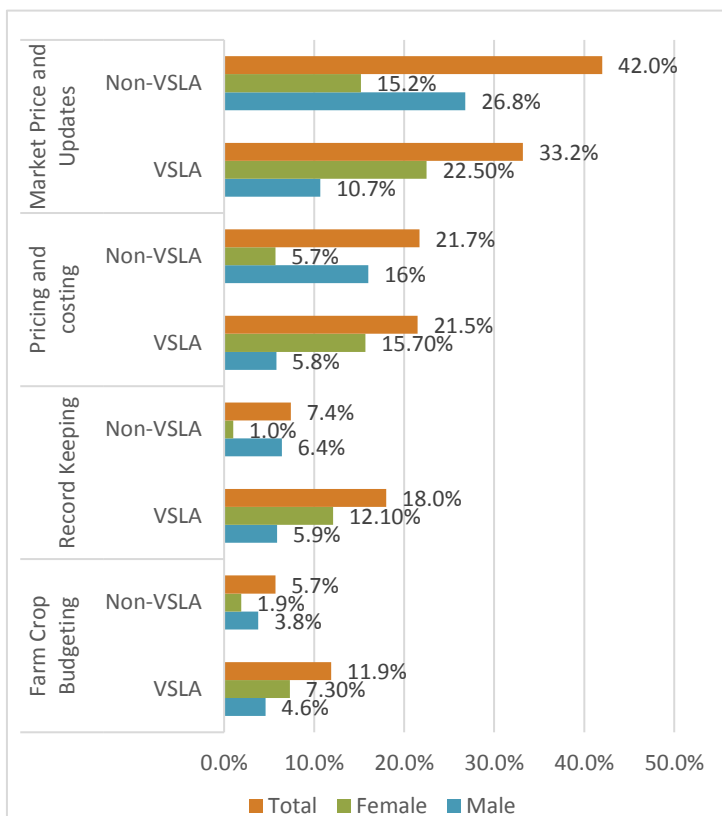


Figure 19: Application of Management Practices



Bagging of maize at Ahyiyem in the Brong Ahafo region

fertilizer, and get the tractor on time as well.” However, farmers also highlighted challenges, including high input prices, including fertilizer prices, the inability to easily access government coupons for subsidized fertilizers, inadequate machinery, limited access to tractor services, and limited options for affordable storage facilities.

Indeed, the study results show a significant difference between the yields of VSLA member farmers and their non-member counterparts. In both the maize and soy value chains, there were significant differences in yield estimates for smallholder farmers who participated in savings groups and those who did not. VSLA members had an estimated average maize yield of 1,454.21 kg/acre in the 2017 season, compared to 1,315.74 kg/acre for non-VSLA members ($p=0.047$). Similarly, the average maize yields of female VSLA members were relatively higher than their non-VSLA member counterparts. Female VSLA members had an estimated average maize yield of 1395.51Kg/acre, compared to 1145.45Kg/acre for non-VSLA members ($p=0.076$). Similarly, male VSLA members had an average maize yield of 1640.08Kg/acre, slightly higher than that of their non-VSLA member counterparts, who had estimated yields of 1429.26Kg/acre ($p=0.043$). Within the same period, VSLA members reported higher average

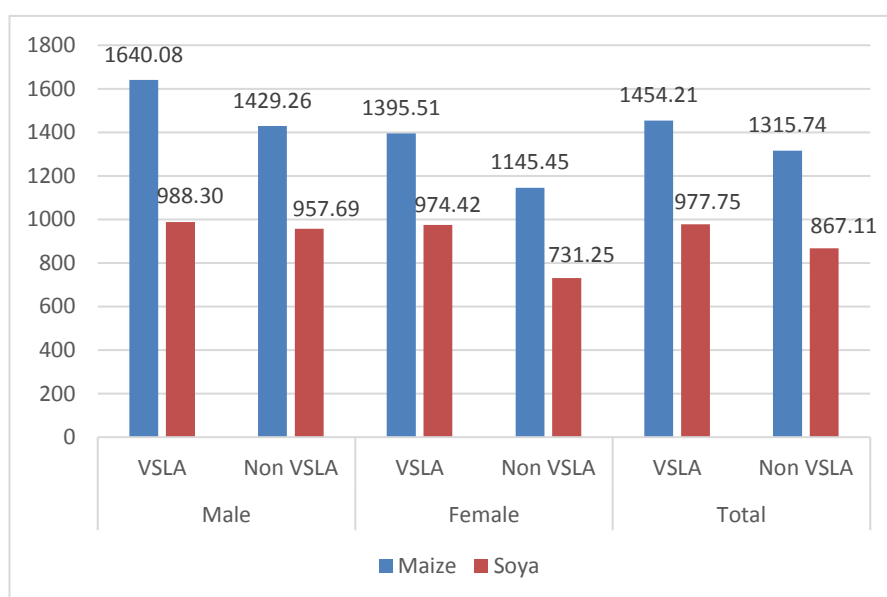


Figure 20. Average crop yields (kg/acre)

soy yields (977.75 kg/acre) than non-VSLA members (867.12 kg/acre) ($p=0.048$). The average soy yields of female VSLA members (974.42 kg/acre) was significantly higher than their non-VSLA member counterparts (731.25 kg/acre) ($p=0.020$). Similarly, the average soy yield of male VSLA members was 988.30kg/acre, compared to 957.69kg/acre for their non-VSLA counterparts ($p=0.765$).

3.5 Female Agency

This section provides information related to women smallholder farmers’ decision making within households and groups, as well as how VSLA membership increased female members’ agency to be more socially and economically active. Many of this study’s indicators were adapted from the Women’s Empowerment in Agriculture Index (WEAI). The WEAI is a multidimensional tool designed to examine women’s agency², inclusion, and empowerment in agriculture (Alkire, et al., 2013).

3.5.1 Women’s Participation and Decision-Making in Groups

The study found a significant difference between VSLA and non-VSLA women in terms of group membership ($p=0.000$). A total of 15.8 percent of non-VSLA women indicated membership in any group. In contrast, apart from their VSLA memberships, 19 percent of female VSLA members maintained memberships in other groups (47 percent in other social groups, 22 percent in producer groups, 16.7 percent in trade and business associations, and 13.9 percent in other credit or microfinance groups). Membership and participation in groups is critical for women’s access to information, services, and social capital or networks. The main expectations of women joining VSLA groups included access to finance (95.6 percent), inputs (54 percent), information (43.3percent), and markets (28.5 percent). The

² Agency in this context is the ability of women to freely participate in group activities. It is also about a woman being able to act for herself and for others.

majority of women in VSLAs (98 percent) indicated they were happy and willing to continue their membership, and 71 percent reported plans to increase their savings with the group. VSLA membership helped women strengthen their resilience. Women members ranked increased access to loans (65.7 percent) as the most important benefit they receive through their memberships, followed by access to emergency support (63.6 percent), greater access to inputs (57.3 percent) and acquisition of capital assets (31.5 percent). During FGDs, participants mentioned the social benefit resulting from their VSLA membership. Emphasizing the benefits of VSLA membership, one female VSLA member in the northern region said,

“I can say there is an improvement in my access to credit now. Previously, when I was not in the group I will just be thinking of how to get money, you will go to someone and tell the person all what is bothering you and after all this you will still not get the money. So this VSLA has taken away that disgrace where you will have to narrate your situation to people who at the end cannot help you. I can boldly say that my family will not go hungry and I am happy.”

Female non-VSLA members highlighted the major reasons they do not belong to an association, including the inability to raise entrance fees or share contributions, an inconvenient group meeting location, and their husbands’ objection to VSLA membership. Others mentioned a lack of interest or the lack of time for weekly meeting attendance. In most of the communities visited, community members’ growing desire to join VSLAs was evident. This growing interest resulted in the formation of new groups, often facilitated by existing VSLAs established by USAID’s ADVANCE project.



Share out by VSLA group in Yamah community in West Mamprusi with

Regarding decision-making power in VSLAs, most women report they have a high level of input in group decision making. When asked, “*How much input do you have in making decisions in the group?*” the majority of women (59.4 percent) in VSLAs indicated they had a say in all the group’s decisions.

3.5.2 Women’s Comfort with Public Speaking

Comfort in public speaking is critical for rural women to represent themselves and others. Overall, women in VSLAs reported higher levels of comfort in public speaking than their non-member counterparts, with non-VSLA members reporting relatively higher levels of discomfort on all issues. During FGDs and informal discussions, most women confirmed that they recognize their husbands and other male counterparts as lead persons in public discourse, in conformity with their culture. However, the exposure that women receive as VSLA members encourages them to become more assertive. The gap between VSLA and non-VSLA women is highest when protesting misbehavior of those in authority (i.e., in terms of arguing issues with their male counterparts or persistently seeking clarifications and not being docile), where 51.7 percent of women VSLA members and 26.2 percent of non-VSLA members report feeling somewhat to very comfortable (a score of 4 or 5 on a scale of 1–5) ($p=0.034$), and 45.3 percent of non-VSLA women expressing high levels of discomfort (score 1 or 2), compared with 26.2 percent of those with VSLA membership. During

FGDs, some women mentioned exposure to training programs that enhanced their assertiveness, and that they can now share their opinions at community meetings. Comfort when speaking publicly is important for female farmers so that they can speak out and negotiate on their own behalf when discussing issues that directly affect them. For example, women in Zorbisi, in the Upper East region, mobilized to negotiate a deal with bank officials who were holding their monies.

3.5.3 Women's Decision Making within Smallholder Farmer Households

Decision-making Input into Productive Activities

In Ghana, men are traditionally identified as the main decision makers in production and frequently control productive resources such as land, labor, and capital (Akugugu et al., 2012). In this section, we compare female VSLA and non-VSLA members' decision-making in regards to production activities. Generally, women had low involvement in decision-making activities about production because of the local tradition that recognizes men as figureheads and principal decision makers (see section 3.5.2 above). However, women in VSLA groups have proportionately higher decision-making input than those who do not belong to VSLAs, except in own wage or salary employment, where non-VSLA members report relatively higher decision-making input.

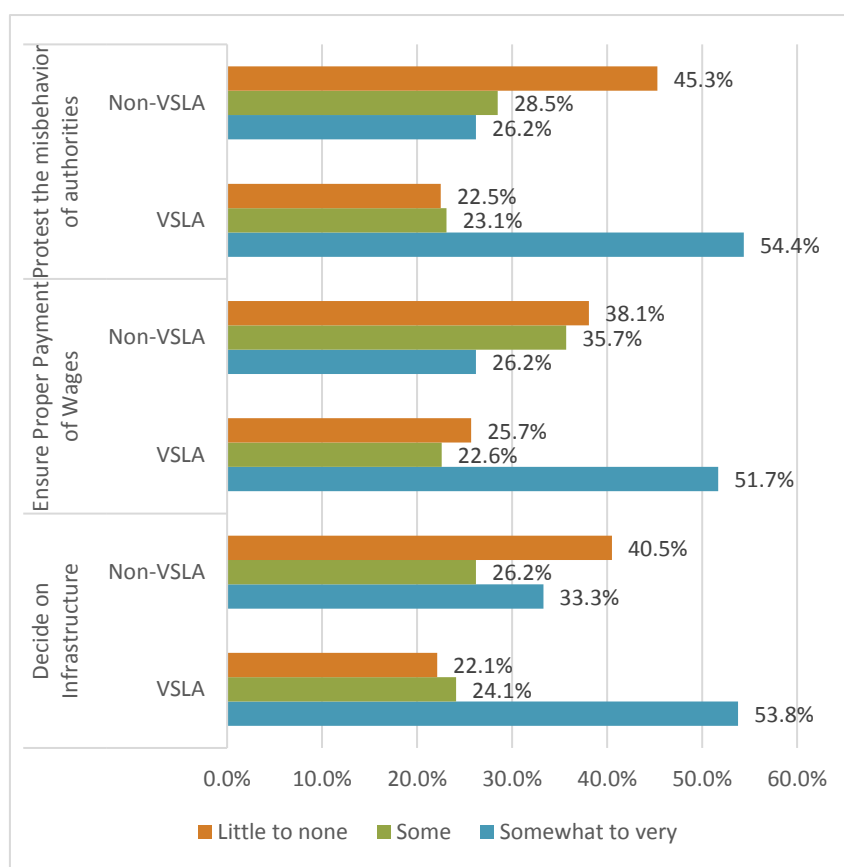


Figure 21: Comparison on comfort level between VSLA and Non-VSLA women when speaking in Public

Table 5. Comparison of female farmers who report decision making on productive activities

Activity	VSLA			Non-VSLA		
	Male head/husband (%)	Female head/Wife (%)	Joint (%)	Male head/husband (%)	Female head/Wife (%)	Joint (%)
Ag. production	29.7	14.5	55.8	36.8	10.5	52.7
Inputs to buy for ag. Production	29.7	17.2	53.1	42.0	12.3	45.7
Types of crops to grow	24.1	20.7	55.2	36.8	15.8	47.4
Marketing of crop produce	17.2	29.7	53.1	26.3	22.8	50.9
Raising Livestock	42.0	11.7	46.3	40.4	8.7	50.9
Non-farm business activity	25.5	22.8	51.7	28.0	15.8	56.2
Own salary or wage employment	20.7	26.9	52.4	26.3	29.8	43.9

Decision on Household Expenditure

Women generally reported higher joint decision making about both major household expenditures (such as the purchase of a refrigerator, a motor bike, or a TV, etc.) and minor household purchases (such as food for daily consumption or other household needs), although women in VSLA groups reported proportionately higher sole decision-making power in both major (14.5 percent VSLA women; 8.8 percent non-VSLA women, $p=0.047$) and minor (25.2 percent VSLA women; 17.9 percent non-VSLA women, $p=0.056$) household expenditure. During FGDs, some women VSLA members mentioned an improvement in their input into household decisions compared to before they joined the VSLA, which they attribute to their greater contribution to household expenditures, leading them to become more active in household decision making. For example, one female VSLA member noted, “When we did the share-out and I sent the money to the house, and my husband saw the money, then we used it for our girl’s school fees and now he has even joined the group. Now, anything he does he will consult me, my wife what should we do but first those things were not there, whatever he do you just have to take it like that. Whether you like it or not, because you cannot contribute you just have to take it like that.”

Other women shared similar experiences, particularly in the northern regions.

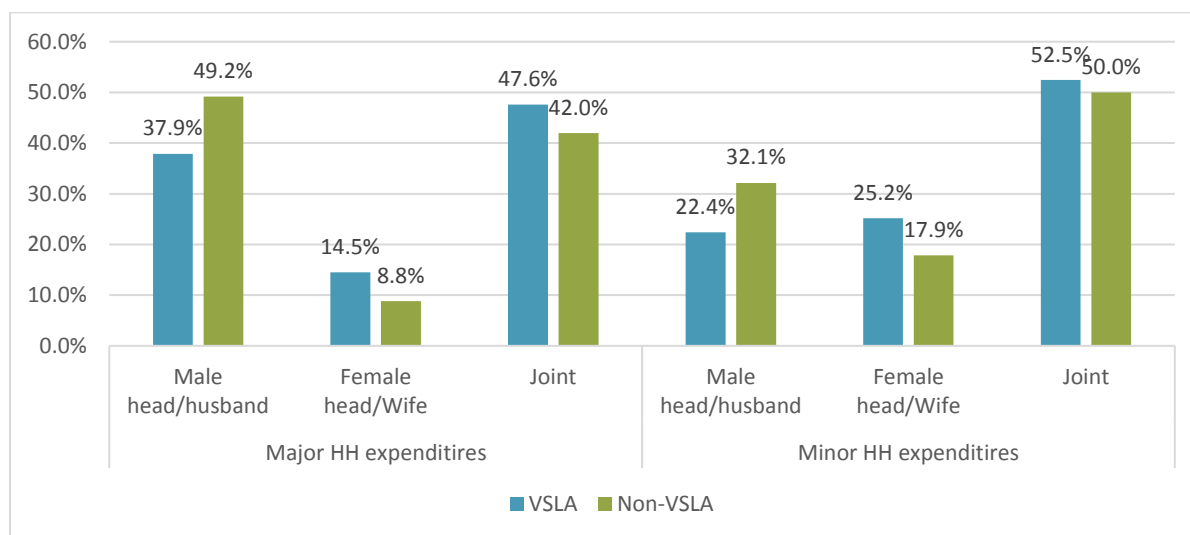


Figure 22. Decision making on household expenditure between VSLA and non-VSLA women

3.6 Sustainability of VSLAs

The study explored the sustainability of VSLAs, especially in light of the end of USAID’s ADVANCE project. During the qualitative gathering process, the majority of VSLA members and leaders emphasized a sense of optimism that their groups will thrive and grow. This belief is attributed to their understanding of VSLA concepts, the capacities they developed while operating their associations with little or no challenges. They are also strongly motivated by the individual benefits derived from being a member.

During a FGD in Disiga, in the Northern region, VSLA members described the mutual trust developed among members as a reason their association will continue. Others shared that their group developed an excellent security arrangement to keep the ‘boxes’ safe, and that they will encourage more people in the community to form groups and register as VSLAs.

A male respondent in Disiga shared, “Who does not like progress in his or her livelihood or occupation. Because of the training we received from VSLA in row planting, fertilizer, and weedicide application, my maize yields which averaged two bags per acre, has now increased to 10 bags. I am now able to finance my children’s education.”

Some of the groups have also developed links to banks and NBFIs. The respondents emphasized their confidence that networking with established financial institutions will help them sustain their groups when the USAID's ADVANCE project ends.

Currently, VSLA groups hold a complete share-out arrangement at the end of every cycle. However, many respondents agree that VSLAs should consider retaining some of members' share-out monies to build the group's capital base. However, they requested more training to handle the potential complexities that would be introduced by the new system.

“If your father dies that does not mean you cease existing. But rather you take up whatever you have been taught and make a better life with it. We are praying the Project comes back, but if they don't come back our rgoups will continue to operate. We will go by what ADVANCE has taught us for about four years now and we will teach those who are not in the group.” – A Female VSLA Executive in Upper West Region

4.0 KEY OBSERVATIONS

The key observations made during the study have been summarized under the five research hypotheses as follows:

Individual money savings are higher among VSLA members than community members who do not use any group savings scheme.

- The average savings of VSLA members was GHS 829.71 (\$197.55) in 2017. Within the same period, non-VSLA members saved an average of GHS 1,109.03 (\$264.05).
 - During the same period, 76.9 percent of VSLA members made savings, compared to 24 percent of non-VSLA respondents.
 - The savings culture of VSLA members is improved by their membership in the association; other members expose them to engagements with development organizations and agents that emphasize the importance of savings.
 - VSLA members are motivated to save at higher levels because more savings translates into better access to credit and other benefits.
 - Paying for emergency and family needs, such as children's school fees and medical bills, motivated members to save.
1. There is a positive relationship between individual VSLA savings and the amount of money invested in agriculture and other livelihood activities, and socioeconomic needs.
 - There is a positive correlation (correlation coefficient= +0.562, significant at 1 percent level) between individual savings and the amount of money invested in agriculture.
 - Investment in agriculture includes tractor services, hiring farm laborers, and the use of inputs like fertilizer, certified seeds, and agrochemicals. To secure tractor services, VSLA leadership (mostly in the south) source tractors from a private service provider, and members are serviced. The leadership adds nominal fees to the cost, and the funds are later added to the group's account. Others (in the north) procured tractors services from an OB to service members, who pay from credit they accessed from the group.
 - Paying for school fees and health insurance bills were other socioeconomic needs mentioned by respondents.
 2. Organization of input sales during share-out increased the investment in and use of agricultural inputs by members.
 - VSLAs have accepted the use of organizing input sales after share-out. For example, in Kintampo area, VSLAs arranged for an input dealer from Techiman, known as Wofa Addo, to display a variety of inputs in the communities. In the Swala-Tuna-Kalba area, input dealers come mainly from Wa, including Alhaji Antika, to sell to members. One respondent emphasized the advantages of this arrangement, including that inputs are brought to farmers' doorsteps, they can form a relationship with suppliers, the system promotes easy traceability, and it also ensures timely supply and quality of inputs.
 - The inputs supplied through this system included wellington boots, cutlasses, agrochemicals, and fertilizer. Input suppliers gave items directly to the VSLAs, which then distributed inputs to members according to their expressed need. Some VSLAs made arrangements for members to pay in cash or in-kind or both.
 3. Increased savings from VSLAs facilitated the adoption of new ideas and improved technology and practices.
 - Respondents confirmed that, as a result of their improved access to credit because of their VSLA savings, they can buy and use improved seeds, fertilizers, and agrochemicals.

- As their VSLA savings enhanced their creditworthiness with input dealers, VSLA members can buy these inputs when needed and apply them as required.
 - Increased savings have made VSLAs viable and attractive to many development agencies, which provide them with training on improved cultural practices and introduce them to technologies.
4. VSLA membership increases the agency of female members and encourages them to be more socially and economically active.
- Assertiveness of women members has been enhanced; they are able to publically share their opinions at community meetings.
 - VSLA members have taken on increased leadership roles that are strategic to women's well-being; for instance in Zorbise, VSLA leadership mobilized women whose monies were supposedly locked up with GN Bank to negotiate a deal with bank officials.
 - Some women members have investments in alternative livelihoods (e.g., petty trading, retail trading in agricultural commodities, and food vending) that have led to increased women's incomes.
 - Women make more financial contributions to their families' development, including payment of school fees, health insurance bills, and acquisition of family assets such as bicycles.

It is worthy to note that most communities experience a spillover effect of the positive effects of the VSLAs. Many smallholder farmers who did not initially participate in the intervention have come together and formed groups independent of USAID's ADVANCE project involvement. This spillover effect has positive implications for VSLA sustainability.

5.0 CONCLUSION

The overall study objective was to assess the impact of VSLAs on smallholder investments in agriculture in general, in crop production, and application of new and/or improved practices to improve yields and incomes. The study confirmed that VSLAs significantly improved smallholder farmers' investments and application of improved technologies. The respondents indicated that this has led to improved living conditions among smallholder farmers, especially women who are VSLA participants, in the areas of child education, health and nutrition, and investment in alternative livelihoods, among others. The study also confirms the sustainability of the project's innovative approach linking VSLAs to agricultural input dealers. This is grounded in the mutual trust among members, VSLA members' well-developed understanding of the concept, and the benefits derived from the linkages.

Finally, VSLA membership enhanced women's participation in decision making at the community and household levels. Women members are empowered to act on behalf of protecting their wellbeing and that of other women and children.

6.0 LESSONS LEARNED AND RECOMMENDATIONS

R Lessons Learned

VSLA impact on rural-urban migration. VSLAs provided opportunities in agriculture and enhanced options in alternative livelihoods, including petty trading. Qualitative evidence from the field indicated that the presence of VSLAs contributed to slowing down the north-south migration, as well as rural-urban migration in general. In some cases, young people find employment as farm laborers within their communities, who otherwise may have moved from rural areas to the south to find gainful opportunities. Other youth can now continue their education beyond basic education to secondary and tertiary levels because their parents are able to afford school fees as a result of VSLA membership. The communities participating in this study attributed these developments to the VSLA model.

Social capital. The VSLAs have enhanced its members' horizons and awareness of community development through self-help social interventions. It empowered members, especially women, to become active participants in social activities in their communities, and advocacy channels for other women. The VSLAs serve as reliable social security for their members, who fall back onto them in times of need, including for funeral support, marriage, health, and other social needs. Indeed, VSLAs provide a platform for networking in and among communities, further boosting and enhancing smallholder farmers' quality of life.

VSLA and productivity. As a result of VSLA membership, many members' agricultural production increased and yield more than doubled. These improvements can be attributed to VSLAs' facilitation of smallholder farmers' access to credit to purchase essential agriculture inputs, including fertilizer, improved seeds, access tractor services, and hired labor.

'Compulsory' savings. Smallholder farmers in study communities had knowledge about savings and some belonged to credit associations, but many were not adequately motivated to consistently make regular contributions or savings. VSLAs moved their members beyond this threshold, motivating them with easy access to credit and the share-out. Many members express their satisfaction with the transparency and participatory nature of the processes involved. Members and non-members describe the importance of the 'compulsory' savings that are collected on a weekly basis. In fact, this is transforming the culture of saving in the project communities and beyond.

Risk reduction among OBs. Membership in a VSLA enhances the creditworthiness of smallholder farmers because they have easy access to credit and are therefore able to afford the application of improved technologies leading to increased productivity. These developments significantly reduced risk among OBs, who willingly extend credit lines to these farmers and may accept cash or in-kind repayments.

Village-level agri-input agents (VAAs). The project's facilitation of the formation of community input agents is a very positive development for increased and sustained application of improved technologies. The enhanced purchasing power of VSLA members make the CIA concept feasible, increasing the chance that it will be sustained in the future.

Recommendations

The following recommendations are based on the study's key findings, including observations and lessons learned:

Access to VSLA 'Boxes.' With VSLAs becoming increasingly accepted among smallholder farmers, and non-members willing to come together to constitute VSLA groups, new groups should have easy access to VSLA toolkits and access to capacity building to set up their associations. Peer coaching and experience sharing must also be facilitated among the groups, particularly related to the safety of members' contributions and conflict management. This will further contribute to the sustainability of VSLAs.

Enhancing linkages with formal financial institutions. More frequent engagement between VSLAs and formal financial institutions should be promoted, particularly to build VSLAs' trust and confidence in these institutions. VSLA members generally consider procedures by formal financial institutions to be "cumbersome." These formal financial institutions need to work in tandem with VSLAs to promote banking products that are flexible, practical, and easily accessible by smallholder farmers. Some VSLAs already collaborate with formal financial institutions. These collaborations should be developed into systems that can support the use of VSLA savings as collateral for loans, and other financial support such as input credit.

Enhance social networking among VSLAs. Networking among VSLA members and, by extension, networking with OBs and other development agents should be nurtured. This may be done by encouraging VSLAs to formalize some of these networks and to have regular engagements. The benefits derived from these networks could be enormous, particularly in the areas of knowledge and information sharing. It may lead to an increase in the use of improved technologies among smallholder farmers in the project area, enhancing productivity and improving incomes.

Market for farm produce. Smallholder farmers still complained about inadequate market for maize and soy, particularly at the peak season, the harvest period. The management of storage facilities' capacities is an area of potential that is not fully utilized at the local level and in the maize and soybean value chains. At the local level, the use of storage facilities can enhance smallholder farmers' competitiveness, especially those in groups such as VSLAs. The OBs who work in tandem with VSLAs require enhanced storage and warehousing facilities and best practices to provide options and marketing opportunities for smallholder farmers. In this regard, OBs should consider adopting an adapted inventory credit system.

Access to Inputs. Farmers have come to accept the concept of input promotions during share out, the project should work with the input firms who have been involved in the community sales to take ownership of the process through the use of community lead established during the process. This will ensure sustainable supply of inputs to the farmers.

Tractor Services. Access to mechanization services should be enhanced in the intervention communities, as many farmers complained about the inadequate availability and timeliness of services. Additional tractor services could be provided by VSLA group initiatives or by OBs, and could be enhanced through planned and effective collaboration with private plant pool owners or district-level Department of Agriculture Mechanization Units.

Share-out. VSLA share-out have had tremendous impact on technology adoption, yield, and incomes, but many VSLA participants expressed a need for more capacity building to improve upon these results. Therefore, support should be given to VSLA leadership to innovate when planning sharing arrangements. Some percentage (such as 10 percent) of the total contributions could be left in a 'kitty' to build a capital base for the group over time. This would require the associations' leadership to complete further capacity building in 'shares' management due to the complexity of modified share-outs.

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ANNEXES

ANNEX 1: SCOPE OF WORK (SOW)



REQUEST FOR PROPOSAL

CONSULTANCY ASSIGNMENT TO ASSESS THE IMPACT OF VSLAs AND OTHER FINANCIAL SOURCES ON SMALLHOLDER INVESTMENTS AND APPLICATION OF IMPROVED PRACTICES THAT IMPROVE YIELDS AND INCOMES

RFP Release Date:	October 2, 2018
Proposal Submission Deadline	October 5, 2018
Performance Period:	October 10 to December 7, 2018

RFP #: ADVII/2018/003

INTRODUCTION

Company Background

Based in Washington, D.C., ACDI/VOCA is a nonprofit international development organization that delivers technical and management assistance in agribusiness, financial services, enterprise development, community development, and food security in order to promote broad-based economic growth and vibrant civil society. For more information, go to www.acdivoca.org.

Program Background

The USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) project aims at increasing competitiveness of agricultural value chains in northern Ghana to foster economic growth and reduce poverty among smallholder farmers and the population at large, in line with USAID Ghana's Feed the Future (FtF) strategy. The project's approach is to increase productivity, promote private enterprise development and investment, and ensure that benefits are realized by vulnerable populations, including women, children, and people with physical challenges.

PURPOSE AND SCOPE

A major component of the USAID's ADVANCE project is the facilitation of access to financial services by outgrower businesses, smallholders, firms, and FBOs for investment in production, technology adoption, and management services. Data collected on a total of 192 outgrower businesses (OBs),

indicate that they spent GHS 17, 859,367 as investment on their outgrowers' production activities in the 2016 and 2017 farming seasons. About 35 percent was for women and 65 percent for men. This huge capital outlay and investment poses risks to OBs in case of default in repayment. To reduce the risk, while enabling OBs to invest in expanding their businesses and reaching out to more outgrowers, the project introduced the village savings and loan associations (VSLA) concept in 2015. The concept encourages SHFs to save towards production activities. This concept is a reliable and sustainable means of investing in their production activities, while also promoting shared risk in investment. With the VSLA concept, a group of 20–35 smallholder farmers meet regularly, and can not only save but also borrow from their savings. Since the inception of the VSLAs in 2015, 1,128 groups comprising 24,457 SHFs (male-37 percent, female-63 percent) have been trained and set up under 192 OBs across the project's operational areas. This strategy exposed SHFs to various farming techniques, such as effective land preparation, drought tolerant varieties of target crops, safe use and handling of herbicides, good agricultural practices (GAPs), and quality inputs and their sources, among others.

However, to consolidate this gain and to ensure that SHFs adopt technologies taught at demonstration sites to improve their yields, the project linked VSLA share-outs to input promotions. The project particularly encouraged women to participate in VSLAs, considering evidence suggesting that VSLAs can lead to greater women's empowerment at the household and community level (Karlan, 2017). The aim is to ensure that farmers use their VSLA savings to purchase inputs, meeting the VSLA's core purpose. To this end, these groups invested an estimated GHS 1,730,063 (30 percent) in inputs during share-outs in 2016 and 2018.

However, the impact of USAID's ADVANCE project's VSLA initiative on farmer yields, technology adoption, and women's empowerment has not been sufficiently studied to document trends, plan exit strategies that will sustain such interventions, and guide the design of future interventions.

The study's main objective is to assess the impact of VSLAs and other financial sources on smallholder investments in agriculture in general, crop production, and application of new and/or improved practices to improve yields and incomes. Specific objectives will include an assessment of the impact of savings made under VSLAs scheme on

- Individual-level saving among beneficiary farmers within the project's coverage
- Access to, and use of inputs by farmers after share-out
- Farmers' level of new investments in crop production
- Smallholders' use of new ideas and adoption of improved practices
- Women's agency (the ability to freely participate in group activities and act on other issues and matters)

The study will test the following hypotheses:

- Individual money savings are higher among VSLA members than community members who do not use any group savings scheme.
- There is a positive relationship between individual VSLA savings and the amount of money invested in agriculture.
- Organization of input sales during share-out has increased the investment in and use of agricultural inputs by members.
- Adoption of new ideas and improved technology and practices is facilitated by increased savings from VSLA
- VSLA membership has increased the agency of female members as they are more active socially and economically.

Deliverables

The consultant will deliver the following outputs.

- Inception report
- Data collection tools
- Draft report

- Presentation (ppt)
- Final Report
- Raw data

The final report will include the following elements, at a minimum:

- Acknowledgements
- Table of Contents
- List of Acronyms and Abbreviations
- List of Figures and Charts
- Executive Summary
- Background/Brief Program Description, Context, and Rationale
- Purpose and Expected Use of the Study
- Objectives of the Study
- Methodology and Data Collection Techniques
- Main Findings
- Conclusions

TIMELINES

Activity	Number of Days	Tentative deadline	Outcome
Prepare for study Tendering for consultant Signing of contracts	10	Oct 12	Contract signed
Desk review of project document, reports, and other relevant documents	3	Oct. 17	Inception report including detailed study plan, methodology and tools drafted and shared with project management and M&E teams
Presentation of inception report and briefing of evaluation team	1	Oct. 19	Inception report is finalized, methodology and study plan agreed on
Data collection in the field	10	Nov 6	Field data collected
Review of initial data analysis with project team	1	Nov.16	Consultant and project team agree on specific areas of data analysis
Data analysis and preparation of draft report	5	Nov.26	Draft report generated
Presentation of draft report to stakeholders	1	Nov.28	Feedback collected and incorporated
Finalization of evaluation report	3	Dec.7, 2018	

CONTRACT MECHANISM & TERMS OF PAYMENT

ACDI/VOCA anticipates issuing a fixed price purchase order to an Offeror.

ACDI/VOCA will issue fixed payment(s) based on submission and ACDI/VOCA acceptance of deliverables. Once an award is issued, it will include a fixed price payment schedule with deliverables specified above. A copy of the purchase order terms and conditions are attached to this RFP for informational purposes

Schedule for Payment:

40 percent down payment will be made upon receipt of an updated work plan for review and approval within five days of signing the contract

60 percent final payment will be made upon receipt of a final report within two weeks of receiving ADVANCE's comments on the draft report

PROPOSAL PREPARATION AND SUBMISSION REQUIREMENTS

Instructions for Proposal Preparation

ANNEX 2: INTERVIEWS AND FOCUS GROUP DISCUSSIONS HELD

List of Qualitative Key Informant Interviews, In-depth Interviews and Focus Group Discussions Held				
Region	Community	Name of Person(s) we met with	Designation	Gender
Key Informant Interviews				
Northern	Disiga	Iddrisu Iddi	Chief	Man
Northern	Tamale	Mohammed Seidu	Input dealer	Man
Upper East	Navorongo	Teddy Addah	Input dealer/OB	Man
Upper East	Biu	James Adawuna	Chief	Man
Upper East	Dua	Esther Akabzaa	OB/input dealer	Woman
Upper East	Navorongo	Richard Akoka	Regional OB network chairman	Man
Upper West	Buoti	Yahaya Seidu	OB (nucleus farmer)	Man
Upper West	Jirapa	Bawaanaa	Input dealer	Man
Northern	Daffiel/Tuna	Lucila Dayouri	FBO leader/OB	Woman
Brong Ahafo	Kobedi	Emmanuel K. Atiso	VSLA supervisor	Man
Ashanti	Ejura	Prince Owusu	Input dealer	Man
In-Depth Interviews				
Northern	Disiga	Memunatu Iddrisu	VSLA member	Woman
Upper West	Buoti	Abibata Moro	Non-VSLA member	Woman
Upper West	Buoti	Suraj Cecilia	VSLA member	Woman
Brong Ahafo	Mesidan	Andrews Frimpong	VSLA member	Man
Brong Ahafo	Ahyiyem	Anaba John	Non-VSLA member	Man
Brong Ahafo	Ahyiyem	Kafui Isaac	VSLA executive	Man
Focus Group Discussions				
Upper East	Biu	Atinkong John Mark	VSLA member	Man
Upper East	Biu	Abaati Kwame	VSLA member	Man
Upper East	Biu	Atankwi Paul	VSLA member	Man
Upper East	Biu	Azibadigi Anyaweh	VSLA member	Man
Upper East	Biu	Adakpala Adayigna	VSLA member	Man
Upper East	Biu	James Adawuna	VSLA member	Man
Northern	Disiga	Ayishetu Iddrisu	VSLA member	Woman

List of Qualitative Key Informant Interviews, In-depth Interviews and Focus Group Discussions Held

Region	Community	Name of Person(s) we met with	Designation	Gender
Northern	Disiga	Azara Fuseini	VSLA member	Woman
Northern	Disiga	Sana Iddrisu	VSLA member	Woman
Northern	Disiga	Barikisu Yakubu	VSLA member	Woman
Northern	Disiga	Aramatu Issifu	VSLA member	Woman
Northern	Disiga	Kande Yirisu	VSLA member	Woman
Northern	Disiga	Azara Shakai	VSLA member	Woman
Northern	Nakpanzoo	Alhassan Adam	Non-VSLA member	Man
Northern	Nakpanzoo	Sualisu Mohammed	Non-VSLA member	Man
Northern	Nakpanzoo	Issahaku Nindo	Non-VSLA member	Man
Northern	Nakpanzoo	Zacharia Adam	Non-VSLA member	Man
Northern	Nakpanzoo	Salifu Abdulai	Non-VSLA member	Man
Northern	Nakpanzoo	Adam Abubakari	Non-VSLA member	Man
Upper East	Biu	Atinkong John Mark	VSLA member	Man
Upper East	Biu	Abaati Kwame	VSLA member	Man
Upper East	Biu	Atankwi Paul	VSLA member	Man
Upper East	Biu	Azibadigi Anyaweh	VSLA member	Man
Upper East	Biu	Adakpala Adayigna	VSLA member	Man
Upper East	Biu	James Adawuna	VSLA member	Man
Upper East	Gowrie	Thomas Abasa	VSLA member	Man
Upper East	Gowrie	Akalali Aweme	VSLA member	Man
Upper East	Gowrie	Baba Atisa	VSLA member	Man
Upper East	Gowrie	Zakare Akazore	VSLA member	Man
Upper East	Gowrie	Alagma Derick	VSLA member	Man
Upper East	Gowrie	Nsobila Abelinkera	VSLA member	Man
Upper East	Gowrie	Apopia Nsoh	VSLA member	Man
Upper East	Zorbisi	Adama Laadi	VSLA member	Woman
Upper East	Zorbisi	Azor Angela	VSLA member	Woman
Upper East	Zorbisi	Faustina Atuyine	VSLA member	Woman
Upper East	Zorbisi	Akugre Vivian	VSLA member	Woman
Upper East	Zorbisi	Azure Atanpoka	VSLA member	Woman

List of Qualitative Key Informant Interviews, In-depth Interviews and Focus Group Discussions Held

Region	Community	Name of Person(s) we met with	Designation	Gender
Upper East	Zorbisi	Adabre Faustina	VSLA member	Woman
Upper East	Zorbisi	Aliaya Akurimah	VSLA member	Woman
Upper East	Zorbisi	Akolbire Akunne	VSLA member	Woman
Upper West	Buoti	Suraj Cecilia	VSLA member	Woman
Upper West	Buoti	Lardi Iddrisu	VSLA member	Woman
Upper West	Buoti	Alhassan Talata	VSLA member	Woman
Upper West	Buoti	Issifu Zeinab	VSLA member	Woman
Upper West	Buoti	Inusah Hawa	VSLA member	Woman
Upper West	Buoti	Issaka Zeinab	VSLA member	Woman
Upper West	Buoti	Abdulai Ajaratu	VSLA member	Woman
Upper West	Bugubelle	Sala Mohammed	VSLA member	Woman
Upper West	Bugubelle	Afisa Sulley	VSLA member	Woman
Upper West	Bugubelle	Moro Fatima	VSLA member	Woman
Upper West	Bugubelle	Adama Iddrisu	VSLA member	Man
Upper West	Bugubelle	Abiba Isaka	VSLA member	Man
Upper West	Bugubelle	Muntari Adisatu	VSLA member	Woman
Upper West	Bugubelle	Tahiru Imoro	Non-VSLA member	Man
Upper West	Bugubelle	Darikoko Seidu	Non-VSLA member	Man
Upper West	Bugubelle	Payala Moro	Non-VSLA member	Man
Upper West	Bugubelle	Susolo Mohammed	Non-VSLA member	Man
Upper West	Bugubelle	Sofia Danjan Buyon	Non-VSLA member	Man
Upper West	Gbare	Regina Kofi	VSLA member	Woman
Upper West	Gbare	Wenifred Bere	VSLA member	Woman
Upper West	Gbare	Veronica Ngne	VSLA member	Woman
Upper West	Gbare	Gladys Baloo	VSLA member	Woman
Upper West	Gbare	Margaret Bakpaala	VSLA member	Woman

List of Qualitative Key Informant Interviews, In-depth Interviews and Focus Group Discussions Held

Region	Community	Name of Person(s) we met with	Designation	Gender
Upper West	Gbare	Domitela Dery	VSLA member	Woman
Upper West	Gbare	Patricia Ansootii	VSLA member	Woman
Upper West	Gbare	Yengdooma Peter	VSLA member	Woman
Upper West	Daffiel	Agnes Darigoba	VSLA member	Woman
Upper West	Daffiel	Cecilia Darigoba	VSLA member	Woman
Upper West	Daffiel	Cecilia Denyi	VSLA member	Woman
Upper West	Daffiel	Engnamwin Tiebenako	VSLA member	Woman
Brong Ahafo	Kobedi	Faustina Anane	VSLA member	Woman
Brong Ahafo	Kobedi	Rose Kusi	VSLA member	Woman
Brong Ahafo	Kobedi	Elizabeth Anantegasi	VSLA member	Woman
Brong Ahafo	Mesidan	Adom Augustine	VSLA member	Woman
Brong Ahafo	Mesidan	Andrews Frimpong	VSLA member	Man
Brong Ahafo	Mesidan	Nsowah Takyi	VSLA member	Man
Brong Ahafo	Mesidan	Agyenim Boateng	VSLA member	Man
Brong Ahafo	Ahyiyem	Martha Anane	VSLA member	Woman
Brong Ahafo	Ahyiyem	Martha Atempoka	VSLA member	Woman
Brong Ahafo	Ahyiyem	Kwame Adams	VSLA member	Man
Brong Ahafo	Ahyiyem	Kafui Isaac	VSLA member	Man
Ashanti	Adidwan	Awe Yaw	VSLA member	Man
Ashanti	Adidwan	James Latiw	VSLA member	Man
Ashanti	Adidwan	Safia Salifu	VSLA member	Woman
Ashanti	Adidwan	Haggar Oppong	VSLA member	Woman
Ashanti	Adidwan	Comfort Nampare	VSLA member	Woman
Ashanti	Adidwan	Alice Kabuga	VSLA member	Woman