IMPACT EVALUATION

Gender and Groundnut Value Chains in Eastern Province, Zambia

September 2018

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MEASURE Evaluation

ABSTRACT

The Gender and Groundnut Value Chains impact evaluation, conducted in Eastern Province, Zambia, tested the hypothesis that the gender mainstreaming interventions implemented by two Feed the Future mechanisms—Production, Finance, & Improving Technology Plus (PROFIT+) and Better Life Alliance (BLA)—assisted in maintaining or increasing women's control over groundnut production, marketing, and proceeds as efforts at commercialization increased.

Evaluation methods were a baseline (2014) and end line (2017) quantitative longitudinal household survey and a qualitative study. The quantitative component employed a quasi-experimental design in which pre- and post-intervention differences in outcomes were compared between project and comparison domains to measure the impact of PROFIT+ and BLA. The analysis involved descriptive frequencies, cross tabulations, and tests of statistical significance for primary outcomes. Impact analyses were conducted for selected primary outcomes using the difference-in-differences model. The qualitative component consisted of in-depth interviews and focus group discussions with beneficiaries to contextualize quantitative findings.

There was a significant increase in the quantity of groundnuts sold/bartered from baseline to end line in both the project and comparison domains among households that grew groundnuts in both seasons. The increase was significantly higher in the project domain. Women's participation in groundnut production, marketing, and use of proceeds was maintained as efforts to commercialize groundnuts expanded. Qualitative findings indicated that beneficiaries perceived savings and lending communities (SILCs) and gender messages promoted by PROFIT+ and BLA to have impacted women's empowerment. Evaluation findings suggest that PROFIT+ and BLA contributed both to groundnut commercialization and maintaining women's participation in production, marketing, and use of proceeds.

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MEASURE Evaluation
University of North Carolina at Chapel Hill
123 W. Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350 | measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government. This report was prepared independently by Sian Curtis (team leader), Jessica Fehringer, Aiko Hattori and Milissa Markiewicz, MEASURE Evaluation; Megan Barry, University of North Carolina at Chapel Hill; and Thelma Namonje, Indaba Agricultural Policy Research Institute. TRE-18-014

ISBN: 978-1-64232-076-3

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ACKNOWLEDGMENTS

MEASURE Evaluation—funded by the United States Agency for International Development (USAID)—thanks the agency for its support of this research and publication.

We thank the following people for their support of the Zambia Gender and Groundnut Value Chains impact evaluation: Krista Jacobs, Bureau for Food Security/USAID, and Anafrida Bwenge, Mlotha Domaseke, Harry Ngoma, and Olive Ndekazi-Kaluwa, USAID/Zambia. Our thanks also go to Aimee Benson and Mat Mainwaring of MEASURE Evaluation for their data management and programming support.

We also thank the staff of PROFIT+ and BLA for their input to the evaluation design and their participation in implementation process monitoring.

We are especially grateful to the staff of our two Zambia-based research partners—the Indaba Agricultural Policy Research Institute and the Central Statistical Office. They are Henry Machina, Jairos Sambo, Munguzwe Hichaambwa, Joseph Ngulube, Anthony Chapoto, and Chance Kabaghe at the Indaba Agricultural Policy Research Institute; and Patrick Chuni, Michael Njobvu, Greenson Samaliya, Cynthia Tigere, Daniel Daka, and John Kalumbi at the Central Statistical Office.

We are indebted to the 65 members of our data collection team for their hard work and dedication, especially those who served on both the quantitative and qualitative teams: Trinity Mwale, Davison Shumba, Timothy Chali, and Elizabeth Makhofani. Our sincere thanks to the kind and gracious people of Eastern Zambia who participated in interviews and focus group discussions.

We thank MEASURE Evaluation's knowledge management team for editorial, design, and production services.

Cover: Shaebyna Mwava, with groundnuts harvested from her family's farm. Photo courtesy of Heifer International.

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ABBREVIATIONS

BLA	Better Life Alliance
CAD	community agro-dealer
COMACO	Community Markets for Conservation
CSO	Central Statistical Office
DID	difference-in-differences
FGD	focus group discussion
GNVC	Gender and Groundnut Value Chains
IAPRI	Indaba Agricultural Policy Research Institute
IDI	in-depth interview
kg	kilogram
km	kilometer
MAL	Ministry of Agriculture and Livestock
NGO	nongovernmental organization
PROFIT+	Production, Finance, & Improving Technology Plus
SE	standard error
SEA	standard enumeration area
SILC	savings and internal lending community
UNC	University of North Carolina
USAID	United States Agency for International Development
ZNFU	Zambia National Farmers' Union

EXECUTIVE SUMMARY

Purpose and Background

Feed the Future is the U.S. Government's global hunger and food security initiative. Two mechanisms that operated under Feed the Future in Zambia were the Production, Finance & Improving Technology Plus (PROFIT+) project and the Better Life Alliance (BLA) project. PROFIT+ targeted 200,000 smallholder farmers in the Eastern Province districts of Chipata, Katete, Lundazi, and Petauke. PROFIT+ aimed to strengthen oilseed, legume (including groundnut), maize, and horticulture value chains by promoting conservation farming practices and improving linkages among smallholder farmers, input suppliers, and buyers of crops. BLA, led by Community Markets for Conservation (COMACO), aimed to increase sustainable, market-led growth across the food production and market chain to improve food and income security for 40,000 households in selected, environmentally-sensitive areas in Chipata, Katete, Lundazi, Mambwe, Nyimba, and Petauke. BLA also worked to strengthen the groundnut value chain by providing agricultural inputs, farmer training, value-added food processing, and access to markets.

In Zambia, groundnuts are considered a female-controlled crop. Commercialization of female-controlled crops can result in women being displaced from the value chain due to a male takeover as crops become more profitable. Interventions designed to commercialize value chains, especially those that are predominantly perceived to be the domain of women, need to take steps to ensure that women's relative control of income and other assets is maintained, if not increased. PROFIT+ and BLA adopted a gender mainstreaming approach to ensure that women were not displaced from the groundnut value chain with increased commercialization. Promotion of gender messages (shared work, joint household decision making, and joint budgeting between husbands and wives), along with promotion of savings and internal lending communities (SILCs), were intended to increase empowerment and inclusion of women in agriculture, with SILCs also aiming to increase access to finance and credit.

The Zambia Gender and Groundnut Value Chains (GNVC) impact evaluation tested the hypothesis that the gender interventions implemented by PROFIT+ and BLA assisted in maintaining or increasing women's control over production, marketing, and proceeds from groundnuts as groundnut commercialization increased. The evaluation questions and a summary of findings are presented in Table E1. The evaluation contributes to global learning on the impact of Feed the Future interventions on women's empowerment under the gender integration and women's empowerment priority area of the Feed the Future Learning Agenda.

KEY FINDINGS

There was a significant increase in the quantity of groundnuts sold/bartered from baseline to end line both in the project and comparison domains among households that grew groundnuts in both seasons. The increase was significantly higher in the project domain.

Women's participation in groundnut production, marketing, and use of proceeds was maintained as efforts to commercialize groundnuts expanded.

Qualitative findings indicate that beneficiaries perceived that SILCs and gender messages promoted by PROFIT+ and BLA impacted women's empowerment, engagement in household decision making, and access to financial resources.

Definitive causal attribution of the outcomes described above to PROFIT+ and BLA is hindered by the complex development landscape in Eastern Province. Nevertheless, evaluation findings are consistent with PROFIT+ and BLA contributing to both groundnut commercialization and maintaining women's participation in production, marketing, and use of proceeds.

Methods

The Zambia GNVC impact evaluation employed a mixed methods approach that involved a baseline (2014) and end line (2017) quantitative longitudinal household survey, implementation process monitoring, and baseline and end line qualitative studies.

The quantitative component used a quasi-experimental design in which pre and post differences in outcomes were compared between project and comparison domains to measure the impact of PROFIT+ and BLA. PROFIT+ and BLA sought to influence outcomes at the population level in the areas in which they worked in Eastern Province; a longitudinal population-based household survey was therefore conducted. Households were eligible for the 2014 baseline survey if (1) they grew groundnuts in the 2012–2013 agricultural season and (2) contained both a female and male household member age 18 or older. The same households were revisited for the 2017 end line survey. Households were eligible for the end line survey if the same female household member was present in the household. A household questionnaire gathered data on demographics, dwelling characteristics, distance to key services, and cultivated/cropped fields. Women's and men's questionnaires gathered data on groundnut production and sales, access to productive capital, household decision making, group membership, exposure to messaging/information, and gender attitudes. The women's questionnaire also contained a module on intimate partner and gender-based violence. Analysis consisted of descriptive frequencies, cross tabulations, and tests of statistical significance for primary outcomes. Impact analyses were conducted for selected primary indicators using a regression-based version of the difference-in-differences (DID) model with individual-level fixed effects.

The goal of the qualitative component was to contextualize the quantitative findings by gathering information about how PROFIT+ and BLA worked to strengthen the groundnut value chain while supporting female farmers and promoting women's empowerment. In-depth interviews and focus group discussions gathered information on gendered household decision making related to groundnut production and sales, household division of labor for groundnut production, control of household assets, and experience with the groundnut and gender interventions implemented by PROFIT+ and BLA.

Implementation process monitoring was conducted between the baseline and end line to document how PROFIT+ and BLA's interventions evolved and were implemented in practice. The process monitoring involved a review of PROFIT+ and BLA project documents and interviews with project staff.

Findings

Table E1. Evaluation questions and findings

Evaluation questions	Findings
Do women maintain control over production of groundnuts as commercialization efforts are expanded?	The percentage of women who participated in groundnut production decisions, either solely or jointly, increased significantly in the project domain, but stayed the same in the comparison domain. There was an increase in sole female decision making in both domains. The DID model found that the change in the percentage of women participating in the decision to grow groundnuts from baseline to end line in the project domain was 5.5 percentage points larger than in the comparison domain ($p<.05$). Similarly, the change in the percentage of women participating in deciding which groundnut seed variety to plant in the project domain was 7.1 percentage points larger than in the comparison domain ($p<.01$).
What interventions might assist in maintaining women's control over production of groundnuts?	Qualitative analysis suggests that promotion of gender messages (shared labor, joint decision making, and joint budgeting between husbands and wives), and SILCs had a positive effect on maintaining women's control over groundnut production. Respondents reported that women's empowerment and inclusion in household decision making increased when the gender messages were adopted, and that SILCs increased women's access to finance and credit, which empowered women to purchase agricultural inputs and may have contributed to women maintaining control over groundnut production. However, quantitative results suggested little change in gender attitudes at the population level in either the project or comparison domains. Women's participation in SILCs increased, especially in project areas.
Do women maintain control over marketing of groundnuts and use of proceeds as commercialization efforts are expanded?	There was a significant increase in the percentage of households that sold/bartered groundnuts in both study domains. At end line, 56.7 percent of project households and 43.6 percent of comparison households sold/bartered groundnuts. Mean total household sale/barter of groundnuts (kilograms [kgs]) also increased significantly in both domains. Although the DID model found that the increase in the percentage of households that sold/bartered in the project domain was not statistically different from the increase in the comparison domain, the increase in the mean total sale/barter was 18.6 kgs larger in the project domain than in the comparison domain ($p<.01$). There were no statistically significant changes in women's involvement in deciding to sell groundnuts or how to use proceeds from sales in either the project or comparison domains, suggesting that women's role in decision making over groundnut marketing and use of proceeds was maintained as commercialization efforts increased. Approximately 60 percent of women participated in the decision to sell groundnuts and approximately two-thirds

Evaluation questions	Findings
	participated in deciding how to use proceeds from groundnut sales at both baseline and end line in both study domains. Consistent with quantitative findings, most end line qualitative respondents reported that women were actively involved in decision making for groundnut marketing and use of proceeds, and there had not been any change over the past three years because households had been practicing joint decision making during that period. The DID model found that the change in the percentage of women who participated in decisions about groundnut sales/proceeds in the project domain was not significantly different from the change in the comparison domain.
What interventions assist in maintaining women's control over marketing of groundnuts and use of proceeds?	Qualitative respondents identified gender messages, especially those related to joint budgeting, as facilitating women's involvement in decisions about use of proceeds from crop sales. In the quantitative findings, almost all women agreed that husbands and wives should decide together how money from crop harvests should be spent at both baseline and end line in both the project and comparison domains.

Conclusion

The Zambia GNVC impact evaluation found that commercialization of groundnuts, as measured by the volume of sales, increased in households that grew groundnuts at both baseline and end line, and that women did not lose control of groundnut production, marketing, or use of proceeds as commercialization increased. These findings are consistent with PROFIT+ and BLA contributing to both groundnut commercialization and to maintaining women's place in the groundnut value chain. Gender messaging and SILCs were identified by qualitative respondents as supporting women's participation in the groundnut value chain. However, definitive causal attribution to PROFIT+ and BLA is hindered by the complex development landscape in Eastern Province and the myriad factors that influence groundnut production and markets, including climate change. Nevertheless, the study suggests that increased commercialization of a traditionally female-controlled crop does not necessarily lead to loss of female control, at least at the level of increased commercialization observed during this period, and that many couples work together to maximize benefits for the household.

INTRODUCTION

Evaluation Purpose and Questions

Feed the Future is the U.S. Government's global hunger and food security initiative. The two mechanisms that operated under Feed the Future in Zambia were Production, Finance & Improving Technology Plus (PROFIT+) and Better Life Alliance (BLA).[1]

PROFIT+ (implementation dates July 2012 to May 2017) was led by ACDI/VOCA and targeted 200,000 smallholder farmers in the Eastern Province districts of Chipata, Katete, Lundazi, and Petauke. A focus of PROFIT+ was strengthening oilseed, legume (including groundnut), maize, and horticulture value chains by promoting conservation farming practices and improving linkages among smallholder farmers, input suppliers, and buyers of crops.

BLA (implementation dates December 2011 to April 2016), led by Community Markets for Conservation (COMACO), aimed to increase sustainable, market-led growth across the food production and market chain to improve food and income security for 40,000 households in selected, environmentally-sensitive areas in Chipata, Katete, Lundazi, Mambwe, Nyimba, and Petauke. BLA also worked to strengthen the groundnut value chain by providing agricultural inputs, farmer training, value-added food processing, and access to markets. Both projects adopted a gender mainstreaming approach to ensure that women were not displaced from the groundnut value chain with increased commercialization.

The Zambia Gender and Groundnut Value Chains (GNVC) impact evaluation tested the hypothesis that the gender interventions implemented by PROFIT+ and BLA assisted in maintaining or increasing women's control over the production, marketing/sales, and proceeds from groundnuts as groundnut commercialization increased. The research questions addressed by the impact evaluation were:

1) Do women maintain control over production of groundnuts as commercialization efforts are expanded?

2) What interventions might assist in maintaining women's control over the production of groundnuts as commercialization efforts are expanded?

3) Do women maintain control over marketing of groundnuts and use of proceeds as commercialization efforts are expanded?

4) What interventions assist in maintaining women's control over marketing of groundnuts and use of proceeds?

The GNVC impact evaluation was commissioned by the United States Agency for International Development (USAID) Bureau for Food Security in Washington, DC to contribute to the Feed the Future Learning Agenda Area V: Improved Gender Integration and Women's Empowerment.[2] The evaluation is relevant to two key questions under this learning agenda area: (1) Have agriculture productivity interventions reduced gender gaps in the use of production inputs? and (2) Have agriculture and nutrition projects or approaches effectively improved women's empowerment, specifically in terms of agricultural production, decision making over and access to credit, control over income, leadership in the community, and time use? The results of this evaluation contribute to global learning on the impact of Feed the Future

[1] PROFIT+ and BLA were two of six mechanisms operating under Feed the Future. Other mechanisms were Commercial Agribusiness for Sustainable Agriculture, the Zambia Economic Resilience Program for Improved Food Security, the Food Security Research Project III, and the Food Security & Crisis Mitigation Program and Research and Development.

[2] https://www.agrilinks.org/sites/default/files/resource/files/Feed%20the%20Future%20Learning%20Agenda_0.pdf

interventions on women's empowerment to inform food security programming strategies aimed at ensuring that women are not displaced from agricultural value chains as these become commercialized. The results will also be useful to USAID/Zambia, its implementing partners, and other organizations working on food security in Zambia, especially by informing food security and gender integration programming in Zambia.

Background

Groundnuts in Zambia

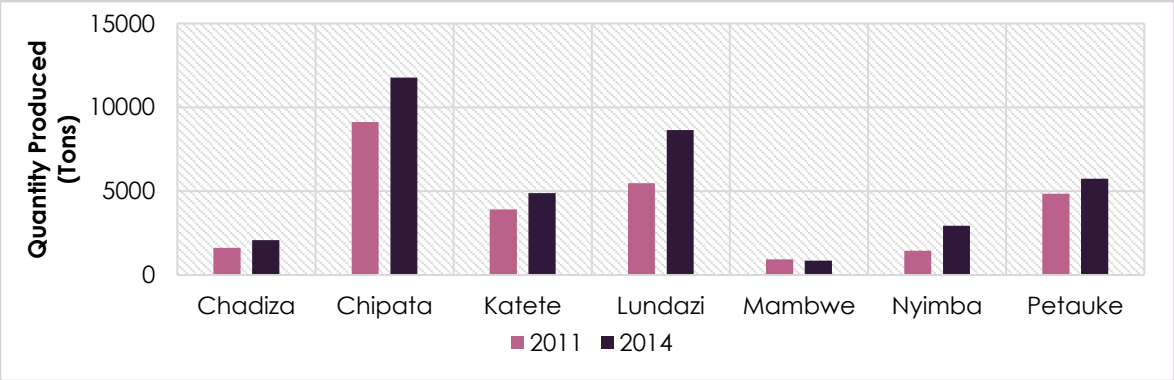
Groundnuts are one of Zambia's most important crops, produced by nearly half of Zambia's 1.4 million rural smallholders (Mofya-Mukuka and Shipekesa, 2013). Groundnuts are the second most frequently grown crop in Zambia, after maize. Most groundnut growers are smallholder households, over 95 percent of which cultivate less than one hectare. In Eastern Province, nearly two-thirds of households grow groundnuts (Chapoto and Zulu-Mbata, 2015).

The Eastern Province of Zambia is the country's largest producer of groundnuts. The province accounted for 27 percent of total production during the 2010–2011 and 2013–2014 agricultural seasons. Chipata district in Eastern Province is the highest producer of groundnuts, followed by Lundazi, whereas Mambwe is the lowest producer (Indaba Agricultural Policy Research Institute/Central Statistical Office/Ministry of Agriculture and Livestock [IAPRI/CSO/MAL], 2012 and 2016; Mofya-Mukuka and Shipekesa, 2013).

Immediately before the start of PROFIT+ and BLA, Zambia experienced a declining national trend in groundnut production, from 160,000 metric tons in 2009–2010 to 113,000 metric tons in 2011–2012 (Mofya-Mukuka and Shipekesa, 2013). A 2013 value chain analysis of the groundnut sector attributed this decline partly to a decreasing area dedicated to groundnut cultivation relative to cotton. Seed recycling and market unpredictability relative to maize and cotton were also believed to be factors contributing to the declining trend in groundnut production (Mofya-Mukuka and Shipekesa, 2013).

However, the Rural Agricultural Livelihood Surveys conducted by the Indaba Agricultural Policy Research Institute (IAPRI) in collaboration with the Zambia Central Statistical Office (CSO) and the Ministry of Agriculture and Livestock (MAL) found that groundnut production in Zambia increased by 27 percent between the 2010–2011 and 2013–2014 agricultural seasons, with most districts in Eastern Province recording an increase in production (IAPRI/CSO/MAL, 2012 and 2016) (Figure 1).

Figure 1. Groundnut production in Eastern Province, by district



Source: IAPRI/CSO/MAL, 2012 and 2016

Recently released Crop Forecast Survey data showed an increase of 2 percent in the area under groundnut production in Eastern Province, from 96,547 hectares in 2016–2017 to 98,708 hectares in the 2017–2018 agricultural season (CSO/MAL, 2018). Although the Crop Forecast Surveys projected an increase in groundnut production at the national level, Eastern Province was expected to record a 16 percent decrease in groundnut production, from 57,208 metric tons in 2016–2017 to 48,333 metric tons in the 2017–2018 agricultural season. Nearly all districts in Eastern Province were projected to have a decline in groundnut production, with the exception of Lundazi and Katete, which showed slight increases. Chipata was projected to have the greatest decrease in production (31 percent). The decline in projected groundnut production in Eastern Province was attributed to an 8 percent decline in area harvested, despite the slightly larger area devoted to groundnut production (CSO/MAL, 2018). The decline in area harvested was believed to be partly due to changes in rainfall patterns.

Among households selling groundnuts in Eastern Province, 75 percent sell primarily to small-scale traders or other households for consumption (IAPRI/CSO/MAL, 2016). Large-scale buyers include COMACO and Eastern Province Farmers' Cooperative, both of which provide famers with inputs; the Export Trading Group of Zambia, a global company; and Rabs, a Malawian company. However, these buyers were associated with sales for only 4 percent of households that sell groundnuts (Mofya-Mukuka and Shipekesa, 2013; IAPRI/CSO/MAL, 2016). The commercialization of groundnuts in Zambia is generally limited. In Eastern Province, households in Lundazi sell the highest portion of their harvest (50.1 percent to 60 percent), followed by Chipata (40.1 percent to 50 percent), with Chadiza, Katete, Petauke, and Nyimba selling 30.1 percent to 40 percent of their harvest. Mambwe households are the least commercialized, selling only 20.1 percent to 30 percent of their harvest (Chapoto and Zulu-Mbata, 2015).

Gender, Agriculture, and Food Security

Food security, nutrition, health, and agricultural productivity are interrelated. When agricultural productivity is enhanced, households can increase their income and improve their food security. Improved food security, in turn, can lead to better nutrition and health outcomes, which can result in further increases in agricultural productivity (Aseno-Okyere and Jemaneh, 2012).

Studies on smallholder agricultural commercialization have demonstrated positive effects of commercialization, including increased household income, improved nutrition, and improved household living standards (Zhou, Minde, & Mtigwe, 2013). However, increasing household income alone is not sufficient to ensure improved food security and nutrition, and better health outcomes. A potential factor that may positively impact the relationship among increased income and health and nutrition outcomes is whether women's control over income and other assets is increased relative to men's, resulting in an increase in women's decision-making power on how household resources are allocated. Women play a

significant role in maintaining the three pillars of food security: adequate food production, economic access to available food, and nutritional security (Quisumbing, Haddad, Meinzen-Dick, & Brown, 1998). Research has also shown that women tend to allocate a higher share of household income to food and health than men, and increasing women's control over income, land, and other physical assets has been positively linked with improved food security, child nutrition, and education (Duflo and Udry, 2004; International Food Policy Research Institute [IFPRI], 2014; Mehra and Rojas, 2008).

However, increasing agricultural productivity and commercialization can have the opposite result: men's relative control over household income, rather than women's, is increased. This outcome has been seen with commercialization of some "women's crops," where a male "takeover" occurs when a certain level of profitability is reached (Mehra and Rojas, 2008). When such a takeover occurs, and the portion of the crop normally saved for home consumption is reduced or even eliminated, and nutritional status can decrease even as household income increases (Meinzen-Dick, Quisumbing, Behrman, Biermayr-Jenzano, Wilde, Noordeloos,… Beintema, 2010).

Interventions aimed at commercializing value chains, especially those that are predominantly perceived to be the domain of women (such as groundnuts in Eastern Zambia), need to take steps to ensure that women's relative control of income and other assets is maintained, if not increased. To achieve this, interventions should identify and address locally-specific obstacles that hinder women's participation in household decision making, which often involve limited access to agricultural inputs, technological resources, land, collective groups, credit/finance, and agricultural extension (Meinzen-Dick, Quisumbing, Behrman, Biermayr-Jenzano, Wilde, Noordeloos,… Beintema, 2010).

PROFIT+ and BLA: Gender Mainstreaming to Prevent Displacement of Women

Figure 2 presents a logic model for PROFIT+ and BLA projects. Gender mainstreaming and promotion of gender messages, along with promotion of SILCs,[3] were intended to increase empowerment and inclusion of women in agriculture, with SILCs also aiming to increase access to finance and credit. Value chain strengthening activities centered on increasing access to inputs (improved seed), promoting conservation farming practices to improve yield, and expanding access to markets to enhance sales. Combined, the interventions ultimately aimed to increase household food security and decrease household hunger, malnutrition, and poverty.

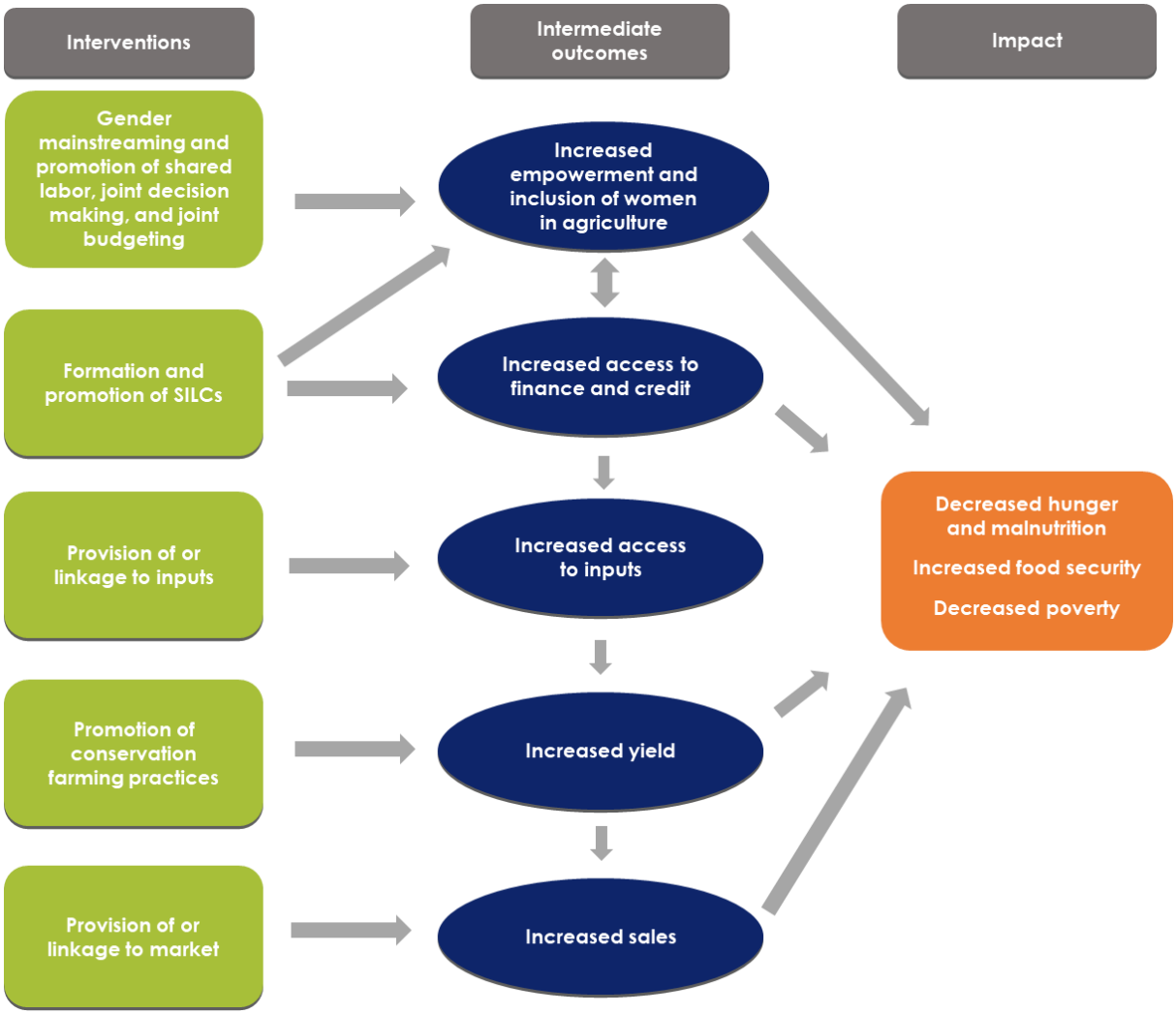
Gender messaging promoted by PROFIT+ was based on the five pillars of the Women's Empowerment in Agriculture Index:[4] production decision making, access to productive resources, control over use of income, community leadership, and time allocation (workload/leisure). Through demonstration plots and farmer field schools, PROFIT+ encouraged shared household decision making between men and women, shared labor, equal access to assets, access to finance, and women-friendly technologies. BLA's gender messaging was partly promoted through its *Better Life Book,* which was distributed to all lead farmers and producer groups. The book contains modules on gender and family planning, women's empowerment in Zambia, and participation in SILCs.

Additional information on the implementation of PROFIT+ and BLA is given in Appendix A.

[3] BLA encouraged beneficiaries to participate in SILCs. PROFIT+ supported the formation of SILCs and membership was 84 percent female. More information on SILCs supported by PROFIT+ is provided in Appendix A.

[4] See http://www.ifpri.org/publication/womens-empowerment-agriculture-index.

Figure 2. Logic model for PROFIT+ and BLA



METHODS

The Zambia GNVC impact evaluation employed a mixed methods approach that involved a baseline (2014) and end line (2017) quantitative longitudinal household survey, implementation process monitoring, and baseline and end line qualitative studies. A summary of each method follows.

Quantitative Component

The quantitative component employed a quasi-experimental design in which pre and post differences in outcomes were compared between project and comparison domains to measure the impact of PROFIT+ and BLA. PROFIT+ and BLA aimed to influence outcomes at the population level in the areas in which they worked in Eastern Province; a longitudinal population-based household survey was therefore conducted in project and comparison areas to address evaluation questions 1 and 3. Households were eligible for the 2014 baseline survey if (1) they grew groundnuts in the 2012–2013 agricultural season and (2) contained both a female and male household member age 18 or older. The same households were revisited for the 2017 end line survey. Households were eligible for the end line survey if the same female household member was present in the household. The quantitative survey instrument contained a household questionnaire and women's questionnaire for all selected households and a men's questionnaire for a randomly selected sub-sample of selected households.[5] The household questionnaire gathered data on demographics, dwelling characteristics, distance to key services, household shocks, and cultivated/cropped fields. The women's and men's questionnaire gathered data on groundnut production and sales, partnership and natal family information, access to productive capital, household decision making, group membership, dietary diversity, household hunger, exposure to messaging/information, and gender attitudes, transactional sex, and alcohol use. The women's questionnaire also contained a module on intimate partner and gender-based violence. The quantitative survey tool is given in Appendix D.

Sampling Design

The project domain consisted of Chipata, Katete, Lundazi, and Petauke districts, in which PROFIT+ and/or BLA worked, and chiefdoms in Nyimba, Mambwe, and Chadiza districts, in which BLA worked. The comparison domain consisted of areas in Nyimba, Mambwe, and Chadiza districts, excluding the chiefdoms in which BLA worked, and southern Chama district. Valley areas and national parks were excluded from both domains. The survey used a stratified multi-stage sampling design to obtain a random sample of households from the project and comparison domains, respectively. The sampling plan aimed to recruit 2,000 households for interviews in each of the two domains (i.e., 4,000 total) from 250 standard enumeration areas (SEAs). The sample size was powered based on minimum detectable change for two key outcome indicators: whether the household bartered or sold groundnuts, and for households that sold groundnuts, whether women were involved in the decision about how to use cash from proceeds. Both the main female adult (age 18 or over) decision maker in all selected households and the main male adult decision maker in approximately 38 percent of selected households were selected for interviews. Further information on the sampling frame, sample size estimation, sampling procedures, and weight calculations is provided in Appendix B.

[5] Questionnaire modules were adapted from a variety of agriculture- and health-related surveys, including the Zambia Rural Agriculture Livelihoods Survey, Feed the Future FEEDBACK Population-Based Surveys, Women's Empowerment in Agriculture Index, Gender, Land and Assets Survey, the Demographic and Health Survey, and nutrition and hunger modules developed by the Food and Nutrition Technical Assistance project.

Response Rate

At baseline, the household response rate was 98.6 percent in the project domain and 98.8 percent in the comparison domain. The women's response rate was 98.1 percent in the project domain and 97.7 percent in the comparison domain. The end line household response rate was 84.4 percent in the project domain and 86.6 percent in the comparison domain. The women's response rate was 84.2 percent in the project domain and 87.2 percent in the comparison domain (Table B2, Appendix B). There was no evidence of significant differences in the baseline characteristics of households that were successfully reinterviewed at end line compared with all households interviewed at baseline (Table B7, Appendix B). Appendix B provides additional information on the response rates and attrition of households and women from baseline to end line.

Analysis

The outcomes of primary interest for the evaluation that are examined in this report are given in Table 1.

Table 1. Primary quantitative outcomes

Topic Area	Outcomes
Participation in groundnut production by women	• Percentage of households' groundnut fields where women solely or jointly decided to grow groundnuts • Percentage of households' groundnut fields where women solely or jointly decided which groundnut seed variety to plant
Participation in groundnut marketing/sales by women	• Percentage of households' groundnut fields where women solely or jointly decided to sell groundnuts • Percentage of households' groundnut fields where women solely or jointly sold groundnuts
Commercialization of groundnuts	• Percentage of households that sold groundnuts • Mean total household sales (kgs) of groundnuts
Women's control over proceeds from groundnut sales	• Percentage of respondents reporting that women solely or jointly decided how to use proceeds from the largest sale of groundnuts

Quantitative data analysis was conducted in Stata 15.1 (Stata Corp LP, College Station, Texas). The analysis consisted of descriptive frequencies, cross tabulations, and tests of statistical significance for primary outcomes. Indicators are mainly reported as percentages, means, or medians, and are weighted using the sampling weights. The analysis in this report is based on the data collected from households and female respondents. Only households with a successfully interviewed female respondent were included in the end line household-level analysis, unless otherwise indicated. Only women who were still the main adult female decision maker at end line and who were still living with the main adult male decision maker from baseline were included in the analysis based on the women's data.[6] The specific samples for the analyses are given in Table B3 in Appendix B. Sample sizes for the analyses that required households to have sold groundnuts at both baseline and end line were relatively small (less than 400) due to variation between the seasons in which households grew and sold groundnuts.

[6] To examine the potential for selection bias due to attrition of female respondents from baseline to end line, the full and eligible (panel) baseline sample were compared (Appendix B). The analysis suggests that the attrition was random and selection bias was minimal.

The foundation of the impact analysis is the difference-in-differences (DID) model. A regression-based version of the DID model with individual-level fixed effects was implemented. The DID regression model as applied for this evaluation is described in Appendix B.

Qualitative Component

The goal of the qualitative component was to contextualize the findings of the quantitative study by gathering information about how PROFIT+ and BLA worked with beneficiaries to strengthen the groundnut value chain while supporting female farmers and promoting women's empowerment. In-depth interview (IDI) and focus group discussion (FGD) guides were developed to gather information on gendered household decision making related to groundnut production and sales, household division of labor for groundnut production, and control of household assets. To better understand the relationship between economic empowerment and gender-based violence, the women's IDI guide also explored women's experience of intimate partner violence and gender-based violence at markets, and while traveling to and from markets. The qualitative survey tools are given in Appendix D.

Sampling Design

At baseline, a total of six communities were purposively selected where only PROFIT+ was operating (one each in Chipata, Katete, and Petauke) and where only BLA was operating (one in Mambwe and two in Nyimba). In each community, two FGDs were held, one with married women and one with married men. In addition, three married couples participated (separately) in IDIs in each community.

The original plan was to return to the same communities at end line. However, findings from the implementation process monitoring (described below) conducted before the end line revealed that groundnut value chain strengthening activities were focused in Lundazi and Chipata. The end line qualitative component was therefore modified, and an intensity sampling approach was applied to recruit participants who were direct beneficiaries of PROFIT+ and/or BLA in Lundazi and Chipata, had high exposure to project interventions, and whose experiences could shed light on which project activities assisted in maintaining women's control over production, marketing, and proceeds. PROFIT+ and BLA provided lists of active community agro-dealers (CADs) and lead farmers, respectively, in the study areas. Three CADs and three lead farmers were selected based on their high level of participation in project activities. Each CAD and lead farmer selected up to ten married female beneficiaries involved in groundnut farming for participation in a FGD, and also selected four married couples for separate male and female IDIs, where the female was a beneficiary and the household grew groundnuts. In addition, a community leader (i.e., village headman) was interviewed in each community where the CAD or lead farmer was located. A total of 131 people (70 women and 61 men) participated in the baseline qualitative study. A total of 117 people (87 women and 30 men) participated in the end line qualitative study (Table B9, Appendix B).

Analysis

End line qualitative findings were used to contextualize the impact evaluation results. All IDIs and FGDs were conducted in a local language (Nyanja or Tumbuka), recorded, and transcribed into English. Transcripts were analyzed through coding using NVivo Pro (QSR International Pty Ltd. Version 12, 2108) to identify relevant themes and patterns of responses to help explain and supplement quantitative findings. To identify differences in perceptions and experiences between males and females, responses were grouped and examined by the sex of respondents.

Implementation Process Monitoring

Implementation process monitoring was conducted between baseline and end line to document how PROFIT+'s and BLA's interventions evolved and were implemented in practice. The evaluation team reviewed PROFIT+ workplans (October 2012 to September 2016) and annual progress reports (October 2012 to September 2015) and BLA workplans and annual reports (December 2011 to September 2015) to extract information on (1) gender and groundnut interventions; (2) the geographic variation of interventions; (3) the extent of participation by female beneficiaries; and (4) contextual factors that could have affected implementation and outcomes (e.g., drought, changing rainfall patterns).

The team then developed IDI guides for PROFIT+ and BLA staff (Appendix D) to fill in gaps in information related to the above topic areas. The PROFIT+ Chief of Party, Deputy Chief of Party, and the Chipata-based Senior District Coordinator and Training and Productivity Manager participated in interviews. The evaluation team also met with three CADs and representatives from two PROFIT+ partners, the Zambia Agriculture Research Institute and Zasaka (a seed company). For BLA, the evaluation team interviewed the Chipata-based Senior Monitoring and Evaluation Officer and Conservation Manager. A process monitoring report was developed combining the findings of the document review and interviews. The findings led to the modification of the end line qualitative component, as described above, and were also used to contextualize the impact evaluation findings.

Strengths and Limitations

A strength of this evaluation design is that it provides for triangulation of data from several sources, including longitudinal data collection from households, qualitative interviews with project beneficiaries and their spouses/partners, and a review of project documents and interviews with project staff. The longitudinal design and relatively large sample size of the quantitative survey provide a unique data set to explore the gender dimensions of decision making about groundnut production and marketing and other gendered outcomes.

Complex interventions operating at some degree of scale in the real world raise several well-documented evaluation challenges, including the presence of other similar interventions implemented by other organizations and difficulty finding suitable comparison areas (Victora, Black, Boerma, & Bryce, 2011). At baseline and end line, there was widespread exposure to information and training relevant to the project interventions and outcomes of interest in both the project and comparison domains. This exposure limits the ability of the statistical analysis to isolate the specific effects of BLA and PROFIT+ interventions. An examination of this exposure is included in the end line analysis to explore its potential implications for the evaluation findings. Identification of a comparison area was challenging because both PROFIT+ and BLA covered a large portion of Eastern Province, leaving few areas available as potential comparison areas. Using comparison areas outside Eastern Province was not appropriate because of differences in agriculture and markets in other areas. Balance testing conducted at baseline showed that the comparison areas were more remote and had lower groundnut commercialization at baseline (Curtis, Hattori, Fehringer, Markiewicz, Lubungu, & Mackenzie, 2015). This result was expected given the constraints on available comparison areas. The estimation strategy for the evaluation is a DID approach that controls for both observed and unobserved time invariant differences between households in the project and comparison domains. This strategy rests on the assumption that the trend in key outcomes in the project domain will be the same as that observed in the comparison domain in the absence of interventions, but it is not possible to formally test that assumption. These limitations are presented more fully in the discussion of the results.

Last, we were unable to follow the original qualitative design to interview communities and couples longitudinally to better understand potential changes in household decision making and groundnut farming over time. Instead, we had to rely on participant's and couple's retrospective assessment of such changes,

as reported at end line with new participants and couples. Our qualitative data are therefore subject to recall bias. Qualitative respondents who were direct beneficiaries of PROFIT+ and/or BLA with high exposure to project activities were also purposively selected at end line. As a result, their experiences are only generalizable to participants with similar levels of exposure.

RESULTS

The analysis examines gendered roles in decision making and activities in groundnut production and sales. Changes in the project domain, where commercialization efforts were expanded through project activities, were compared with changes in the comparison domain that did not have project activities to increase groundnut commercialization. To interpret the findings on gender roles in decision making in the groundnut value chain, an examination of the extent to which production and commercialization changed in each domain was necessary.[7] The presentation of results is organized by the four evaluation questions and the sequence of decision making. First, we present findings on changes in woman's participation in groundnut production decisions and changes in the quantity of groundnuts harvested and area cultivated with groundnuts (production changes). Next, exposure to interventions (gender messaging and promotion of SILCs) aimed at maintaining women's control over groundnut production as commercialization efforts expanded are reviewed. Results related to changes in women's participation in groundnut sales and control of proceeds over time are then presented, along with an analysis of changes in commercialization, where commercialization was measured by the percentage of households that sold or bartered groundnuts and mean total sale/barter of groundnuts. We then examine exposure to interventions aimed at maintaining women's control over sales as commercialization efforts expanded. Last, findings on exposure to interventions aimed at increasing groundnut commercialization are presented.

[7] If there were no changes in groundnut production or commercialization, we would not necessarily expect any changes in women's participation in decision making because we would not expect there to be an incentive for males to take over.

GROUNDNUT PRODUCTION

This section presents findings related to the research question, "Do women maintain control over the production of groundnuts as commercialization efforts are expanded?" Results are presented on the percentage of households that grew groundnuts at end line, reasons for not growing groundnuts at endline, mean total quantity of groundnuts harvested and area cultivated with groundnuts, and women's participation in groundnut production decisions.

Decision to Plant Groundnuts at End Line

Although 83.0 percent of households in the project domain planted groundnuts at both baseline and end line, only 77.5 percent of comparison households planted groundnuts in both seasons. The main reason households did not plant groundnuts at end line was lack of seed (67.5 percent of project households and 74.4 percent of comparison households that did not plant groundnuts at end line). The second most commonly reported reason was that land was needed for other crops (10.2 percent of project households and 5.9 percent of comparison households). Women were involved in the decision not to plant groundnuts at end line in approximately 75 percent of the households in both domains (Table 2).

Table 2. Reasons for not planting groundnuts at end line and decision maker

	Project	Comparison
Percentage of households that grew groundnuts		
Grew at both baseline and end line	83.0	77.5
Grew at baseline but not end line	17.0	22.5
Missing	0.0	0.0
Total	100.0	100.0
Number of women	1,499	1,542
Reasons for not growing groundnuts at end line		
Needed land for other crops	10.2	5.9
Did not have groundnut seed	67.5	74.4
Did not have inputs (other than seed)	1.5	0.5
Rainfall pattern is bad for groundnuts	2.9	2.2
Lack of labor	2.4	5.6
Groundnut crop has failed in the past	1.1	2.8
Lack of a ready market for groundnuts	0.4	2.2
Had enough stock from the previous harvest	1.5	0.4
Crop rotation purposes	1.6	0.0
Expected price of groundnuts to reduce	0.0	0.0
Available land not suitable for groundnut growing	1.1	0.7
Other reason	9.2	3.7
Missing	0.8	1.6
Total	100.0	100.0

	Project	Comparison
Decision maker of not growing groundnuts at end line		
Woman	75.1	74.4
By herself	29.7	27.3
Jointly with spouse/partner	45.4	47.1
Spouse/partner	23.3	23.0
Other	0.3	0.8
Don't know/refused/missing	1.2	1.8
Total	100.0	100.0
Number of women	245	340

Quantity Harvested and Area Cultivated

Table 3 presents the results for the mean total harvest of groundnuts and area cultivated for the full baseline sample and the baseline and end line panel (the subset of households that grew groundnuts at both baseline and end line). Among households that grew groundnuts in both seasons, the mean total harvest decreased by 10.4 percent in the project domain (from 243.4 kgs to 218.1 kgs) but increased by 7.9 percent in the comparison domain (from 135.8 kgs to 146.5 kgs). The change in the total quantity harvested over time was not statistically significant in either study domain. The mean total area cultivated with groundnuts increased significantly ($p<.05$) at end line in the project domain (from 0.4 hectares to 0.5 hectares), but remained constant in the comparison domain at 0.3 hectares.

Table 3. Mean total harvest of groundnuts (kgs) and area cultivated (hectares)

	Project			Comparison		
	Baseline	Baseline panel	End line panel	Baseline	Baseline panel	End line panel
Mean number of cultivated fields	5.0	5.0	4.9	5.7	5.8	5.6
Mean number of groundnut fields	1.1	1.1	1.0	1.0	1.0	1.0
Total area of cultivated fields (hectares)	2.5	2.5	2.8	2.3	2.3	2.5
Total area of groundnut fields (hectares)	0.4	0.4	0.5*	0.3	0.3	0.3
Number of households	1,532	1,283	1,283	1,567	1,223	1,223
Mean total quantity of groundnuts harvest (kgs)	228.6	243.4	218.1	126.7	135.8	146.5
Number of women	1,499	1,254	1,254	1,542	1,202	1,202

*p<.05
"Baseline" includes all households that grew groundnuts at baseline. "Baseline panel" and "End line panel" include only those households that grew groundnuts at both baseline and end line.

Women's Participation in Groundnut Production Decisions

Among households that grew groundnuts in both seasons, women in the project domain participated (either solely or jointly with their spouse/partner) in deciding whether to grow groundnuts for 54.9 percent of households' groundnut fields at baseline. This increased significantly to 60.1 percent at end line ($p<.05$), with a shift to sole female decision making. In the comparison domain, although women participated in this decision for approximately the same percentage of households' groundnut fields at baseline and end line (61.9 percent and 60.5 percent, respectively), there was also a shift to sole female decision making (Table 4 and Figure 3).

Among households that grew groundnuts in both seasons, the DID model found that the change in the percentage of women participating in the decision to grow groundnuts from baseline to end line in the project domain was 5.5 percentage points larger than in the comparison domain ($p<.05$) (Table 5).

Among households that grew groundnuts in both seasons, women in the project domain participated in deciding which seed variety to plant for 65.3 percent of households' groundnut fields at baseline (Table 4 and Figure 4). This increased significantly to 71.8 percent at end line ($p<.01$), again with a shift to sole female decision making. In the comparison domain, although women participated in this decision for approximately the same percentage of households' groundnut fields at both baseline and end line (71.3 percent and 69.2 percent, respectively), there was also a shift to sole female decision making.

Among households that grew groundnuts in both seasons, the DID model found that the change in the percentage of women participating in deciding which groundnut seed variety to plant from baseline to end line was 7.1 percentage points larger in the project domain than the change in the comparison domain ($p<.01$) (Table 6).

Table 4. Percentage of households' groundnut fields where women participated in deciding whether to grow groundnuts and which seed variety to plant

	Project			Comparison		
	Baseline	Baseline panel	End line panel	Baseline	Baseline panel	End line panel
Decision maker on whether to grow groundnuts on the field						
Woman	54.6	54.9	60.1*	59.3	61.9	60.5
By herself	*25.5*	*24.2*	*36.7*	*28.3*	*29.6*	*35.9*
Jointly with spouse/partner	*29.1*	*30.7*	*23.4*	*31.0*	*32.3*	*24.6*
Spouse/partner	43.2	43.0	38.8	38.7	36.1	38.3
Other	2.2	2.1	0.9	1.8	1.8	1.1
Don't know/refused/missing	0.0	0.0	0.2	0.1	0.2	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Decision maker on which groundnut seed variety to plant						
Woman	65.4	65.3	71.8**	70.3	71.3	69.2
By herself	*35.7*	*34.3*	*47.5*	*38.5*	*39.0*	*46.5*
Jointly with spouse/partner	*29.7*	*31.0*	*24.3*	*31.8*	*32.3*	*22.7*
Spouse/partner	31.2	31.5	27.2	27.1	25.8	30.0
Other	3.2	3.1	0.8	2.6	2.8	0.8
Don't know/refused/missing	0.1	0.1	0.2	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of groundnut fields	1,590	1,337	1,298	1,580	1,232	1,224

* $p<.05$; ** $p<.01$

"Baseline" includes all groundnut fields in the baseline sample. "Baseline panel" and "End line panel" include only those groundnut fields that belonged to households that grew groundnuts at both baseline and end line. Note that the total number of groundnut fields for these households was slightly higher at baseline.

Table 5. DID results for women's participation in deciding to grow groundnuts among households that grew groundnuts at both baseline and end line

Variables	Regression coefficient	Standard error (SE)	P value
Time	-0.015	0.0173	0.395
Project x time	0.055	0.0248	0.026

Table 6. DID results for women's participation in deciding which seed variety to plant among households that grew groundnuts at both baseline and end line

Variables	Regression coefficient	SE	P value
Time	-0.022	0.0169	0.191
Project x time	0.071	0.0237	0.003

Figure 3. Among households that grew groundnuts at both baseline and end line, percentage of households' groundnut fields where women participated in deciding to grow groundnuts

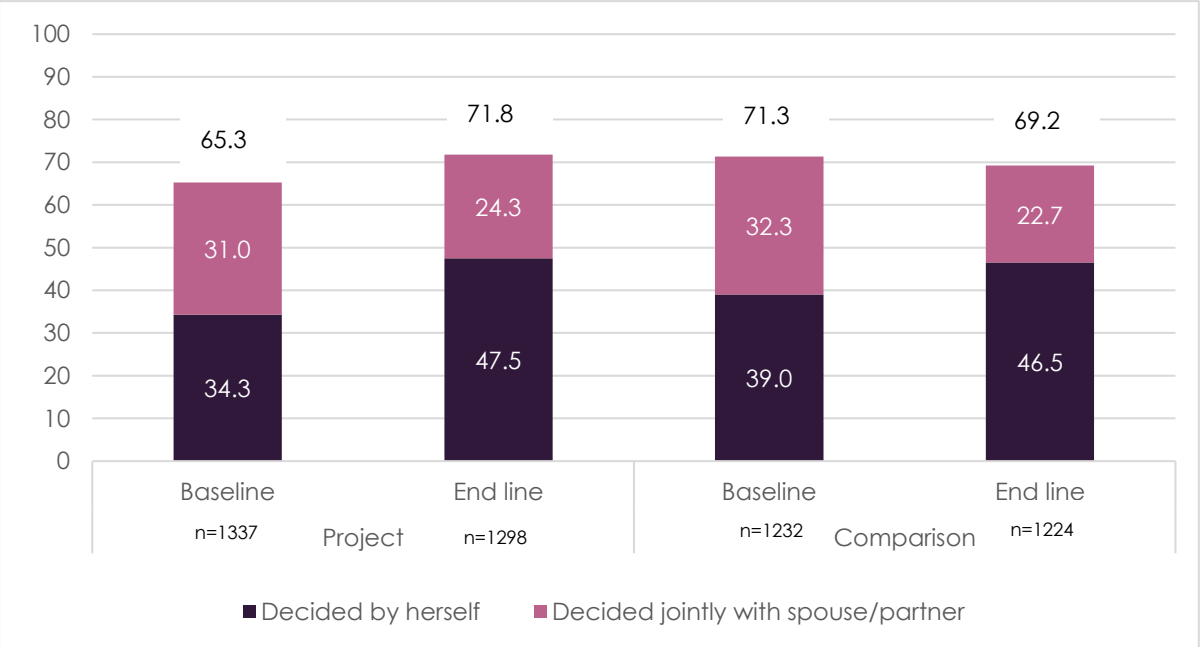
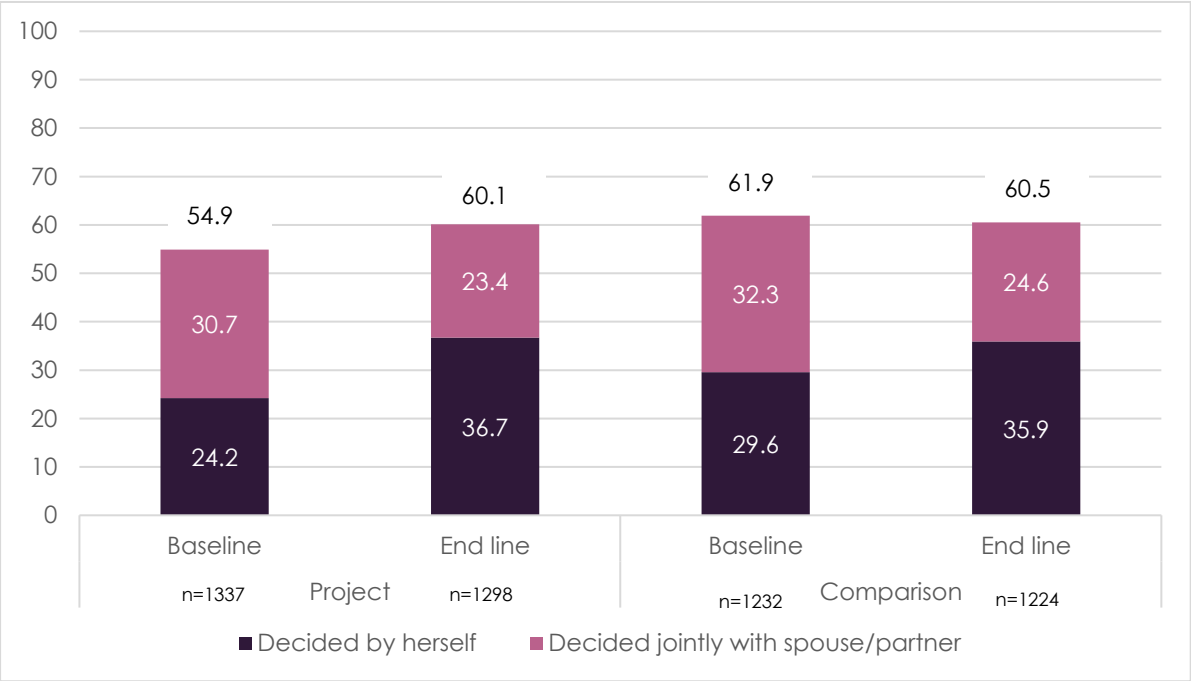


Figure 4. Among households that grew groundnuts at both baseline and end line, percentage of households' groundnut fields where women participated in deciding which groundnut seed variety to plant



Consistent with quantitative findings, most qualitative respondents both at baseline and end line reported that women were involved in groundnut production decisions—including which type of seed to plant, how much seed to plant, what method to use for land preparation, when to weed and harvest, and who would provide labor for production activities—and that many of these decisions were made jointly. Concerning the selection of seed variety, many male and female qualitative respondents reported that women often made this decision, either on their own or jointly with their spouse.

Female respondents explained that they knew more about seed type, and had a special interest in seed variety because they use groundnuts in cooking.

> *Generally, men do not know the best groundnut seed varieties that is why I am the one who decides.* (Female farmer, Lundazi—IDI respondent)

> *I decide … because we need the groundnuts for our food and also for us to sell. Also because he [husband] doesn't pay that much attention to the groundnut crop.* (Female farmer, Lundazi— IDI respondent)

However, unlike the quantitative findings, there was no suggestion by qualitative respondents that there had been a shift from joint to sole decision making among women for any of the production decisions. Instead, some respondents reported that men were more involved in groundnut production, in general.

> *Men are now very much involved in the growing of groundnuts, which was previously regarded as a woman's crop. They are seeing the benefits of growing groundnuts, which sell better and households have extra income to help them.* (Female CAD, Chipata)

In choosing a seed variety, respondents reported that they considered its potential yield and profitability, including its size, weight, and marketability; maturity period in the context of rainfall patterns; the type of soil it would be planted in; and the cost of seed and their ability to access and afford the seed. That said, respondents stated that they generally hold back a portion of the groundnut harvest to plant next season, in effect choosing to plant that variety.

We have already reserved [seed] for next season. That is how it is here in the village. In fact, we keep in advance because we never know when the rains will start. If you already have the seed, you just go and plant, but if you don't have the seed and the rains start when you do not even have any money, you will have nothing to plant. (Female farmer, Lundazi— FGD participant)

EXPOSURE TO INTERVENTIONS AIMED AT MAINTAINING WOMEN'S CONTROL OVER GROUNDNUT PRODUCTION

This section presents findings related to the research question, "What interventions might assist in maintaining women's control over production of groundnuts (as commercialization efforts are expanded)?" PROFIT+ and BLA aimed to increase women's empowerment and inclusion in agricultural production by promoting gender messages on shared household labor, decision making, and budgeting. Both projects also promoted SILCs to empower women by increasing their access to finance and credit. A summary of key findings on these interventions, based mainly on the qualitative data, follows.

Gender Messages Promoted by PROFIT+ and BLA

CADs and BLA lead farmers reported that PROFIT+ and BLA promoted three main gender messages: shared household labor, joint decision making, and joint budgeting between husbands and wives.

To promote shared labor, CADs and lead farmers stressed the importance of sharing work to bring unity and progress to the household.

> *The messages that have been promoted are that working together is a good thing because it brings unity and development in the community and even at the house. If you work together you will see development … A man … should not let a woman do all the household chores alone.* (Female CAD, Chipata)

> *COMACO*[8] *promotes many messages when it comes to gender issues. Firstly, I will talk about duties/chores. In the past, there were things that we used to say only women can do and things we used to say only men can do but now COMACO teaches us that we need to help each other as men and women, husbands and wives.* (Female BLA lead farmer, Lundazi)

> *Men were told to start helping out in doing house chores after knocking off from the fields and not leaving it to women alone.* (Female CAD, Chipata)

To promote joint decision making, CADs and lead farmers explained that they again stressed household unity and equal partnership and women's capacity to participate in making sound decisions.

> *They said a woman also qualifies to be a leader. A man should allow a woman to make decisions in the household … We had a lot of teachings about gender and joint decision making and they used to invite both husbands and their wives for the meetings.* (Female CAD, Chipata)

> *When it comes to joint decision making, COMACO tells us that decisions must be made together because both man and woman are human beings so there shouldn't be any segregation of duties.* (Female BLA lead farmer, Lundazi)

> *The concentration was on how men consider women at household level … The messages centered on changing the mindset of our men so that they start considering women as partners who are entitled to their own opinion. Other than using them as property for work and bearing children, women should be allowed to take part in every decision made at the household level.* (Female CAD, Chipata)

Promotion of joint budgeting was similar to that of joint decision making, stressing unity and partnership and involvement of older children.

[8] Most respondents know BLA as COMACO.

Quantitative respondents were asked whether they had received information or training on several gender messages. At baseline, 20.2 percent of women in the project domain and 17.2 percent in the comparison domain reported receiving information or training on women's rights/roles in agriculture, with approximately 25 percent of women in both domains receiving this information/training at end line. Receipt of information/training on women's ability to own land was reported by 16.6 percent of women in the project domain and 9.7 percent in the comparison domain at baseline. At end line, slightly more than one-quarter of women in both domains reported receiving this information/training. Receipt of information/training on women's rights/roles in the family increased from slightly more than 21 percent at baseline to approximately 30 percent at end line in both domains (Table C13, Appendix C).

Adoption of Gender Messages and Household Change

Many female and male qualitative respondents reported that the gender messages promoted by PROFIT+ and BLA had brought change to their households. Although some male respondents were also beneficiaries of PROFIT+ or BLA and received the messages directly, others reported that they had received the training content through their wives or from other groups (e.g., nongovernmental organizations [NGOs], the MAL, churches).

Some respondents reported that men were now helping more with household chores.

> *What has changed is that I also do household chores, for example, we were called to attend this meeting but I had remained behind to do household chores since she is pregnant and I need to give her some rest.* (Male farmer, Lundazi)

> *In the past, each time I used to tell my husband that we should go to the farm, I would carry my child on my back when going because he would refuse to help out. But this time around because of gender,[9] when it's time to go to the field, my husband carries our child. A lot of things have changed … When I tell him I am too tired to do laundry, he helps out by doing the laundry. He also helps out with the cooking when I am sick … He helps out bathing the children and also feeding them.* (Female farmer, Lundazi—IDI respondent)

A few respondents reported that men were also helping more with groundnut production (please also refer to Qualitative Findings: Division of Labor for Groundnut Production in Appendix C).

> *In some cases, women were not even allowed to grow groundnuts or maybe just planting a very small portion. Men used to call it a woman's crop and difficult to grow [labor intensive]. If the woman insists that they want to grow groundnuts, men would not work with them or give any support. After we were trained about gender, most men have really changed and they are now appreciating women, even supporting them in the growing of groundnuts. They have realized that groundnuts can give them good cash.* (Female CAD, Chipata)

However, the quantitative findings on gender norms indicated little overall change in attitudes. Although some results suggested positive change, others suggested negative change. For example, although fewer women at end line, compared with baseline, agreed with the statements, "A good wife obeys her husband if she disagrees" and "A man should have the final word about decisions in the home" in both study domains, a greater percentage of women in both domains agreed with the statement, "Taking care of the children is the mother's responsibility." Fewer women agreed with the statement that "A married woman should be able to own land" at end line (Table C18, Appendix C).

[9] Many respondents referred to the gender messages promoted by the projects simply as "gender."

Many respondents reported that joint decision making and budgeting had increased. These findings are presented in the section titled, Exposure to Interventions Aimed at Maintaining Women's Control Over Sales and Proceeds.

Participation in SILCs

Membership in SILCs was very common among female respondents in the qualitative study, with most women reporting that they currently or recently belonged to such a group. Fewer men belonged to the SILCs, but many were aware of how they operated based on their wives' participation. Respondents belonged to groups run by CADs or lead farmers or that were established with the help of other organizations.[10]

Respondents reported that SILCs ("village banks") collected a monthly agreed on contribution from members and allowed members to borrow money at a set interest rate. At the end of a savings cycle (length determined by the group), members received their "share"—the amount saved plus a portion of the interest collected on loans.

Most respondents reported that groups had a set monthly contribution amount, although some reported that members could contribute as much as they liked. Some respondents reported that their group had a "social fund" (created from a small monthly contribution of just a few kwacha per member) from which members could receive funds in the event of an emergency, such as a sick child or a funeral.

PROFIT+ CADs reported that they had established SILCs after receiving training from PROFIT+. The CADs reported that they purposely included, but limited, male membership in their groups to expose men to women's ability to save and manage loans.

> *If it's a group of 15, the men can be five …The reason we put men in the group is for them to see and learn that women can also keep money like them.* (Female CAD, Chipata)

PROFIT+ also encouraged budgeting before saving.

> *Before we start saving, everyone must tell the group that after sharing out the money, I will do this and this. Then at the end, when we share out, everyone must do what they said they would do …We budget before we start saving.* (Female CAD, Chipata)

Respondents' experiences with SILCs were mostly positive and enabled participants to buy inputs, pay school fees, and improve their homes.

> *We have done a lot of things out of these savings. Sometimes we share the money when we are broke. If you do not have money to buy fertilizer, you buy from savings. The same with seed. We no longer use recycled maize seed, we now buy maize seed from our savings. Some have built houses from their savings.* (Female farmer, Chipata—FGD participant)

> *The savings group is a very progressive idea and it is really helpful. We have easy access to cash whenever we have a problem, especially school fees and inputs … I'm very comfortable with my wife's participation in this group … I have encouraged her to continue.* (Male farmer, Chipata)

[10] At times, it was difficult to distinguish the organization that supported the establishment of a SILC. Respondents would know the name of the person leading the group (who was also a member), but not always the organization that trained that person.

However, some respondents reported problems with SILCs related to poor leadership or members taking out loans and not paying them back. These respondents suggested that members should not be allowed to borrow amounts that exceeded their savings.

Quantitative female respondents reported increased membership in credit/microfinance groups at end line, especially in the project domain. At baseline, 6.7 percent of women in the project domain and 5.1 percent in comparison domain reported membership in a credit/microfinance group. This increased to 12.8 percent in the project domain and 7.6 percent in the comparison domain at end line (Table C10, Appendix C).

An increase in report of savings in a group or association was also noted among quantitative respondents. At baseline, only 5.2 percent of women in the project domain and 3.6 percent in the comparison domain reported savings in a group or an association. This increased to 12.3 and 7.6 percent among project and comparison respondents at end line, respectively (Table C7, Appendix C).

COMMERCIALIZATION OF GROUNDNUTS

This section present results related to the research question, "Do women maintain control over marketing of groundnuts and use of proceeds as commercialization efforts are expanded?" Findings are presented on the percentage of households that sold/bartered groundnuts, mean total quantity of groundnut sales/barter, women's participation in groundnut sales, and women's control over proceeds from groundnut sales.

Percentage of Households that Sold/Bartered Groundnuts

Among households that grew groundnuts in both seasons, the percentage of households that sold or bartered groundnuts increased significantly, by approximately 5 percentage points from baseline to end line in both study domains ($p<.05$). In the project domain, 51.6 percent of households sold or bartered groundnuts at baseline, compared with 56.7 percent at end line. In the comparison domain, 39.2 percent sold or bartered at baseline, compared with 43.6 percent at end line (Table 7 and Figure 5).

Among households that grew groundnuts in both seasons, the DID model found that the change in the percentage of households that sold or bartered groundnuts from baseline to end line in the project domain was 2.6 percentage points higher than in the comparison domain, but this difference was not statistically significant ($p=0.295$) (Table 8).

Table 7. Percentage of households that sold or bartered groundnuts

	Project			Comparison		
	Baseline	Baseline panel	End line panel	Baseline	Baseline panel	End line panel
Sold/bartered:	**49.7**	**51.6**	**56.7***	**36.4**	**39.2**	**43.6***
Shelled groundnuts only	15.3	15.5	15.9	8.0	8.7	8.1
Unshelled groundnuts only	28.1	30.1	29.5	26.5	28.3	28.3
Both shelled and unshelled groundnuts	6.0	5.7	6.4	1.9	2.2	4.2
Groundnuts, type missing**	0.3	0.3	4.9	0.0	0.0	3.0
Did not sell any groundnuts	50.3	48.3	43.4	63.6	60.8	56.3
Don't know/refused/missing	0.0	0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100
Number of women	1,499	1,254	1,254	1,542	1,202	1,202

*p<.05

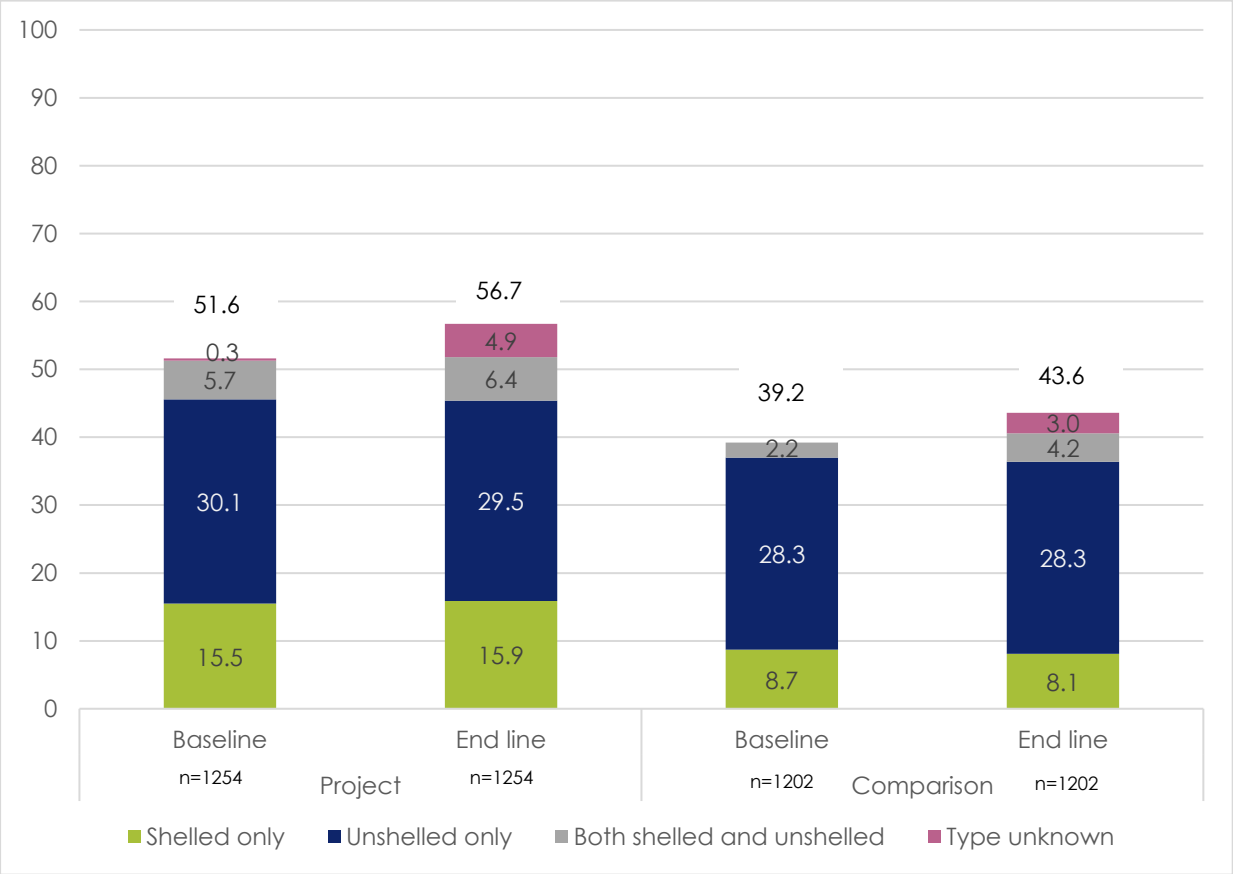
"Baseline" includes all households that grew groundnuts at baseline. "Baseline panel" and "End line panel" include only those households that grew groundnuts at both baseline and end line.

**At end line, a bug in the tablet survey resulted in some missing data on sales. When possible, sales data were imputed from field-level data; however, the type (shelled or unshelled) could not be imputed.

Table 8. DID results on whether the household sold/bartered groundnuts among households that grew groundnuts at both baseline and end line

Variables	Regression coefficient	SE	P value
Time	0.039	0.0172	0.023
Project x time	0.026	0.0243	0.295

Figure 5. Percentage of households that sold or bartered groundnuts among households that grew groundnuts at both baseline and end line



Mean Total Household Sale/Barter of Groundnuts

Among households that grew groundnuts in both seasons, the mean total household sale/barter of groundnuts increased significantly over time in both domains (project: p<.001; comparison: p<.01). In the project domain, there was a 44.3 percent increase in the volume of groundnuts sold/bartered (from 65.7 kgs to 94.8 kgs) and a 32.5 percent increase in the comparison domain (from 37.8 kgs to 50.1 kgs) (Table 9 and Figure 6).

Among households that grew groundnuts in both seasons, the DID model found that the increase in the sale/barter of groundnuts from baseline to end line was 18.6 kgs larger in the project domain than in the comparison domain (p<.01) (Table 10).

Among households that sold or bartered groundnuts in both seasons (project domain: n=393; comparison domain: n=278), the mean total household sale/barter of groundnuts increased by 30.4 percent in the project domain from baseline to end line (from 147.5 kgs to 192.4 kgs), and by 18.1 percent in the comparison domain in the same period (from 110.4 kgs to 130.4 kgs) (data not shown).

Table 9. Mean total household sale/barter (kgs) of groundnuts

	Project			Comparison		
	Baseline	Baseline panel	End line panel	Baseline	Baseline panel	End line panel
Mean total quantity sold or bartered	61.5	65.7	94.8	33.3	37.8	50.1
Number of women	1,499	1,254	1,254	1,542	1,202	1,202

"Baseline" includes all households that grew groundnuts at baseline. "Baseline panel" and "End line panel" include only those households that grew groundnuts at both baseline and end line.

Figure 6. Mean total household sale/barter (kgs) of groundnuts among households that grew groundnuts at both baseline and end line

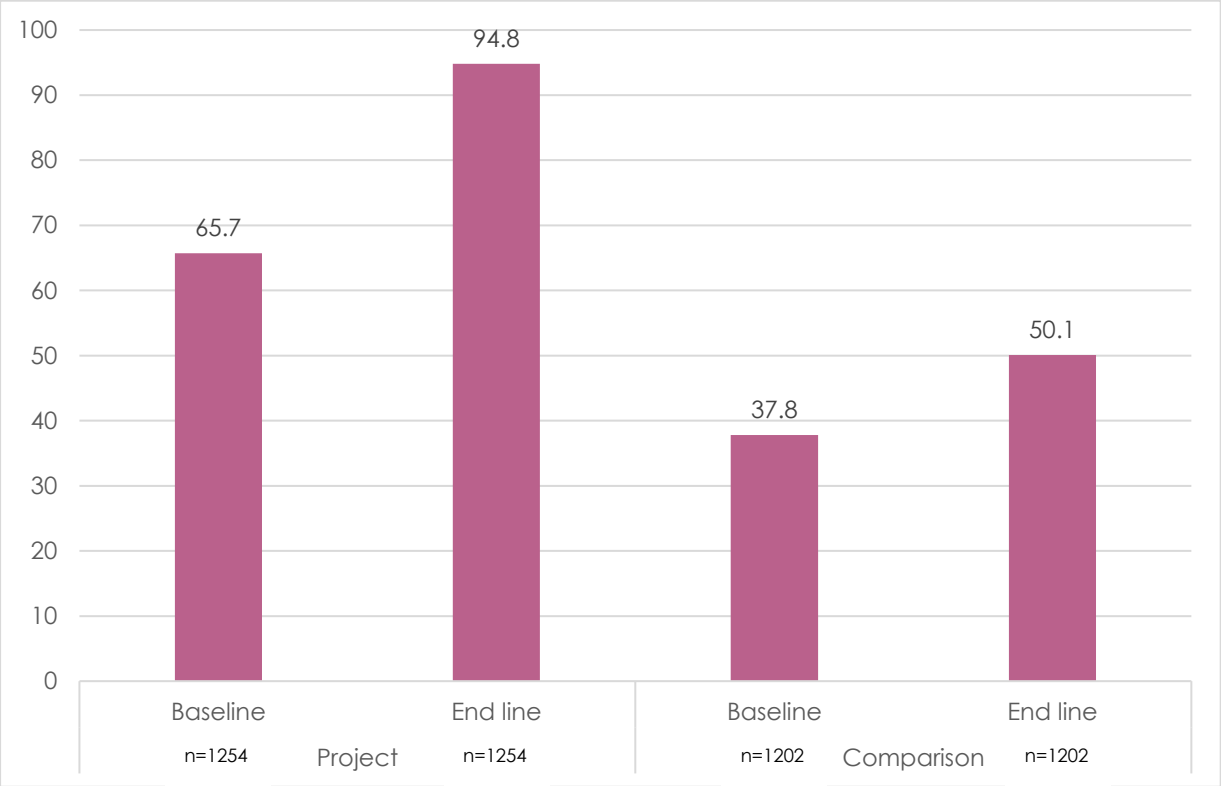


Table 10. DID results for the quantity of groundnuts sold/bartered among households that grew groundnuts at both baseline and end line

Variables	Regression coefficient	SE	P value
Time	12.030	3.3173	0.000
Project x time	18.584	5.4670	0.001

Women's Participation in Groundnut Sales

Of groundnut fields in the project domain from which groundnuts were sold, women were involved in the decision to sell for 57.2 percent of fields at baseline. The percentage of fields for which women were involved in the decision to sell increased to 60.1 percent at end line, with a shift to sole female decision making. In the comparison domain, the percentage of fields for which women were involved in the decision to sell declined from 62.2 percent at baseline to 58.8 percent at end line (Table 11, Figure 7).

Among groundnut fields from which groundnuts were sold, the DID model found that the change in the percentage of women participating in the decision to sell groundnuts from baseline to end line in the project domain was 6.5 percentage points higher than the change in the comparison domain, but this difference was not statistically significant (p=0.184) (Table 12).

Of groundnut fields in the project domain from which groundnuts were sold, women were physically involved in selling for 55.7 percent of fields at baseline. This increased to 57.7 percent at end line, with a shift to sole female decision making. In the comparison domain, although women were involved in selling for approximately 58 percent of the groundnut fields in both seasons, there was a shift to sole female decision making (Table 11, Figure 8).

Among groundnut fields from which groundnuts were sold, the DID model found that the change in the percentage of women who participated in selling groundnuts from baseline to end line in the project domain was 1.5 percentage points less than the change in the comparison domain, but this difference was not statistically significant (p=0.754) (Table 13).

Table 11. Percentage of households' groundnut fields from which groundnuts were sold where women participated in the decision to sell and the sale

	Project		Comparison	
	Baseline	End line	Baseline	End line
Decision maker of whether to sell groundnuts harvested from the field				
Woman	57.2	60.1	62.2	58.8
By herself	*26.4*	*33.5*	*29.8*	*32.6*
Jointly with spouse/partner	*30.8*	*26.6*	*32.4*	*26.2*
Spouse/partner	40.3	39.8	36.9	40.3
Other	2.5	0.1	1.0	0.9
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Person who sold groundnuts harvested from the field				
Woman	55.7	57.7	58.2	58.1
By herself	*38.1*	*44.5*	*37.8*	*45.6*
Jointly with spouse/partner	*17.6*	*13.2*	*20.4*	*12.5*
Spouse/partner	39.9	40.6	37.8	39.6
Other	4.4	1.6	4.0	2.3
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of fields	709	699	527	501
Decision maker of whether to sell groundnuts harvested from the field				
Woman	57.2	60.1	62.2	58.8
By herself	*26.4*	*33.5*	*29.8*	*32.6*
Jointly with spouse/partner	*30.8*	*26.6*	*32.4*	*26.2*
Spouse/partner	40.3	39.8	36.9	40.3
Other	2.5	0.1	1.0	0.9

	Project		Comparison	
	Baseline	End line	Baseline	End line
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Person who sold groundnuts harvested from the field				
Woman	55.7	57.7	58.2	58.1
By herself	*38.1*	*44.5*	*37.8*	*45.6*
Jointly with spouse/partner	*17.6*	*13.2*	*20.4*	*12.5*
Spouse/partner	39.9	40.6	37.8	39.6
Other	4.4	1.6	4.0	2.3
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of fields	709	699	527	501

Baseline includes all households that sold groundnuts at baseline. End line includes all households that sold groundnuts at end line.

Table 12. DID results for whether women participated in deciding to sell groundnuts among groundnut fields from which groundnuts were sold

Variables	Regression coefficient	SE	P value
Time	-0.027	0.0360	0.457
Project x time	0.065	0.0488	0.184

Table 13. DID results for whether women participated in selling groundnuts among groundnut fields from which groundnuts were sold

Variables	Regression coefficient	SE	P value
Time	0.011	0.0359	0.749
Project x time	-0.015	0.0483	0.754

Figure 7. Percentage of households' groundnut fields from which groundnuts were sold where women participated in the decision to sell

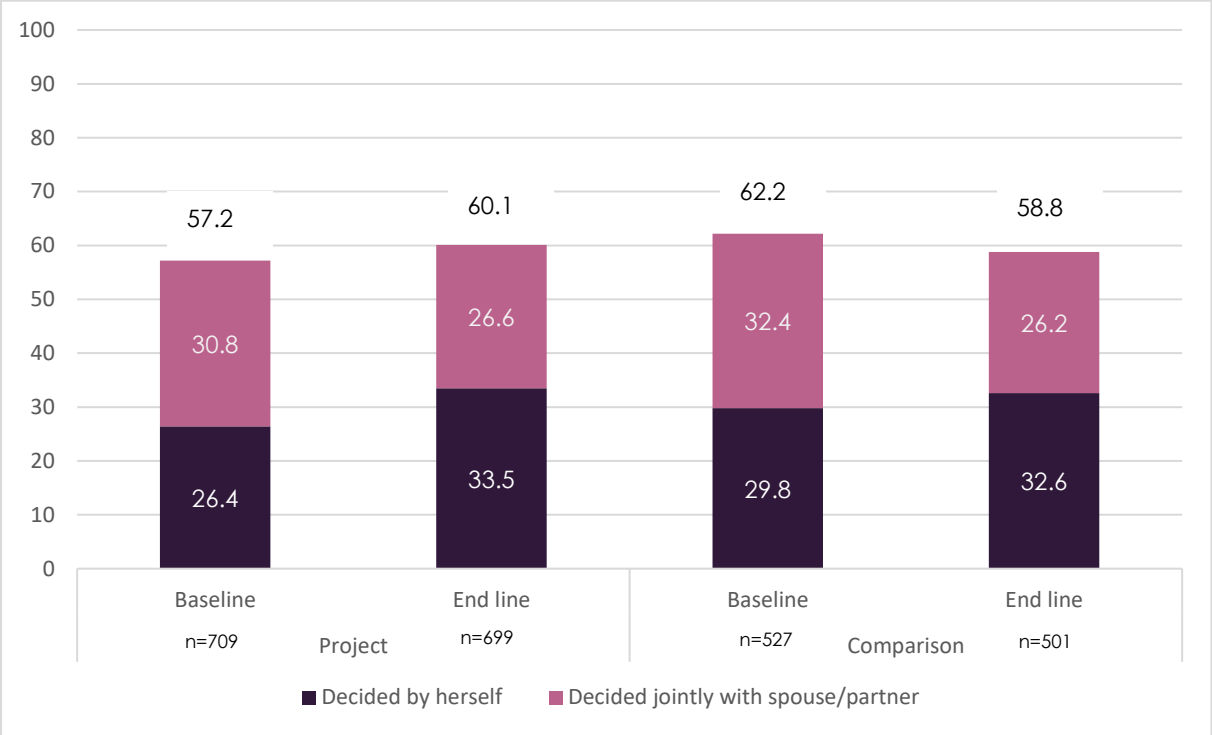
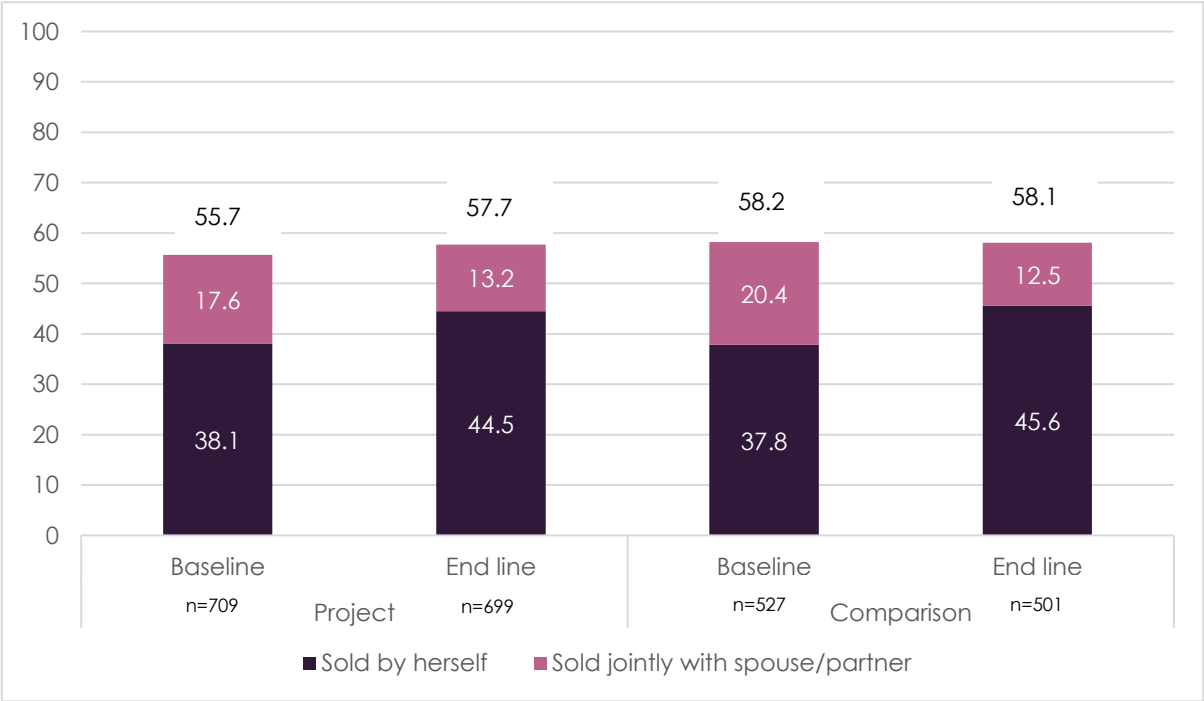


Figure 8. Percentage of households' groundnut fields from which groundnuts were sold where women participated in selling



Women's Control over the Proceeds from Groundnut Sales

Among the households that sold groundnuts at both baseline and end line, just under two-thirds of women in both study domains reported that they participated in deciding how to use proceeds from the largest sale of groundnuts in both seasons (Table 14 and Figure 9).

Among households that sold groundnuts in both seasons, the DID model found that the change in the percentage of women who participated in deciding how to use proceeds from the largest sale of groundnuts from baseline to end line in the project domain was 3.6 percentage points higher than the change in the comparison domain, but this difference was not statistically significant (p=0.476) (Table 15).

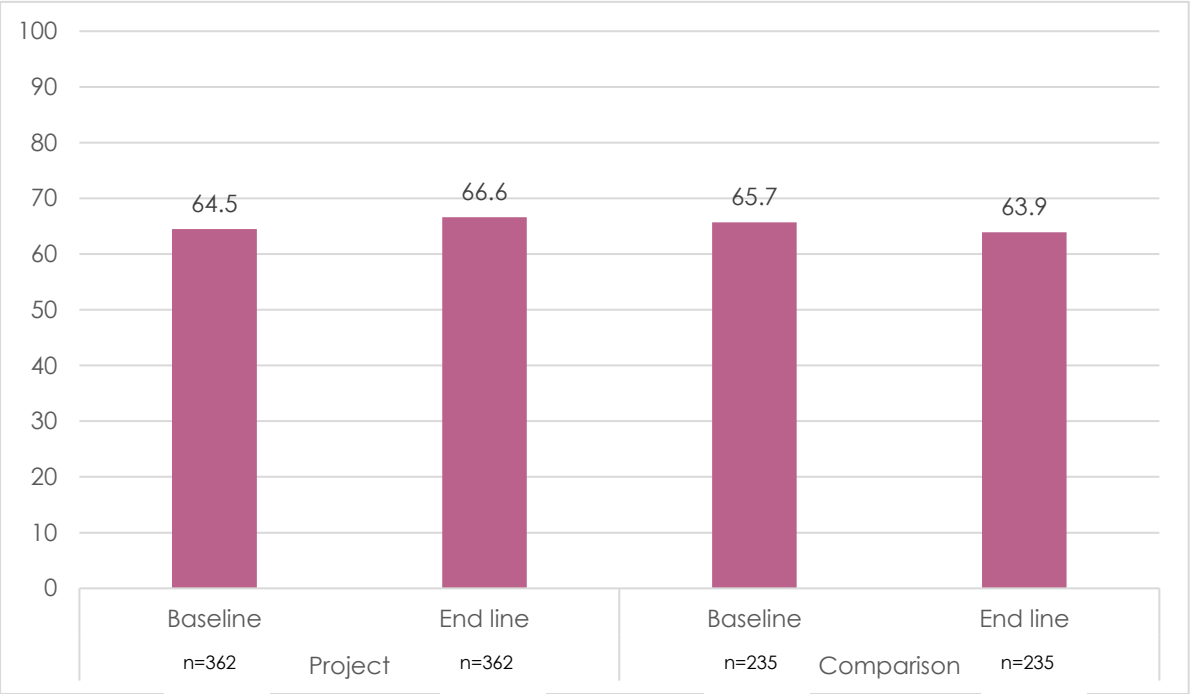
Table 14. Percentage of women who participated in deciding how to use proceeds from the largest sale of groundnuts

	Project		Comparison	
	Baseline	End line	Baseline	End line
Among all households that sold groundnuts				
Woman decided solely or jointly	64.6	64.7	67.7	62.1
Missing	0.4	0.0	0.4	0.0
Number of women	680	604	517	445
Among households that sold groundnuts at both baseline and end line				
Woman decided solely or jointly	64.5	66.6	65.7	63.9
Missing	0.4	0.0	0.0	0.0
Number of women	362	362	235	235

Table 15. DID results for women's control over proceeds from groundnut sales among households that sold groundnuts at both baseline and end line

Variables	Regression coefficient	SE	P value
Time	-0.035	0.0395	0.381
Project x time	0.036	0.0511	0.476
Type of groundnut sold: shelled only	-0.037	0.0731	0.614
Type of groundnut sold: unshelled only	-0.007	0.0687	0.920

Figure 9. Percentage of women who participated in deciding how to use proceeds from the largest sale of groundnuts among households that sold groundnuts at both baseline and end line



Consistent with quantitative findings, the majority of baseline and end line qualitative respondents reported that women were usually involved in decisions about use of proceeds from groundnut sales. At end line, many qualitative respondents reiterated that there was little change during the past three years in women's participation in deciding how to use proceeds. However, some qualitative respondents reported that women had more say in deciding how to use proceeds from groundnut sales as a result of the gender messages promoted by PROFIT+ and BLA.

> *There have been changes because of the many lessons we were given by organizations such as PROFIT+ … [In the past] they [men] would decide on their own. We would even fight over sales but still they wouldn't allow us to make any decisions or be a part of the decision-making process … There is no fighting now. We are fully aware of everything that is happening. We have been well educated and so have they.* (Female farmer, Chipata—FGD participant)

> *Things have changed … because now we make budgets and these budgets are made before going to sell, and so even as one goes to the market to sell, they already know this money is meant for this and that. Sometimes you will find he is even the one suggesting that you, the wife, should go and sell because he doesn't want to misuse the money … In the past, women had no say. Men had all the power when it comes to running the home. Before all this education that has come from these organizations, we wouldn't even attempt to say anything.* (Female farmer, Chipata—FGD participant)

EXPOSURE TO INTERVENTIONS AIMED AT MAINTAINING WOMEN'S CONTROL OVER SALES AND PROCEEDS

This section presents findings related to the research question, "What interventions assist in maintaining women's control over marketing/sales of groundnuts and control over proceeds (as commercialization efforts are expanded)?" PROFIT+ and BLA aimed to increase women's empowerment and inclusion in agricultural sales and maintain women's control over proceeds from sales through gender messaging.

The three main gender messages promoted by PROFIT+ and BLA (shared household labor, joint decision making, and joint budgeting) were relevant to both production and sales. The promotion of joint budgeting, in particular, encouraged women's participation in decisions about use of proceeds from sale of crops.

> *We encouraged them to start making budgets together from the beginning of the season until they sell their produce, that in itself is a big motivation to women. Even children are supposed to be involved as well.* Female CAD, Chipata

> *They taught us [that the] budget should be made by both wife and husband together and that we are supposed to be working together at home. They said a woman should not borrow money from somewhere without the husband knowing, but that in everything, [the] husband and wife must be open to each other and share information … for it is not good for people from one household to do things independent of the other.* (Female BLA lead famer, Lundazi)

Some qualitative respondents reported that joint decision making and budgeting had increased in their household.

> *I have made a lot of adjustments in my household…We make farming plans together and after selling our products, we make budgets together. Most of the things a man does, a woman can do as well.* (Male farmer, Lundazi)

> *Since they trained us, change has been seen as many homes are following what we were being taught. In the past, men used to do everything alone, making budgets, keeping the money, they were only releasing the monies when a woman asked for salt and grinding expenses.* (Female CAD, Lundazi)

Quantitative respondents were also asked about their exposure to information/training on joint budgeting and sharing proceeds from crops with their spouse. At baseline, just under 20 percent of women in both domains reported receiving information or training on budgeting as a household. At end line, approximately one-third of women reported receiving this information. Although only approximately 14 percent of women in both domains reported receiving information or training on sharing profits from crops jointly with their spouse at baseline, approximately one-quarter of women reported receiving this information at end line (Table C13, Appendix C).

Quantitative respondents were also asked about their agreement with statements on gender norms and attitudes, and about women's participation in household decision making. At baseline and end line, nearly all (97 percent) of the female respondents in both domains agreed with the statement, "The husband and wife should decide together how to spend money from crop harvests" (Table C18, Appendix C.)

Quantitative respondents reported little change in household decision making from baseline to end line about their involvement in decisions about major and minor household expenditures. Of households that made decisions about major expenditures, women in the project domain reported being involved in decision making approximately 56 percent of the time at both baseline and end line. In the comparison domain, although approximately 58 percent of women reported being involved in decisions about major expenditures at baseline, only 51 percent reported being involved at end line. Approximately 80 percent of women in both domains reported being involved in making decisions about minor household expenditures at both baseline and end line (Table C9, Appendix C.)

EXPOSURE TO INTERVENTIONS AIMED AT INCREASING GROUNDNUT COMMERCIALIZATION

The research questions for the Zambia GNVC impact evaluation focus on whether women maintain control over groundnut production, marketing/sales, and proceeds *as commercialization efforts are expanded.* This section presents findings on exposure to interventions aimed at increasing commercialization of groundnuts. Both PROFIT+ and BLA promoted conservation farming practices and linkages to inputs (seed) to increase production. Both projects also sought to increase linkages to markets to improve sales. Key findings on these interventions, based mainly on the qualitative data, are summarized below.

Conservation Farming Practices Promoted by PROFIT+ and BLA

Nearly all qualitative respondents were familiar with the demonstration plots in their communities managed by PROFIT+, BLA, or another organization[11] and had personally visited them. The practices demonstrated for groundnut production most frequently reported by respondents were tillage and planting—ripping the land before the start of the rains, making planting basins, and filling the basins with manure before planting. Many respondents reported that they were also taught about plant spacing, how to make compost/manure, how to dry groundnuts using the Mandela cock method to reduce aflatoxin contamination, planting gliricidia trees to enhance soil fertility, and the importance of crop rotation. A few reported that they were taught about the use of herbicides.

Many respondents reported that the demonstration plots were helpful and the practices promoted helped them to improve their groundnut yields.

> *There are a lot of benefits in using conservation farming. Our yields have greatly improved and we are able to maintain soil fertility in our fields.* (Female farmer, Lundazi—FGD participant)

> *Before COMACO, we used to grow groundnuts in ridges, but when they came, they discouraged it and introduced us to conservation farming, which is very good looking at the current rainfall patterns. We do not receive rains the way we used to, but with little rains we have good yields.* (Male farmer, Lundazi)

A few respondents, mostly men, noted that they were too busy to visit the demonstration plots regularly. Other respondents stated that some practices were too expensive for them to adopt. For example, ripping requires a plough and animals, and if the household does not own them, they must be hired. Herbicides were also noted by some respondents to be cost prohibitive.

Quantitative respondents were asked about their exposure to information or training on conservation farming. In both study domains, approximately half of women interviewed at baseline, and nearly two-thirds at end line reported that they had received information or training on conservation farming (Table C13, Appendix C). However, the adoption of practices was low. For example, ripping as a main tillage method for groundnuts was reported by only 1.9 percent and 3.4 percent of project households at baseline and end line, respectively, and by 0.3 percent and 2.6 percent of comparison households at baseline and end line, respectively (Table C1, Appendix C).

[11] Community leaders reported that conservation farming was also taught by the MAL, the Conservation Farming Unit (an independent organization funded by the British Department for International Development), and women's associations.

Linkage to Inputs

Both BLA and PROFIT+ promoted the improved groundnut seed varieties MGV4, MGV5, and Chishango. BLA's input strategy was to supply farmers with groundnut seed at the start of the agricultural season and recover an agreed on amount of seed at harvest. Respondents who had experience with BLA most frequently reported receiving seed from BLA in just one season, although a few had received seed in more than one season.

The reported amounts of seed supplied to farmers varied, as did the agreed on rate at which BLA recovered seed. A few respondents reported that BLA recovered as little as 133 percent of what they were supplied (e.g., a farmer received 15 kgs and paid back 20 kgs), although most reported that BLA recovered seed at a rate of 150 percent or 200 percent.

A few respondents, who were not supplied seed by BLA/COMACO, complained that lead farmers only gave seed to friends and family.

> *Here in our village, those that are in leadership are from within the village and they do things the way they want just to favor their relatives. So mostly you find that we can register our names to get seed, but you find that your name doesn't appear yet [to receive seed]. All the names of their family members appear and even get seed.* (Female farmer, Lundazi—IDI respondent)

PROFIT+'s input strategy was to strengthen the legume seed value chain to make more seed available in the market, and to link farmers to inputs through the CADs. As such, most respondents did not receive seed directly from PROFIT+, with some finding this problematic.

> *Here in the village, we want to be helped. We received lessons, and we want them [PROFIT+] to help us by giving us seed or finding a market for us. But with them, they just teach and we find seed ourselves.* (Female farmer, Chipata—IDI respondent)

However, a few respondents reported that they were given small amounts of groundnut seed by CADs that they did not have to pay back. Others reported being supplied seed by a CAD that they paid back at recovery rates similar to BLA's. A few reported buying groundnut seed from a CAD's shop.

A few respondents also reported participating in seed loan/recovery programs through other groups, such as Share Africa (a PROFIT+ partner), World Vision, and the Conservation Farming Unit. Many respondents reiterated that they recycled seed from season to season.

Qualitative respondents did not have a great deal of direct experience growing MGV4, MGV5, and Chishango. A somewhat larger number of respondents had heard about the varieties and their qualities. MGV4 was the best known and was reported by both male and female respondents to have a high yield, be heavy, have a high fat/oil content, and garner a good price at market. Women reported that they did not like this variety for cooking relish (a cooked vegetable) because its high oil content causes vegetables to go bad quickly. Chishango was the second most well-known of the varieties, although in describing what they knew about the variety, at times respondents reported conflicting qualities (e.g., requires a lot of rain, requires little rain). MGV5 was the least well known; one respondent said that it was good for peanut butter.

Quantitative respondents reported on seed variety planted. Approximately 2 percent or less of households planted MGV4 or MGV5 at either baseline or end line. Use of Chishango was also low but increased in both domains (from 2.5 to 5.5 percent in the project domain and from 0.8 to 1.9 percent in the comparison domain) (Table C3, Appendix C).

Linkage to Market

Although BLA's approach involved directly buying groundnuts from beneficiaries, PROFIT+ largely sought to link smallholders to buyers through CADs. Some PROFIT+ and BLA beneficiaries reported that selling groundnuts through CADs or to BLA (COMACO) was a positive experience; the prices were good, weighing scales were accurate, and the need to transport groundnuts for sale was eliminated.

> *The price we are receiving now is far better than it used to be previously, especially if we sell to the [community] agro-dealer …the presence of the agro-dealer has really helped to change things here.* (Male community leader, Chipata)

> *They [COMACO] come to us …Transport cost would have been a problem for us. But they come to buy here and they come with their own transport to get the groundnuts.* (Female farmer, Lundazi—IDI respondent)

However, other PROFIT+ and BLA beneficiaries lamented that CADs and COMACO did not consistently buy groundnuts each year, or could not buy all that was produced, resulting in an unreliable market.

> *We used to sell our groundnuts to COMACO … But for the past few seasons they have bought from very few farmers. They were buying, but not compared with previous years. We had a very active lead farmer who used to encourage even men to be working together with their wives to grow groundnuts, but they have become inactive as well.* (Male community leader, Lundazi)

> *We are actually complaining because we do not understand why she [CAD] stopped buying…We take our groundnuts to Malawi or the Lundazi boma and sell … Sometimes when we take the groundnuts to the boma we find that the scales are tampered with and so we lose out.* (Female farmer, Lundazi—IDI respondent)

Those that did not sell to either the CADs or to COMACO reported that the market could be poor and unreliable, with low prices. These respondents reported that they sold to mobile vendors or their neighbors.

> *Sometimes, when you grow a lot of groundnuts, you find [that] there is not [a] market for your crop. The only way our groundnuts finish is when people pass by buying groundnuts … People put that much more attention into growing maize and soya, saying that groundnuts have little market.* (Female farmer, Chipata—IDI respondent)

> *There is no reliable market other than the vendors, but the prices they offer are not helping farmers. We do not have an alternative market apart from the vendors. We are forced to sell at their prices because we need money.* (Male farmer, Chipata)

> *There is no market here. If you are to sell groundnuts, it means you sell to your neighbors and at a low price.* (Female farmer, Lundazi—FGD respondent)

Quantitative respondents who sold groundnuts reported on the buyer of the largest sale. For the largest sale of shelled groundnuts, most sales were to retailers/marketers, followed by small scale traders or millers/processors, and large-scale traders/wholesalers at both baseline and end line in both study domains (Table C4, Appendix C). For the largest sales of unshelled groundnuts, most sales were to retailers/marketers, followed by small scale traders or millers/processors (Table C5, Appendix C). For both the largest sale of shelled and unshelled groundnut, there was a notable decline in the percentage selling to retailers/marketers at end line in both study domains.

Sales to COMACO in the project domain increased from 1.6 percent at baseline to 2.3 percent at end line for the largest sale of shelled groundnuts, and from 1.7 percent to 7.2 percent for the largest sale of unshelled groundnuts (Tables C4 and C5, Appendix C). In the comparison domain, sales to COMACO were negligible for the largest sale of shelled groundnuts (Table C4, Appendix C), and increased from 0 percent to 4.3 percent for the largest sale of unshelled groundnuts (Table C5, Appendix C).

CADs were added as a category for the end line quantitative survey, but were rarely mentioned as the buyer of the largest sale of shelled or unshelled groundnuts (Tables C4 and C5, Appendix C).

DISCUSSION

In Zambia, women tend to maintain considerable control over production decisions and use of income for traditionally female-controlled crops, such as groundnuts, cowpeas, and sweet potatoes (Chapoto and Zulu-Mbata, 2015). Ccommercialization of traditionally female-controlled crops can result in men taking over the commodity once it becomes profitable (Mehra and Rojas, 2008). Therefore, interventions aimed at commercializing value chains, especially those predominantly perceived to be the domain of women, need to take steps to ensure that women's relative control of income and other assets is maintained, if not increased. The Zambia GNVC impact evaluation aimed to determine whether gender mainstreaming and the gender-focused interventions implemented by PROFIT+ and BLA assisted in maintaining or increasing women's control over groundnut production, marketing/sales, and proceeds as efforts to increase groundnut commercialization were expanded. Table 16 summarizes the key findings for each evaluation question.

Overall, the evaluation found that women's participation in groundnut production, marketing/sales, and use of proceeds was maintained during the implementation of the PROFIT+ and BLA's groundnut commercialization interventions. Women's participation in groundnut production decisions increased significantly in the project domain and there was a shift to sole female decision making in both the project and comparison domains. Women's participation in groundnut marketing and use of proceeds from sales did not change significantly in either study domain. Qualitative results indicate that beneficiaries perceived that gender messages and SILCs, which were promoted by both PROFIT+ and BLA, impacted women's empowerment, engagement in household decision making, and access to financial resources. However, the quantitative data did not show systematic population-level changes in gender attitudes and norms associated with the gender messages promoted.

The gender messages promoted by PROFIT+ and BLA in the project domain were fairly widespread in most parts of rural Zambia because other organizations, such as church groups, NGOs, government ministries, and civil society groups promote these same key messages to rural households. Our results showed similar exposure to gender messages in both the project and comparison domains, which may contribute to our finding of increases in sole female decision making on groundnut production in both study domains. SILCs were also run by a range of organizations in rural Zambia. The qualitative respondents sometimes did not know which organization supported the start of the SILC in which they participated, so attributing SILCs to specific projects is difficult. Participation in SILCs increased in both the project and comparison domains but increased more and was higher at end line in the project domain.

Table 16. Summary of key findings

Evaluation questions	Findings
Do women maintain control over production of groundnuts as commercialization efforts are expanded?	The percentage of women who participated in groundnut production decisions, either solely or jointly, increased significantly in the project domain, but stayed the same in the comparison domain. There was an increase in sole female decision making in both domains. The DID model found that the change in the percentage of women participating in the decision to grow groundnuts from baseline to end line in the project domain was 5.5 percentage points larger than in the comparison domain ($p<.05$). Similarly, the change in the percentage of women participating in deciding which groundnut seed variety to plant in the project domain was 7.1 percentage points larger than in the comparison domain ($p<.01$).
Evaluation questions	**Findings**
What interventions might assist in maintaining women's control over production of groundnuts?	Qualitative analysis suggests that promotion of gender messages (shared labor, joint decision making and joint budgeting between husbands and wives) and SILCs had a positive effect on maintaining women's control over groundnut production. Respondents reported that women's empowerment and inclusion in household decision making increased when the gender messages were adopted, and SILCs increased women's access to finance and credit, which empowered women to purchase agricultural inputs and may have contributed to women maintaining control over groundnut production. However, quantitative results suggest little change in gender attitudes at the population level in either the project or comparison domain. Women's participation in SILCs increased, especially in project areas.
Do women maintain control over marketing of groundnuts and proceeds as commercialization efforts are expanded?	There was a significant increase in the percentage of households that sold/bartered groundnuts in both study domains. At end line, 56.7 percent of project households and 43.6 percent of comparison households sold/bartered groundnuts. Mean total household sale/barter of groundnuts (kgs) also increased significantly in both domains. Although the DID model found that the increase in the percentage of households that sold/bartered in the project domain was not statistically different from the increase in the comparison domain, the increase in mean total sale/barter was 18.6 kgs larger in the project domain than in the comparison domain ($p<.01$). There were no statistically significant changes in women's involvement in deciding to sell groundnuts or how to use proceeds from sales in either the project or comparison domains, suggesting that women's role in decision making on groundnut marketing and use of proceeds was maintained as commercialization efforts increased. Approximately 60 percent of women participated in the decision to sell groundnuts and approximately two-thirds participated in deciding how to use proceeds from groundnut sales at both baseline and end line in both study domains. Consistent with quantitative findings, most end line qualitative respondents reported that women were actively involved in decision making for groundnut marketing and use of proceeds, and that there had not been any change over the past three years because households had been practicing joint decision making during this period. The DID model found that the change in the percentage of women who participated in decisions about groundnut sales/proceeds in the project domain was not significantly different from the change in the comparison domain.

Evaluation questions	Findings
What interventions assist in maintaining women's control over marketing of groundnuts and use of proceeds?	Qualitative respondents identified gender messages, especially those related to joint budgeting, as facilitating women's involvement in decisions about use of proceeds from crop sales. In the quantitative findings, almost all women agreed that husbands and wives should decide together how money from crop harvests should be spent at both baseline and end line in both the project and comparison domains.

An important consideration in interpreting the evaluation findings about women's control over production, marketing, and use of proceeds from groundnut sales is the extent to which commercialization of groundnuts increased during the project implementation period. In terms of groundnut production, the evaluation found a decrease in the quantity of groundnuts harvested in the project domain and an increase in the comparison domain. Although these changes were not statistically significant, the project domain outcomes mirror the national trend in groundnut production, which has shown a decline in production in Eastern Province (CSO/MAL, 2018). One of the underlying factors associated with the decline in quantity harvested is a reduction in the area harvested due to crop failure from poor rainfall patterns, an issue mentioned by some respondents in the qualitative interviews. Moreover, approximately two-thirds of the quantitative respondents who did not plant groundnuts at end line reported that the main reason was difficulty obtaining groundnut seed. However, concerning groundnut marketing, among households that grew groundnuts at both baseline and end line, there was a significant increase in the quantity of groundnuts sold by individual households, in both the project and comparison domains, and the increase was significantly higher in the project domain. Qualitative respondents indicated that interventions, such as selling through CADs or to COMACO, had some positive effect on groundnut marketing. They also reported that these interventions assisted in maintaining women's control over marketing of groundnuts, especially in the physical selling of groundnuts, because they reduced the distance to markets, which can be a barrier to women's participation in sales. However, relatively few women in the quantitative survey reported selling to COMACO or through CADs.

Our main evaluation finding that women did not lose control over groundnut production, marketing, and use of proceeds as commercialization increased is consistent with findings from other recent studies. Another recent study about increasing commercialization of the groundnut value chain in Eastern Zambia found that the introduction of mechanized shelling and higher sales did not reduce women's perceived control over groundnuts (Orr, Tsusaka, Kee-Tui, & Msere, 2016). However, in a cross-sectional analysis of the 2012 Zambia Rural Agricultural Livelihood Survey, Namonje-Kapembwa and Jayne (forthcoming) found that women were less likely to be involved in decisions about selling groundnuts and in decisions about the use of revenue from groundnut sales in households that harvested and sold larger quantities of groundnuts. Qualitative research from Malawi and Nigeria concluded that women could participate in new commercial cassava markets; however, women's ability to participate in and benefit from new commercialization opportunities depended on prevailing gender norms and specific household dynamics (Forsythe, Posthumus, & Adrienne, 2016).

One outstanding question is whether a certain threshold of commercialization has to be reached before women lose control of production, marketing, and use of proceeds from traditionally female-controlled crops. Some respondents in qualitative interviews reported that the market for groundnuts was weak. One explanation for women maintaining control during this period of increased commercialization of groundnuts is that the attention to gender by PROFIT+ and BLA (and other gender messaging efforts in the project and comparison domains) were successful in mitigating potential loss of control from increased commercialization. Another possibility is that preceptions of the groudnut market and profitability are not yet sufficient to attract a male takeover. This is an area for further research.

Several limitations of the study are described in the Methods section of this report. Our findings are consistent with PROFIT+ and BLA contributing to groundnut commercialization without displacing women from the groundnut value chain. However, causal attribution rests on the DID parallel trend assumption that the trends observed in the comparison domain represent those that would have been observed in the project domain in the absence of the interventions. Although our comparison domain was the best we could identify under the circumstances, groundnut production and markets are different in the two areas, which could lead to different commercialization trajectories. There were also multiple other projects and initiatives being implemented in both the project and comparison domains, and we therefore cannot definitively attribute exposure to specific interventions, such as gender messaging or SILCs, to PROFIT+ or BLA. Despite these limitations on definitive causal attribution, our core finding that women maintained control over groundnut production, marketing, and revenue as groundnut commercialization (as measured by volume of sales) increased remains relevant to the larger Feed the Future Learning Agenda on gender and women's empowerment in agriculture.

Last, the analysis in this report focuses on the primary questions identified for this impact evaluation. The data set provides opportunities for further exploration of other questions relevant to the Feed the Future Learning Agenda. For example, an analysis of relationships between exposure to program strategies and changes in decision making using different statistical approaches could provide further insights on the relative importance of the types of interventions and would allow for further triangulation of results with the DID findings. Qualitative findings from Orr, Tsusaka, Kee-Tui, and Msere (2016) found differences in male and female perceptions of household decision making, which is consistent with our analysis of the baseline data from this evaluation (Curtis, Hattori, Fehringer, Markiewicz, Lubungu, & Mackenzie, 2015). Analysis of gender differences in perceptions and the impact on the conclusions drawn about changing household decision-making dynamics is another potential area for further work. The results also contain extensive information on gender-based violence (Appendix C), which warrants further exploration in relation to household decision making.

CONCLUSION

The Zambia GNVC impact evaluation found that commercialization of groundnuts, as measured by the volume of sales, increased in households that grew groundnuts at both baseline and end line, and that women did not lose control of groundnut production, marketing, or use of proceeds as commercialization increased. These findings are consistent with PROFIT+ and BLA contributing to both groundnut commercialization and to maintaining women's place in the groundnut value chain. Gender messaging and SILCs were identified by qualitative respondents as supporting women's participation in the groundnut value chain. However, definitive causal attribution to PROFIT+ and BLA is hindered by the complex development landscape in Eastern Province and the myriad factors that influence groundnut production and markets, including climate change. Nevertheless, the study suggests that increased commercialization of a traditionally female-controlled crop does not necessarily lead to loss of female control, at least at the level of increased commercialization observed during this period, and that many couples work together to maximize benefits for the household.

REFERENCES

Aseno-Okyere, K., Jemaneh, S. (2012). *Increasing agricultural productivity and enhancing food security in Africa*. Washington, DC, USA: International Food Policy Research Institute (IFPRI). Retrieved from http://www.ifpri.org/publication/increasing-agricultural-productivity-enhancing-food-security-africa

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics,* 119(1), 249–275. Retrieved from https://academic.oup.com/qje/article/119/1/249/1876068

Chapoto, A.., & Zulu-Mbata, O. (2015). *Atlas of Zambian agriculture*. Lusaka, Zambia: Indaba Agricultural Policy Research Institute.

Central Statistical Office (CSO). *Post-harvest survey 2005–2006*. (Unpublished).

CSO/Ministry of Agriculture and Livestock(MAL). (2018). *Crop forecast survey data*. (Unpublished).

Curtis, S., Hattori, A., Fehringer, J., Markiewicz, M., Lubungu, M., & Mackenzie, A. (2015). *Impact evaluation of gender and groundnut value chains in Zambia: Baseline report*. Rockville, MD, USA: Feed the Future FEEDBACK Project. Retrieved from https://www.agrilinks.org/sites/default/files/resource/files/508_Feed%20the%20Future%20Zambia%20Impact%20Evaluation%20Baseline%20Gender%20and%20Groundnuts.pdf

Duflo, E. & Udry, C. (2004). *Intrahousehold resource allocation in Cote D'Ivoire: Social norms, separate accounts and consumption choices*. Cambridge, MA, USA: National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w10498.pdf

Forsythe, L., Posthumus, H., & Adrienne, M. (2016). A crop of one's own? Women's experiences of cassava commercialization in Nigeria and Malawi. *Journal of Gender, Agriculture and Food Security,*1(2):110–28. Retrieved from http://www.agrigender.net/views/women-experience-of-cassava-commercialization-in-nigeria-and-malawi-JGAFS-122016-6.php

Indaba Agricultural Policy Research Institute (IAPRI)/CSO/MAL. (2012). *Rural agriculture livelihoods survey*. Lusaka, Zambia: IAPRI. Retrieved from http://catalog.ihsn.org/index.php/catalog/7201/study-description

Indaba Agricultural Policy Research Institute (IAPRI)/CSO/MAL. (2016). *Rural agriculture livelihoods survey*. Lusaka, Zambia: IAPRI. Retrieved from https://images.agri-profocus.nl/upload/post/RALS_2015_Survey_Report__Finalv-_edited1456827249.pdf

International Food Policy Research Institute (IFPRI). (2014). *A toolkit on collecting gender & assets data in qualitative and quantitative program evaluations*. Washington, DC: IFPRI. Retrieved from http://gaap.ifpri.info/files/2010/12/GAAP_Toolkit_Update_FINAL.pdf

Mehra, R., & Rojas, M.H. (2008). *Women, food security and agriculture in a global marketplace*. Washington, DC, USA: International Center for Research on Women. Retrieved from: http://www.icrw.org/publications/women-food-security-and-agriculture-global-marketplace

Meinzen-Dick, R.S., Quisumbing, A.R., Behrman, J.A., Biermayr-Jenzano, P., Wilde, V., Noordeloos, M., … Beintema, N.M. (2010). *Engendering agricultural research*. Washington, DC, USA: International Food Policy Research Institute. Retrieved from http://www.ifpri.org/publication/engendering-agricultural-research

Mofya-Mukuka, R., & Shipekesa, A.M. (2013). *Value chain analysis of the groundnut sector in the Eastern Province of Zambia*. Lusaka, Zambia: IAPRI. Retrieved from http://www.iapri.org.zm/images/WorkingPapers/wp78.pdf

Namonje-Kapembwa, T. & Jayne, T.S. (forthcoming). *What determines women's decision making on use of income from crop production? Evidence from Zambia*.

Orr, A., Tsusaka, T., Kee-Tui, S.H., & Msere, H. (2016). What do we mean by 'women's crops'? Commercialization, gender, and the power to name. *Journal of International Development*, 28(6): 919–937. Retrieved from: https://onlinelibrary.wiley.com/doi/abs/10.1002/jid.3224

Quisumbing, A.R., Haddad, L., Meinzen-Dick, R., & Brown, L.R. (1998). Gender issues for food security in developing countries: implications for project design and implementation. *Canadian Journal of Development Studies/Revue canadienne d'études du développement,* 19(4):185–208. Retrieved from https://www.tandfonline.com/doi/abs/10.1080/02255189.1998.9669784

Republic of Zambia. (2012). 2010 Census of Population. Retrieved from https://www.zamstats.gov.zm/phocadownload/2010_Census/2010%20Census%20of%20Population%20National%20Analytical%20Report.pdf

Victora, C. G., Black, R. E., Boerma, J. T., & Bryce, J. (2011). Measuring impact in the Millennium Development Goal era and beyond: A new approach to large-scale effectiveness evaluations. *The Lancet* , 377(9759): 85–95. Retrieved from https://www.sciencedirect.com/science/article/pii/S0140673610608100?via%3Dihub

World Health Organization (WHO). (2001). *Putting women first: Ethical and safety recommendations for research on domestic violence against women*. Geneva, Switzerland: WHO. Retrieved from: http://www.who.int/gender/violence/womenfirtseng.pdf

Zhou, S., Minde, I.J., & Mitgwe, B. (2013). Smallholder agricultural commercialization for income growth and poverty alleviation in southern Africa: A review. *African Journal of Agricultural Research*, 8(22); 2599–2608. Retrieved from http://www.academicjournals.org/journal/AJAR/article-full-text-pdf/1334DA234788

APPENDIX A. PROJECT IMPLEMENTATION

This section summarizes the implementation of PROFIT+ and BLA based on process monitoring activities carried out by the evaluation team before the end line survey.

PROFIT+

Value Chain Strengthening

At the start of the project, PROFIT+ conducted comprehensive value chain and gender analyses to guide development of project interventions.

Noting that there was an insufficient supply of improved groundnut seed in Eastern Province, PROFIT+ examined the legume seed value chain to identify and address gaps in supply. PROFIT+ also worked to increase smallholder demand for improved seed, specifically MGV4, MGV5, and Chishango varieties. Through demonstration plots, seed fairs, radio programs, and farmer field schools, PROFIT+ promoted and/or demonstrated the increased yield associated with improved seed.

PROFIT+ promoted improved technologies through demonstration plots and farmer field schools. In total, 164,523 farmers (53 percent female) attended field schools led by demonstration host farmers. For groundnuts, the main improved technologies promoted were the use of improved seed, use of herbicides, and "Mandela cock" for drying to prevent aflatoxin, a practice adopted from Malawi that involves the creation of a ventilated stack for drying in the field. For conservation agriculture, ripping and basin-making for tillage were promoted. Adoption of these improved technologies and conservation agriculture practices were expected to improve groundnuts yield among smallholder farmers.

PROFIT+ also established CADs to bring seed and other inputs closer to farmers. There were 339 CADs (36 percent female) by the project's end, most of whom had served as demonstration host farmers before becoming CADs. The CAD model is the centerpiece of PROFIT+'s efforts to create a "distributor-sales agent/franchise model" that is appropriate for rural settings. Trained in business management, entrepreneurship, and negotiation skills, CADs own and manage agro-dealer shops that are located in rural communities. CADs are linked to input suppliers and buyers of crops and are meant to fill a gap in the value chain by providing retailing and marketing to smallholders.

PROFIT+ also linked CADs to existing SILCs, and trained CADs on how to create and manage new SILCs. PROFIT+ broadened its vision of SILCs and renamed them "agribusiness and savings groups." In addition to training members on savings and credit, CADs also trained members on business management and entrepreneurship and aggregated their crops for sale to buyers. Agribusiness and savings group members, which were 84 percent female, were also among CADs' primary customers. In total, 925 agribusiness and savings groups saved 2,412,828 Kwacha ($241,283) and issued 826,284 loans valued at 2,183,883 Kwacha ($218,384) to members during the project.

Gender

PROFIT+ promoted joint household decision making between men and women, shared labor, equal access to assets, access to finance, and women-friendly technologies. Although there was no prescribed format for including gender messaging in farmer field schools or agribusiness and savings groups, more formal training on gender occurred early in the project (Years 1 and 2; October 2012 to September 2014). Training was a gender mainstreaming training of trainers for 99 women and 30 men, with rollout to 36,058

smallholders (67 percent female); gender sensitization sessions for demonstration host farmers and their spouses; and leadership, governance, and gender trainer of trainers for 124 women and 51 men, with rollout to 44,228 smallholders (65 percent female).

Table A1 summarizes PROFIT+ beneficiaries, by sex.

Table A1. PROFIT+ beneficiaries by sex

	Total	Percent female
Demonstration host farmers	690	29
CADs	339	36
Agribusiness and savings group members	28,039	84
Farmer field school attendees	164,523	53
Aflatoxin trainees	16,612	59

BLA

Value Chain Strengthening

During the project, BLA selected 40,145 (53 percent female) smallholders as project beneficiaries. Criteria for farmer selection were evidence of illness; preference for female-headed households; chronic hunger; lack of education or skills needed to farm successfully; and dependence on harmful or illegal livelihoods, such as poaching and charcoal making. Beneficiaries were organized into producer groups, led by 667 lead farmers (42 percent female). Lead farmers taught conservation agriculture practices on demonstration plots to three or four producer groups, each comprised of 15 to 20 farmers.

BLA distributed groundnut or soya bean seed to beneficiaries annually. Most groundnut beneficiaries were located in Chipata and Lundazi, followed by Katete and Petauke, with the fewest located in Nyimba and Mambwe. The groundnut seed provided to beneficiaries each year was seed that had been recovered from beneficiaries the previous season. When this amount was insufficient, additional seed was purchased. Beneficiary targets for groundnuts and soya bean combined ranged from 18,000 farmers in Year 2 (October 2012 to September 2013) to 28,318 in Year 3 (October 2013 to September 2014).[12] The beneficiary targets were not reached each year, reportedly due to lower than expected recovery rates resulting from low yields because of unfavorable rainfall patterns. The quantity of purchased seed was also below target due to a shortage of improved seed on the market, higher than expected prices, and limited project funds. As such, the total number of beneficiaries receiving either seed was 11,819 in Year 2 (67 percent of target) and 18,157 in Year 3 (64 percent of target).

For marketing of crops, lead farmers aggregated crops at bulking points and submitted estimates to BLA/COMACO. BLA purchased what they could, given available funding, and linked farmers to markets for surplus they could not buy. In Year 3 (October 2013 to September 2014), 6,979 beneficiaries (58

[12] The most complete project data accessible by the evaluation team was for Years 1-3. Year 1 was a startup year with limited distribution of seed.

percent female) of the target of 12,000 were provided with market. In Year 4 (October 2014 to September 2015), 4,831 beneficiaries (32 percent female) of the target of 12,000 were provided with market. Both low yields and reduced working capital were reported to be the cause of target shortfalls.

BLA employed a market-based incentive policy based on compliance with sustainable land use practices: use of basins or ripping for tillage; crop rotation; use of compost or fertilizer; planting gliricidia or musanga to improve soil fertility; not burning crop residue or letting livestock eat it; making firebreaks around cultivated fields; and not poaching wildlife or making charcoal. For full compliance, 10 percent above market price was paid. For acceptable but not full compliance, market price was paid. BLA also offered conservation dividends to producer groups with the highest compliance rankings in the form of cash, seed inputs, or farming implements. Premium price was paid to 17 of 21 chiefdoms. The project reported that there was 71 percent compliance with sustainable land use practices among beneficiaries by Year 4 (October 2014 to September 2015). The four chiefdoms that did not receive premium price were all near national parks/protected land in Mambwe and parts of Petauke and Nymiba. All were affected by poaching, which carried a high penalty against compliance.

BLA's *Better Life Book* was distributed to all lead farmers and producer groups. It was used to guide training by lead farmers throughout the year based on the agricultural calendar. Topics covered conservation farming methods with crop-specific modules, and modules on health, nutrition, and gender. As with PROFIT+, BLA advocated for the adoption of conservation agriculture practices, such as use of planting basins or ripping for tillage, crop rotation, and use of improved seed varieties, such as MGV4, MGV5, and Chishango. BLA also encouraged the use of manure for groundnuts and intercropping with gliricidia to improve soil fertility.

Most lead farmers also received radios so that producer groups could listen to Farm Talk radio together. Farm Talk radio was produced by BLA and promoted project messaging and teaching. Each week, BLA hosted a one-hour radio show that was broadcast three times. Members of producer groups were encouraged to attend as a household, and lead farmers led discussions before and after the broadcast. Content of the Farm Talk radio program was developed the week before broadcasting and aligned with the agricultural calendar in the *Better Life Book*.

In Year 4 (October 2014 to September 2015), 200 farmers in three chiefdoms were trained as certified groundnut seed growers to address supply shortages and reduce the cost of groundnut seed. Farmers selected to become certified seed growers were chosen from among lead farmers who were best performing and had plot sizes that met requirements. All farmers trained as certified seed growers were based in Chipata and Lundazi for ease of access by the Zambia Agricultural Research Institute, the training organization that is located in Chipata.

Gender

BLA aimed for half of all project beneficiaries to be female. Table A2 presents information on BLA's beneficiaries by sex. For the percent of females provided with seed and market, selected years for which sex-disaggregated data were available are presented.

Table A2. BLA beneficiaries, by sex

	Total	Percent female
Total beneficiaries	40,145	53
Lead farmers	667	42
Provided seed (groundnut or soya bean) by BLA in Year 3 (10/13 to 9/14)*	18,157	55
Provided market by BLA/COMACO in Years 3 and 4 (10/13 to 9/15)**	11,810	47

*Target = 28,318; **Target for both years combined = 24,000.

The *Better Life Book,* which guides the project's teaching, has modules on gender and family planning, women's empowerment in Zambia, and the SILCs. Key gender messages in the book were:

- Joint (male/female) family planning for a desired number of children, including the spacing and timing of births, to improve women's, children's, and men's health.
- Empowerment of women (complete school; choose a partner who respects your rights; join a women's group for income-generation; join a SILC for saving/accessing capital; make decisions together with your husband; attend health facilities).
- Inclusion of men (listen to your wife and female relatives; make decisions together with your wife; attend the health facility with your wife, including antenatal and postnatal visits; play with your children and help your wife with chores).

BLA's Farm Talk radio show incorporated segments on gender in its weekly show. There was also a 13-week gender sensitization training for the leadership of the chiefdom cooperatives. Each week, the leadership of the cooperatives gathered for a 45-minute radio "class" followed by a discussion. The content focused on women's leadership and removing traditional barriers to women's leadership.

BLA staff reported that two project activities had the potential to reduce women's labor. In Year 4, BLA supported the construction of 32,728 fuel-efficient cook stoves, recognizing that gliricidia wood is also a good source of firewood. This may have freed up some of women's labor by reducing the time spent gathering firewood. COMACO also completed construction of its Chipata hub, invested in a sheller, and began buying unshelled groundnuts to reduce aflatoxin contamination. This may have reduced women's time spent shelling groundnuts presale.

APPENDIX B. METHODS SUPPLEMENT

Quantitative Sampling Design

Sampling Frame

PROFIT+ seeks to influence the entire area of its project districts, whereas BLA operates in chiefdoms, which do not have officially defined geographic boundaries or a population size measure. To map the geographic boundaries of its project chiefdoms, BLA constructed shapefiles using geographic information systems. To construct a sampling frame, these shapefiles were overlaid with shapefiles of SEAs, the census enumeration unit in Zambia, for which officially defined geographic boundaries and a population size measure were available from the 2010 Census of Population and Housing data (Republic of Zambia, 2012). Preparatory work using geographic information systems was not necessary for defining the PROFIT+ project area as SEAs do not span across district boundaries. The project domain consisted of Chipata, Katete, Lundazi, and Petauke districts, in which PROFIT+ and/or BLA worked, and chiefdoms in Nyimba, Mambwe, and Chadiza districts, in which BLA worked. The comparison domain consisted of areas in Nyimba, Mambwe, and Chadiza districts, excluding chiefdoms in which BLA worked, and southern Chama district. Valley areas and national parks were excluded from both domains. SEAs that were in the PROFIT+ or BLA project areas comprised the sampling frame for the project domain, whereas those that were in the comparison domain comprised the sampling frame for the comparison domain. SEAs that were split between the project and comparison areas, which applied to a few SEAs in and around the BLA project area in Nyimba, Mambwe, and Chadiza districts, were removed from the sampling frame.

Sample Size Estimation

Sample size calculations were based on estimated sampling parameters (e.g., baseline values, design effects) using data from Zambia's 2005-2006 Post Harvest Survey (CSO, 2005-06). The minimum detectable change for two indicators related to groundnut commercialization and gendered decision making was calculated, namely:

1) Whether the household bartered or sold groundnuts in the past year: binary (yes, no).

2) For households that sold groundnuts, who decided on the use of cash proceeds from sales: multiple answers (household head, spouse, joint decision, others). These categories were collapsed to a binary outcome: (1) decided by/jointly with a female household member (female household head, spouse of male household head), and (2) otherwise.

A response rate (combining both household and individual-level response rates) of 94 percent and a follow-up rate at end line of 85 percent were assumed. This implied that approximately 80 percent of households contacted at baseline, or approximately 3,200 households, were expected to be available for analysis after completion of the end line survey.

Table B1 summarizes the key sampling parameter assumptions and specifications, and baseline and end line values that were used to estimate the minimum detectable change for each indicator. With these assumptions and specifications, the estimated minimum detectable change in the percentage of bartering or selling groundnuts with the baseline value of 49 percent was nine percent. Likewise, the minimum detectable change in the percentage of decision making involving a female member with the baseline value of 63 percent was nine percent (based on the assumption that the proportion of households that had sold groundnuts was 49 percent at baseline).

Table B1. Sampling parameter assumptions and specifications

Indicator	Baseline value	End line value	Minimum detectable change	Design effect	Significance level	Power	Multi-correlation*	Target sample size
Household bartered/sold groundnuts in the past year	49%	58%	9%	3.5	5% (two-sided)	80%	0.7	3,200
Female involved in deciding how to use cash proceeds from sales	63%	72%	9%	2.4	5% (two-sided)	80%	0.7	3,200

*Between the DID interaction terms and the indicator variables.

Sampling Procedures

The baseline survey adopted a stratified multi-stage sampling design that, in each domain, involved: (1) selection of SEAs, (2) household listing in selected SEAs; (3) selection of households in selected SEAs; and (4) allocation of selected households to type of interview. First, from each domain, 126 SEAs were selected with probability proportional to the number of households engaged in groundnut production, which was obtained from the 2010 Census of Population and Housing data. The sampling frame in each domain was ordered by districts for implicit stratification. Second, in each selected SEA, every household was listed by the data collection team to identify households eligible for interview and to produce a list of eligible households. A household was eligible for interview if it planted or grew groundnuts in the October 2012 to September 2013 agricultural season and had both a male and female household member age 18 or older. Third, from each selected SEA, 16 eligible households were randomly selected from the list of eligible households. The selected households were randomly allocated to two groups: households where only the main adult female decision maker would be interviewed, and households where both the main adult male and female decision makers would be interviewed. Details on the sampling procedures for the baseline survey can be found in the baseline report (Curtis, Hattori, Fehringer, Markiewicz, Lubungu, & Mackenzie, 2015). The end line survey was designed to be a panel survey of baseline respondents. The baseline households were revisited and interviewed. Households were eligible for the end line survey if the same female household member was present in the household.

Weight Calculations

The baseline sampling weights were prepared to account for the sampling design and nonresponse. First, design weights were calculated based on the sampling probabilities for each sampling stage of SEAs, households, and individuals. Second, the sampling weight was calculated with the design weight by adjusting for unit nonresponse calculated at the level of cluster as ratios of the number of interviewed units over the number of selected units, where units were either households or individual respondents. Details on the sampling procedures of the baseline survey can be found in the baseline report (Curtis, Hattori, Fehringer, Markiewicz, Lubungu, & Mackenzie, 2015).

The end line sampling weights were calculated based on the baseline sampling weights by adjusting for eligibility of units and unit nonresponse at end line. First, the baseline sampling weights were adjusted for unknown eligibility of units. When the presence of the same female household member could not be

assessed due to household refusal or loss to follow up, the eligibility status of units could not be determined. The unknown eligibility adjustment for units involved dividing the baseline sampling weights by the ratios of the number of units with known eligibility (either eligible or ineligible) over the number of all baseline units calculated at the cluster level, where units were households or individuals. Second, the baseline sampling weights adjusted for unknown eligibility of units were further adjusted for unit nonresponse at end line. The response rate adjustment for units involved dividing the baseline sampling weights (after adjustment for unknown eligibility) by the ratios of the number of successfully interviewed (either partially or completely) units over the number of eligible units calculated at the cluster level, where units were either households or individuals. The baseline sampling weights adjusted for unknown eligibility and nonresponse at end line served as the end line sampling weights.

Response Rate and Attrition of Households and Women from Baseline to End Line

Table B2 presents the baseline and end line response rates. Although all households grew groundnuts at baseline, not all households still grew groundnuts at end line. Some analyses were also relevant only to particular subsamples of households, such as those that sold groundnuts. Households could sell groundnuts at baseline, end line, neither, or both. Consequently, the sample sizes available for specific analyses varied depending on the primary purpose of the analysis. Table B3 presents the sample and subsamples used for key indicators.

Table B2. Baseline and end line response rates

	Project	Comparison
Baseline response rates		
Household		
Households selected	2,000	2,000
Households interviewed	1,972	1,976
Household response rate	98.6	98.8
Women		
Women selected	1,972	1,978
Women interviewed	1,935	1,933
Women's response rate	98.1	97.7
End line response rate		
Household		
Households interviewed at baseline	1,972	1,976
Households interviewed at end line	1,664	1,711
Household response rate	84.4	86.6
Women		
Women interviewed at baseline	1,972	1,978
Women interviewed at end line	1,629	1,686
Women's response rate	84.2	87.2

Table B3. Sample and subsamples sizes used for analyses

	Project		Comparison		
	Baseline	End line	Baseline	End line	Indicators
Samples size for households, women, and groundnut fields					
Eligible households: Same male and female decision makers present at both baseline and end line	1,532	1,532	1,567	1,567	• Distance to key services
Eligible women: Female decision maker at baseline and end line and still living with same male decision maker at end line	1,499	1,499	1,542	1,542	• Access to productive capital, household decision making, and group membership • Exposure to messaging/information • Food security • Gender norms and gender-based violence
Groundnut fields: Total number of households' groundnuts fields among eligible women	1,590	1,298	1,580	1,224	• Women's participation in groundnut production • Farming practices for groundnuts
Subsamples of women					
Number of eligible women whose household grew groundnuts in either season	1,499	1,254	1,542	1,202	• Mean total harvest • Percent of households that sold groundnuts • Mean and median household sales
Number of eligible women who are married/cohabitating	1,415	1,415	1,470	1,470	• Intimate partner violence

	Project		Comparison		
	Baseline	End line	Baseline	End line	Indicators
Number of eligible women whose household grew groundnuts in both seasons	1,254	1,254	1,202	1,202	• Percent of households that sold groundnuts • Mean and median household sales
Number of eligible women whose household sold groundnuts in either season	616	602	486	444	• Women's participation in the decision about proceeds
Number of eligible women whose household sold groundnuts in both seasons	362	362	235	235	• Mean and median household sales • Women's participation in the decision about proceeds
Subsample of groundnut fields					
Number of household groundnut fields among eligible women from which groundnuts were sold in either season	709	699	527	501	• Women's participation in groundnut production • Women's participation in deciding to sell and selling

Tables B4 and B5 list the reasons for nonresponse at end line, and Table B6 examines changes in decision-maker status from baseline to end line. Among households and women not interviewed at end line, the main reasons for nonresponse were that the female decision maker at end line was no longer present in the household or the household could not be located.

Table B4. Household response rate at end line

	Project	Comparison	Total
Interviewed at baseline	1,972	1,976	3,948
Interviewed at end line	1,664	1,711	3,375
Not interviewed at end line	308	265	573
Reasons for household nonresponse at end line			
Nonresponse of all people at baseline	4.5	9.8	7.0
Household not located	45.8	34.0	40.3
Female decision maker no longer present	46.8	52.5	49.4
Incapacitated	2.9	2.6	2.8
Refused	0.0	1.1	0.5
Total	100.0	100.0	100.0
Response rate (%)[1]	84.4	86.6	85.5
Response rate (%)[2]	92.2	94.8	93.5

[1] The number of households interviewed at end line divided by the number of households interviewed at baseline.

[2] The number of households interviewed at end line divided by the number of households interviewed at baseline, excluding households that were no longer eligible for the end line survey because the female decision maker was no longer present.

Table B5. Individual response rate at end line

	Project		Comparison		Total	
	Female	Male	Female	Male	Female	Male
Interviewed at baseline	1,935	687	1,933	675	3,868	1,362
Interviewed at end line	1,629	502	1,686	523	3,315	1,025
Not interviewed at end line	306	185	247	152	553	337
Reasons for individual nonresponse at end line						
Household not located	45.4	30.8	35.6	19.7	41.0	25.8
Household refused	0.0	0.0	1.2	1.3	0.5	0.6
Female decision maker no longer present	46.4	24.3	55.1	27.6	50.3	25.8
Incapacitated	3.9	8.1	3.2	7.2	3.6	7.7
Individual not located/present	4.2	16.8	4.0	24.3	4.2	20.2
Refused	0.0	0.5	0.8	0.0	0.4	0.3
Dropped out during household interview	0.0	4.9	0.0	2.6	0.0	3.9
No longer with the household	0.0	14.6	0.0	17.1	0.0	15.7
Total	100.0	100.0	100.0	100.0	100.0	100
Response rate (%)[1]	84.2	73.1	87.2	77.5	85.7	75.3
Response rate (%)[2]	90.9	78.2	94.0	82.9	92.4	80.5

[1] The number of people interviewed at end line divided by the number of people interviewed at baseline.

[2] The number of people interviewed at end line divided by the number of people interviewed at baseline, excluding people that were no longer eligible for the end line survey because the female decision maker was no longer present.

Table B6. Changes in decision-maker status and partnership at end line

	Project		Comparison	
	Female	Male	Female	Male
Respondent's decision-maker status at end line				
Self-identified as main decision maker	99.5	99.6	99.7	99.8
Presence of main decision maker of opposite sex at end line				
Present and still main decision maker	91.8	99.8	91.5	100.0
Present but not still main decision maker	1.2	0.2	0.8	0.0
Not present	7.1	0.0	7.8	0
Total	100.0	100.0	100.0	100.0
Decision-maker status and partnership at end line				
Main decision makers of both sexes still present	91.7	99.6	91.4	99.8
Number of individuals	1,629	502	1,686	523

Tables B7 and B8 present the potential selection bias in the panel sample by comparing key baseline characteristics of the samples successfully reinterviewed at end line with the baseline characteristics of all households and women interviewed at baseline. There was little variation between the full baseline sample and the panel sample in either household or women's baseline characteristics. This suggests that attrition between the baseline and end line survey was fairly random and did not result in strong selection bias in the end line sample, although selection on unobserved characteristics cannot be ruled out.

Table B7. Baseline background characteristics of households for the full baseline sample and sample successfully reinterviewed at end line (panel sample) *

Background characteristics at baseline	Project		Comparison	
	Full baseline sample	End line panel sample	Full baseline sample	End line panel sample
Number of usual members				
1-5	44.3	42.0	43.2	41.3
6-9	48.7	50.5	49.1	50.9
10+	7.0	7.5	7.7	7.8
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Household mean size	6.1	6.2	6.1	6.2
Electricity				
Yes	21.3	22.3	23.0	22.7
Toilet/latrine facility				
Flush, communal	0.0	0.0	0.0	0.0
Flush, private	0.6	0.7	0.1	0.1
Ventilated improved pit latrine, communal	0.1	0.2	0.1	0.1
Ventilated improved pit latrine, private	0.7	0.6	0.3	0.3
Pit latrine, communal	9.2	10.1	13.2	13.5
Pit latrine, private	74.2	74.3	71.1	71.2
Pan/bucket	0.0	0.0	0.0	0.0
No toilet/Bush	14.6	13.6	14.8	14.4
Other	0.1	0.1	0.1	0.2

Background characteristics at baseline	Project		Comparison	
	Full baseline sample	End line panel sample	Full baseline sample	End line panel sample
Don't know/refused/missing	0.4	0.5	0.3	0.2
Total	100.0	100.0	100.0	100.0
Source of drinking water				
Improved source	72.1	70.9	74	73.7
Unimproved source	27.5	28.5	25.8	26.1
Don't know/refused/missing	0.4	0.5	0.2	0.2
Total	100.0	100.0	100.0	100.0
Total area of cultivated/cropped fields (hectares)	2.4	2.5	2.2	2.3
Total area of groundnut fields (hectares)	0.4	0.4	0.3	0.3
Number of households	1,972	1,532	1,976	1,567

*Includes households with the same male and female decision maker at baseline and end line that are included in the end line analysis.

Table B8. Baseline background characteristics of women for the full baseline sample and sample successfully reinterviewed at end line (panel sample)*

Background characteristics at baseline	Project		Comparison	
	Full baseline sample	End line panel sample	Full baseline sample	End line panel sample
Age				
18-19	3.2	3.2	2.3	2.2
20-24	13.2	12.2	12.3	12.3
25-29	15.2	14.9	15.1	15.4
30-34	15.5	15.9	16.3	16.8
35-39	13.4	14.2	12.7	13.4
40-44	10.7	10.6	12.9	13.0
45-49	8.6	9.5	8.9	9.0
50-54	6.7	7.0	6.8	6.3
55-59	3.7	3.2	4.6	4.4
60-64	3.4	3.7	2.9	3.1
65-69	3.3	3.5	2.8	2.2
70-74	1.8	1.2	1.2	0.9
75+	1.3	1.0	1.3	0.9
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Educational attainment				
No education	23.0	23.7	30.3	30.0
Some primary	50.1	49.6	47.7	48.3
Completed primary	14.1	14.5	11.3	11.6
Some secondary	10.5	10.2	9.2	8.7
Completed secondary	1.5	1.3	1.1	1.0
More than secondary	0.8	0.7	0.4	0.4
Don't know/refused/missing	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0

Background characteristics at baseline	Project		Comparison	
	Full baseline sample	End line panel sample	Full baseline sample	End line panel sample
Marital status				
Never married	0.9	0.6	1.3	0.9
Married/cohabiting	94.7	96	93.9	96.1
Monogamous	76.8	78.5	72.2	74.8
Polygamous	17.1	16.8	21.6	21.2
Missing number of wives/co-wives	0.8	0.7	0.1	0.1
Widowed	2.9	2.1	2.9	1.9
Divorced	1.1	0.9	1.4	0.9
Separated	0.3	0.4	0.2	0.2
Don't know/refused/missing	0.0	0.0	0.2	0.0
Total	100.0	100.0	100.0	100.0
Number of women	1,935	1,499	1,933	1,542

*Includes females who were the main female decision maker at baseline and end line, and who still live with the main
male decision maker from baseline.

Imputation of Groundnut Sales

Approximately eight percent of female respondents had missing data on the whether their household sold groundnuts in the sales section of the data. In these cases, we imputed the household groundnut sales status from data collected on sales from each household groundnut field from each respondent. When a respondent reported groundnut sales from at least one of the household groundnut fields, we assigned a status of sale. When a respondent did not report groundnut sales from any of the household groundnut fields, we assigned a status of no sale. When the sales data for household groundnut fields were also missing, the status remained missing.

Calculation of the Quantity of Groundnut Harvest/Sale/Bartering

The quantity of groundnut harvest/sale/bartering was reported in various units by respondents. For data analysis, the quantities were standardized into kilograms using conversion factors according to reported units. When the quantity of sale/bartering exceeded the quantity of harvest, the quantity of sale/bartering was capped by the quantity of harvest for the mean estimation of the quantity of sale/bartering in the report.

Hypothesis Testing

We performed hypothesis testing on selected indicators in this report accounting for the sample design and sampling weights. To examine differences in indicators between groups at one measurement time point (either baseline or end line) for a cross-sectional sample of households or individuals, we used two-sample t-test and Person's chi-squared test for continuous and dichotomous/categorical variables, respectively. To examine changes in indicators between baseline and end line for a panel sample of households or individuals, we used paired t-test and McNemar's test for continuous and dichotomous variables, respectively. The sample of groundnut fields from baseline and end line was considered a pooled cross-sectional sample, and two-sample t-test and Person's chi-squared test were performed on continuous and dichotomous/categorical variables, respectively, to examine differences in indicators between baseline and end line. We performed the tests against the null hypothesis of no difference between groups or measurement time points at the significance level of 0.05, unless otherwise indicated.

Difference-in-Differences Model

The DID regression model, as applied for this evaluation is specified:

$$Y_{it}^{*} = \beta_0 + \beta_2 \cdot t + \beta_3 \cdot P_i \cdot t + \vec{\gamma}' \cdot \vec{X}_{it} + \sum_{j=1}^{N^P-1} \delta_j^P \cdot d_i^{P,j} + \sum_{k=1}^{N^{NP}} \delta_k^{NP} \cdot d_i^{NP,k} + \epsilon_{it} \quad (1)$$

Where

Y_{it}^{*}:	The outcome of interest for unit of observation *i* at time *t* underlying the observed variable Y_{it}.
P_i:	Equals 1 if unit of observation *i* is in the project areas, and 0 otherwise.
t:	Equals 0 if unit of observation is drawn from the baseline, and 1 if drawn from the end line.
$\vec{\gamma}' \cdot \vec{X}_{it}$:	The inner-product of a *1Xk* row of estimation parameters γ and a *kX1* column of time-varying characteristics of unit of observation *i*.
N^P:	The number of units of observations in the project areas in the sample.
N^{NP}:	The number of units of observations in the comparison areas in the sample.
$d_i^{P,j}$:	Equals 1 if the unit of observation *i* is a project participant *j*, and 0 otherwise.
$d_i^{NP,k}$:	Equals 1 if the unit of observation *i* is a nonparticipant *k*, and 0 otherwise.
ϵ_{it}:	The idiosyncratic, nonserially correlated error for the unit of observation *i* at time *t*.

The regressor P_i controls for fixed unobserved differences between participants and nonparticipants, *t* controls for the common time trend between participants and nonparticipants, and the variables in $\vec{X}_{it}$

represent exogenous time-varying variables that might influence Y and, hence, might provide an avenue for violation of the parallel trend assumption in the absence of their inclusion. However, only one model included any variables in $\vec{X}_{it}$. Specifically, the DID model on decision making about how to use proceeds from groundnuts sale included types of groundnuts sold as $\vec{X}_{it}$. The parameter β_3 provided an estimate of the project effect: $P_i \cdot t$ controls for differences in the observed trend between the project participants and nonparticipants that, under the parallel trend assumption, was the project effect. $d_i^{P,j}$ and $d_i^{NP,k}$ were a series of dummy variables representing the units of observations introduced to capture serial correlation in observations through fixed effects ($\delta_j^P \cdot d_i^{P,j}$ and $\delta_k^{NP} \cdot d_i^{NP,k}$). The series of dummy variables also accounted for time-invariant characteristics of observations, i.e., characteristics that did not change between the baseline and end line.

Most of the outcomes of interest that were considered in this evaluation were binary in nature. For such binary outcomes, we estimated (1) as a linear probability model. The main advantage of the linear probability model in this application was the ease of interpretation of results. The model has fixed effects for each unit of observation to control for potential bias to the estimates of standard errors (Bertrand, Duflo, Mullainathan, 2004). Standard errors were estimated through bootstrapping to address the heteroskedasticity problems associated with a linear probability model.

Qualitative Sample

Table B9 provides information on the qualitative baseline and end line samples.

Table B9. Qualitative respondents

	Females		Males		Total number of respondents
	N	Age Average (range)	N	Age Average (range)	
Baseline IDI participants					
Married couples	18	38 (19-66)	18	45 (23-74)	36
Baseline FGD participants					
Married women	52	38 (19-74)			52
Married men			43	45 (22-78)	43
Baseline total	70		61		131
End line IDI participants					
CADs	3	47 (47-49)			3
Lead farmers	3	48 (39-49)			3
Community leaders			6	50 (42-66)	6
Married couples	24	37 (25-71)	24	43 (23-66)	48
End line FGD participants					
Married women	57	41 (23-67)			57
End line total	87		30		117

Fieldwork and Training

The quantitative survey was implemented by CSO in collaboration with IAPRI, under the guidance of the Carolina Population Center at the University of North Carolina (UNC). The qualitative studies were implemented by IAPRI under the guidance of the Carolina Population Center at the UNC.[13]

Quantitative

Master trainers from CSO and IAPRI were trained by UNC staff at both baseline and end line. Training of master trainers occurred in July of each round and was held at IAPRI's offices in Lusaka. Training topics covered an introduction to the study and a detailed review of the survey instrument, enumerator manual, and supervisor manual, including (at baseline only) household listing and sampling procedures. Master trainers were also trained on the use of tablets for data entry and management.

At baseline, the master trainer team pretested the survey instruments in Rufunsa district during a two-day period. At end line, a group of enumerators and supervisors piloted the tool in Chipata district under the supervision of the master trainers. In both instances, minor revisions were made to the instrument.

Training of enumerators at both baseline and end line took place in Chipata during a 12-day period from late July to early August. Training topics at baseline and end line covered training on the use of tablets for data entry and a detailed review of each survey module during which the intent of all questions and responses were reviewed. The Nyanja translation of each question was also reviewed to ensure appropriate translation. The candidates were also trained on human subjects' protection, interviewing techniques, data management, and household listing procedures (baseline only). Several quizzes were administered during training to assess candidates' learning. The training had daily role plays and tablet practice, and a day of field practice in a nearby village during which each candidate conducted two practice interviews.

At the end of both baseline and end line training, 13 candidates were chosen as supervisors, along with 39 female and 13 male enumerators (52 total enumerators).

Baseline data collection occurred from mid-August through early October 2014. End line data collection occurred from mid-August through late September 2017.

Data quality was ensured at several levels. At the tablet level, the survey was programmed so that questions could not be skipped. Numerous quality checks were also built into the programming that prevented enumerators from moving forward with the survey until errors were corrected. Supervisors monitored enumerator performance by observing interviews, conducting spot checks, and reviewing survey responses in the tablet for completeness and consistency before finalizing and transmitting questionnaires to a secure Westat server (baseline) or MEASURE Evaluation server (end line). The master trainers served as quality monitors during data collection and provided another layer of quality control, visiting each team regularly to observe interviews and review enumerator and supervisor control sheets.

A final level of data quality control involved the use of quality control reports that were reviewed daily by an evaluation team member throughout the data collection period. The reports contained information on household identification numbers, number of completed interviews per SEA, and other information. Using these reports, the evaluation team communicated regularly with the quality monitors and supervisors to alert them to any errors (e.g., duplicate household identification numbers), collect corrected information, and make corrections to the data set.

[13] The baseline survey was implemented under the Feed the Future FEEDBACK mechanism. Westat was the prime organization for Feed the Future FEEDBACK, and the Carolina Population Center at UNC was a subpartner and served as the lead organization for the baseline. The end line survey was implemented under the MEASURE Evaluation Project. The Carolina Population Center is the prime organization for the MEASURE Evaluation project.

The tablets used for data collection were password protected and their hard drives were encrypted. To ensure data protection and confidentiality across the study, all members of the data collection team committed to using reasonable data protection measures to protect the data. When data collection was complete, tablets were returned to the United States, checked for completeness of data delivery, and cleared of all survey data. Handwritten records, including household listing books and maps, and supervisor and enumerator control sheets, were stored in locked file cabinets at IAPRI.

Qualitative

At both baseline and end line, four members of the quantitative data collection team (two males and two females) were selected as qualitative interviewers based on their strong performance during the quantitative component.

Interviewer training occurred in October 2014 (baseline) and October 2017 (end line) in Chipata and was led by the Carolina Population Center in collaboration with IAPRI. Topics were an overview of the qualitative component; qualitative techniques, with an emphasis on IDIs and FGDs; gender and gender-based violence; logistics and use of audio recorders; and a review of informed consent procedures. Training sessions covered translation of the IDI and FGD guides into Nyanja and frequent role plays to practice interviewing and facilitation skills.

The IDI and FGD guides were pretested by the interviewers in a nearby village during a two-day period at both baseline and end line, and then were finalized. Data collection occurred from late October to early November 2014 (baseline) and from late October to early November 2017 (end line).

Institutional Review Board Clearance and Informed Consent

The Zambia GNVC impact evaluation baseline and end line study protocols were reviewed by the UNC's Institutional Review Board (study numbers 14-0661 and 17-0497, respectively). The baseline and end line study protocols were was also reviewed by ERES Converge, a private, registered Zambian ethics review committee (study approval numbers 2014-Mar-005 and 2017-Mar-015, respectively). All data collection personnel (master trainers, supervisors, and enumerators) were trained in human subjects' research protection. Informed consent was obtained from all participants before their participation in the study. In addition, the collection of data on gender-based violence followed internationally recognized ethics protocols to protect women who have experienced violence (World Health Organization [WHO], 2001).

APPENDIX C. ADDITIONAL RESULTS

Additional results related to production of groundnuts; commercialization of groundnuts; access to productive capital, household decision making, and group membership; exposure to messaging/information; food security; and gender norms and gender-based violence are presented below. Significance tests were performed for two tables only (C20 and C21).

Production of Groundnuts

Table C1. Farming practices on groundnut fields

Percentage of women who report:	Project		Comparison	
	Baseline	End line	Baseline	End line
Type of tree to protect or improve the harvest				
None planted	94.0	88.7	94.6	86.9
Faidherbia albida (musangu)	4.3	4.0	4.3	7.1
Gliricidia sepium	0.9	2.8	0.3	1.3
Sesbania sesban	0.1	0.3	0.1	0.3
Tephrosia vogelii (ububa)	0.3	0.1	0.0	0.0
Other	0.4	3.9	0.6	4.1
Don't know/refused/missing	0.0	0.2	0.2	0.3
Total	100.0	100.0	100.0	100.0
Main tillage method used				
Conventional hand hoeing	15.9	35.1	14.6	39.0
Planting basins (potholes)	1.5	0.4	2.1	0.6
Zero tillage	0.7	0.9	2.3	1.5
Ploughing	25.2	29.2	17.2	22.8
Ripping	1.9	3.4	0.3	2.6
Ridging (before planting)	54.6	30.2	62.9	32.2
Bunding	0.2	0.3	0.5	0.3
Mounding	0.1	0.3	0.0	1.0
Don't know/refused/missing	0.0	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of times of complete weeding				
0	2.9	2.1	2.2	2.0
1	41.5	42.4	26.8	29.7
2	50.1	51.6	56.0	51.9
3+	5.5	3.8	15.0	16.4
Don't know/refused/missing	0.0	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of times sprayed with herbicide				
0	97.0	97.0	98.5	98.6
1+	2.1	2.7	0.6	1.4
Don't know/refused/missing	1.0	0.2	0.9	0.0
Total	100.0	100.0	100.0	100.0
Whether applied animal manure and/or compost				
Yes	1.8	3.7	1.4	6.0
No	98.2	96.1	98.5	94.0
Don't know/refused/missing	0.0	0.2	0.1	0.0
Total	100.0	100.0	100.0	100.0

Percentage of women who report:	Project		Comparison	
	Baseline	End line	Baseline	End line
Number of fields	1,590	1,298	1,580	1,224

Table C2. Division of labor for groundnut production

Percentage of women who report labor was provided by:	Project		Comparison	
	Baseline	End line	Base line	End line
Land preparation				
Did not do this activity	0.3	0.4	0.3	0.6
Family labor involving male adults	75.1	70.9	75.2	71.1
Family labor excluding male adults	18.0	21.0	19.3	22.1
Hired labor	6.7	6.4	4.9	4.2
Mechanical power	0.0	0.7	0.2	1.5
Other	0.0	0.3	0.0	0.6
Don't know/refused/missing	0.0	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0
Planting				
Did not do this activity	0.0	0.2	0.0	0.1
Family labor involving male adults	58.9	53.8	60.9	60.0
Family labor excluding male adults	37.9	42.7	37.2	38.6
Hired labor	3.2	2.9	2.0	1.1
Mechanical power	0.0	0.0	0.0	0.0
Other	0.0	0.2	0.0	0.2
Don't know/refused/missing	0.0	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0
Weeding				
Did not do this activity	0.6	0.9	0.8	1.0
Family labor involving male adults	69.6	66.5	74.5	72.2
Family labor excluding male adults	22.1	26.3	20.7	23.2
Hired labor	7.7	5.8	4.0	2.9
Mechanical power	0.0	0.1	0.0	0.1
Other	0.0	0.1	0.0	0.5
Don't know/refused/missing	0.1	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0
Harvesting of groundnuts				
Did not do this activity	0.9	0.9	0.6	0.6
Family labor involving male adults	72.5	71.2	76.6	73.0
Family labor excluding male adults	19.5	20.6	19.0	22.4
Hired labor	6.8	6.9	3.4	3.3
Mechanical power	0.0	0.0	0.3	0.0
Other	0.0	0.2	0.0	0.6
Don't know/refused/missing	0.3	0.2	0.2	0.0
Total	100.0	100.0	100.0	100.0
Number of fields	1,590	1,298	1,580	1,224

Note: The categories for who provided labor were revised slightly at end line in response to enumerator feedback. Some enumerators explained that they hesitated to select the response option of "women and children" if the respondent explicitly stated that labor was provided by women and male children/sons, and instead selected "male and female adults." Therefore, the report of male adult involvement at baseline might be somewhat inflated.

Qualitative Findings: Division of Labor for Groundnut Production

Qualitative respondents discussed who primarily provided labor for land preparation, planting, weeding, harvesting, processing, and shelling of groundnuts.

At both baseline and end line, most male and female respondents reported that they worked together with their spouses to prepare the land, plant, weed, and harvest the groundnut crop. Although many end line respondents reported little change in the past three years in the household division of labor for groundnut production, a few reported that men were more involved. Some attributed the change to the lessons received from PROFIT+, BLA, or other groups on the profitability of groundnuts.

> *Men would only focus on producing other crops than groundnuts, but after these various teachings that they have been receiving, they have come to realize the true value of groundnut production and they have also seen that what we get from there really helps us solve various problems that we go through in our households, such as money for fertilizers and school fees for our children and that is why we do the work together.* (Female farmer, Chipata—IDI respondent)

> *I'm trying to shift attention from growing maize for sale to groundnuts. I'm thinking of putting more inputs than before. We have realized that groundnuts have a better price than maize so we will try to increase production.* (Male farmer, Chipata)

When it comes to processing of groundnuts, respondents reported that this work remains primarily with women. However, a few respondents reported that men were also assisting with processing as a result of teaching received on gender.

> *Everything was done by the woman. You would be shelling groundnuts, roasting, or even making peanut butter and he would just be watching. But now because of gender, he helps out.* (Female farmer, Lundazi-IDI respondent)

> *It is because of gender, we learned that you cannot let a woman alone do all the household chores when you are around and doing nothing. You need to help out so she can rest. For example, she goes to Lundazi, you cannot wait for her to come and do the processing, you have to come and help out.* (Male farmer, Lundazi)

Shelling

Although women (and often children) are primarily responsible for shelling groundnuts for home consumption and small sales, some men help when groundnuts are being shelled for a large sale or for planting. A small number of respondents reported using a shelling machine or hiring laborers. One BLA lead farmer confirmed that COMACO had added a sheller to its Chipata hub and was now buying groundnuts unshelled.

> *They [COMACO] are buying more and more of unshelled groundnuts. In the past they used to concentrate more on shelled groundnuts … Now there is more time to rest. Women don't have to shell the groundnuts and so there is time to either rest or do other chores. In terms of volume, people sell more because shelling is not a must.* (Female BLA lead farmer, Lundazi)

Qualitative results on men's participation in groundnut production conflict somewhat with quantitative results that show a decrease in male involvement in groundnut production (Table C2). However, the results in Table C2 should be interpreted with some caution. Following baseline data collection, a focus group was held with enumerators to discuss issues that arose with the wording of questions/responses in the survey that might affect results. For questions on who provides labor for production activities, some enumerators explained that they hesitated to select the response option of "women and children" if the respondent explicitly stated that labor was provided by women and male children/sons, and instead selected, "male and female adults." Therefore, report of male adult involvement at baseline might be somewhat inflated.

Table C3. Main seed variety used for first planting of groundnuts

Percentage of fields planted with:	Project		Comparison	
	Baseline	End line	Baseline	End line
MGV-4	2.1	1.5	0.7	1.0
Chalimbana	18.4	27.8	31.2	45.9
Local groundnuts	36.7	15.2	38.5	14.1
Hybrid groundnuts	1.7	0.7	0.6	0.2
Recycled hybrid groundnuts	1.8	1.4	1.5	3.4
Chishango	2.5	5.5	0.8	1.9
MGV-5	1.3	0.5	0.2	0.1
Kanjute	17.0	22.7	14.0	17.0
Makuru Red	12.0	13.0	8.8	3.9
Other	6.3	10.4	3.5	10.5
Don't know/refused/missing	0.1	1.3	0.3	2.0
Total	100.0	100.0	100.0	100.0
Number of fields	1,590	1,298	1,580	1,224

Commercialization of Groundnuts

Table C4. Buyer of the largest sale of shelled groundnuts and the distance to sale

	Project		Comparison	
	Baseline	End line	Baseline	End line
Total quantity of the largest sale of shelled groundnuts (kgs)	125.1	158.8	84.0	95.5
Number of women (unweighted)	304	265	140	130
Percentage of the largest sales of shelled groundnuts bought by:				
Small-scale trader or miller/processor	23.5	28.7	29.3	37.4
Large-scale trader/wholesaler	19.9	22.3	9.4	14.0
Retailer/marketer	45.0	30.6	46.0	26.6
Other households (for consumption)	5.4	6.9	9.9	14.0
COMACO	1.6	2.3	0.0	0.4
CAD	NA	0.0	NA	1.3
Other	3.6	8.4	3.3	5.4
Don't know/refused/missing	1.0	0.9	2.0	0.8
Distance to the point of sale of shelled groundnuts				
0 kilometers (kms)	33.2	36.6	32	35.8
1-5 kms	13.0	14.0	9.4	18.1
6-10 kms	5.6	6.5	13.9	9.3
11-15 kms	4.4	3.9	10.6	5.0
16-20 kms	6.4	6.3	6.2	7.7
21-25 kms	4.7	4.6	2.2	6.1
26+ kms	28.0	23.7	25.8	14.9
Don't know/refused/missing	4.6	4.3	0.0	3.1
Number of women	304	268	140	133

Note: CAD asked only at end line.

Table C5. Buyer of the largest sale of unshelled groundnuts and the distance to the buyer

	Project		Comparison	
	Baseline	End line	Baseline	End line
Total quantity of the largest sale of unshelled groundnuts (kgs)	83.7	116.4	79.6	95.4
Number of women	434	401	391	350
Percentage of the largest sales of unshelled groundnuts bought by:				
Small-scale trader or miller/processor	22.9	24.4	18.1	27.4
Large-scale trader/wholesaler	4.0	3.6	3.0	2.9
Retailer/marketer	62.0	36.7	65.6	34.9
Other households (for consumption)	6.6	12.5	9.5	14.3
COMACO	1.7	7.2	0.0	4.3
CAD	NA	0.3	NA	0.0
Other	1.5	14.9	2.2	16.2
Don't know/refused/missing	1.3	0.4	1.5	0.0
Distance to the point of sale of unshelled groundnuts				
0 kms	84.5	91.8	89.4	87.3
1-5 kms	7.2	3.6	4.2	5.8
6-10 kms	2.2	0.9	2.3	1.2
11-15 kms	2.0	0.3	0.9	0.9
16-20 kms	0.7	0.5	0.5	0.9
21-25 kms	1.2	0.0	0.6	0.3
26+ kms	2.0	2.6	1.6	1.7
Don't know/refused/missing	0.3	0.2	0.5	1.9
Number of women	435	403	392	352

Note: CAD asked only at end line.

Access to Productive Capital, Household Decision Making, and Group Membership

Table C6. Access to productive capital

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of households that own:				
Agricultural fields	99.5	99.4	99.9	99.8
Large livestock	45.1	48.4	41.7	44.0
Small livestock	53.4	40.7	52.6	43.3
Chickens, ducks, turkeys, etc.	73.1	75.6	77.4	79.1
Fish pond or fishing equipment	1.3	2.0	3.4	3.5
Farm equipment (nonmechanized)	96.2	93.4	97.9	95.4
Farm equipment (mechanized)	7.6	11.4	8.7	10.6
Nonfarm business equipment	10.2	6.7	9.6	6.4
House	70.0	72.7	76.2	68.1
Large consumer durables	24.0	30.4	18.8	20.3
Small consumer durables	69.5	56.1	65.5	53.4
Cell phone	59.5	67.9	47.7	56.2
Other land not used for agriculture	5.5	9.1	5.3	9.0
Bicycle	78.0	74.3	81.6	74.8
Motorcycle	2.3	5.3	3.9	6.6
Car/truck	2.2	2.7	2.0	2.8
Number of women	1,499	1,499	1,542	1,542
Of women whose household owns the asset, percentage who own solely or jointly				
Agricultural fields	57.1	48.1	58.5	50.1
Large livestock	58.8	61.9	53.0	57.0
Small livestock	67.0	65.5	68.4	68.9
Chickens, ducks, turkeys, etc.	78.6	73.3	77.0	68.9
Fish pond or fishing equipment	[18.2]	[32.3]	62.0	29.7
Farm equipment (nonmechanized)	75.9	59.7	73.7	55.4
Farm equipment (mechanized)	41.4	49.1	55.7	55.2
Nonfarm business equipment	68.9	68.2	64.8	57.6
House	73.8	70.5	70.8	68.1
Large consumer durables	72.3	70.8	68.3	62.2
Small consumer durables	66.0	58.9	59.0	51.8
Cell phone	36.9	36.1	33.0	28.3
Other land not used for agriculture	66.2	59.1	51.0	56.5
Bicycle	38.1	41.3	34.0	36.6
Motorcycle	[27.1]	48.8	37.9	45.4
Car/truck	[50.7]	[59.5]	[38.2]	[57.0]

Figures in brackets [ ] have an n less than 50.

Qualitative Findings: Control over Assets

At baseline and end line, married couples were asked about control over productive assets. Findings were similar at both time periods. End line results are presented here.

Male and female IDI respondents (24 married couples, 48 total respondents) were interviewed separately about ownership and decision-making authority over a variety of household assets. The assets were land, hand tools (e.g., hoes, axes), ploughs/rippers, tractors/threshers/planters, wheelbarrows, small farm equipment (e.g., sprayers, grass cutters, weeders), irrigation equipment (e.g., watering cans, treadle pumps), processing equipment (e.g., millers, shellers), bicycles, motorcycles/cars/trucks, cell phones, and savings accounts. For some assets, respondents were also asked who would decide how proceeds would be used if the asset were sold.

All female respondents, and all but one male respondent, reported that their household owned land. All respondents reported that their household had small hand tools, and most also stated that their household had a bicycle and one or more cell phones. A majority also reported ownership of small farm equipment (usually a sprayer) and irrigation equipment (usually a watering can). Less commonly owned assets were ploughs/rippers, processing equipment, cars/trucks/motorbikes, and savings accounts.

Differences in Responses between Husbands and Wives

Husbands and wives frequently gave differing accounts of who owned and had decision-making authority over household assets. For example, only half of the married couples interviewed provided similar responses to question, "Who owns the land?" There were no instances where husbands and wives gave identical reports of who owned all the assets in their households. In several cases, couples even gave differing accounts of whether certain assets existed in their households.

Ownership

Sole female ownership of assets was rare. With the exception of one female who reported sole ownership of most household assets, only one other female reported that she had her own savings account, although another woman reported sole ownership of a bicycle. However, cell phones were an exception, with the majority of female respondents reporting sole ownership of a cell phone.

Permission to Use Assets and Use of Assets

The question, "Who decides who can use the asset?" generally elicited responses about who had the authority to loan the asset to someone outside the home, rather than who decided which people in the household could use the asset. Seemingly, anyone in the household who knew how to use an asset was free to use it. The authority to loan an asset was generally reported to be the decision of the owner(s) of the asset.

Use of Proceeds if the Asset Was Sold

About half of female respondents reported that their husband would decide how proceeds would be used if an asset were sold, and the rest reported that they would decide together for some or all assets. Again, the exception was cell phones, where women reported that they would be the sole decision maker about phones they owned. Male respondents were more likely than female respondents to report that decision making on proceeds would be joint.

Table C7. Access to financial assets

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of households that have:				
Savings account in a bank	10.2	9.0	5.6	5.7
Second savings account in a bank	1.4	1.2	1.0	0.8
Savings in a group/association	5.2	12.3	3.6	7.6
Cash and savings - not in a bank/group/association	12.2	27.3	13.4	34.0
Pension or retirement account	1.7	2.1	0.5	1.2
Other	4.1	1.2	5.9	0.6
Number of women	1,499	1,499	1,542	1,542
Of women whose household has the asset, percentage of women who own solely or jointly				
Savings account in a bank	70.8	81.3	67.5	66.2
Second savings account in a bank	[79.4]	[69.5]	[39.9]	[62.4]
Savings in a group/association	70.2	70.4	78.9	76.5
Cash and savings - not in a bank/group/ association	81.1	97.3	89.6	96.7
Pension or retirement account	[62.8]	[66.7]	[29.6]	[82.5]
Other	[94.0]	[100.0]	98.9	[100.0]

Figures in brackets [ ] have an n less than 50.

Table C8. Access to credit

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of households that took loans or cash/in-kind				
Nongovernmental organization (NGO)	4.5	3.2	2.7	1.9
Informal lender	4.9	6.8	3.7	5.9
Formal lender (bank/financial institution)	2.2	1.9	1.1	1.0
Friends or relatives	14.9	15.3	11.1	12.8
Group-based microfinance	5.0	7.0	2.7	7.6
Number of women	1,499	1,499	1,542	1,542
Of households that took loans or cash/in-kind, percentage of women who participated in deciding to borrow				
NGO	54.0	[49.4]	60.6	[30.5]
Informal lender	43.7	43.4	48.8	44.8
Formal lender (bank/financial institution)	[51.1]	[28.6]	[48.3]	[45.9]
Friends or relatives	50.1	62.0	59.9	52.8
Group-based microfinance	82.4	66.4	[83.9]	55.9
Of households that took loans or cash/in-kind, percentage of women who participated in deciding how to use the loan or cash/in-kind				
NGO	56.0	[58.4]	71.5	[38.3]
Informal lender	55.9	48.7	54.5	50.0
Formal lender (bank/financial institution)	[65.4]	[39.5]	[61.6]	[45.9]
Friends or relatives	60.7	67.5	66.0	58.2
Group-based microfinance	87.4	68.1	[77.6]	57.0

Figures in brackets [ ] have an n less than 50.

Table C9. Household decision making

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of households that engage in activity				
Nonfarm business activity	47.0	69.8	37.4	67.2
Own wage/salary employment	54.6	67.7	54.0	61.1
Major household expenditures	53.2	76.7	49.1	71.4
Minor household expenditures	99.0	98.8	98.4	99.2
Whether to use family planning	82.7	90.7	75.9	89.4
Spending own money	92.8	98.3	92.6	97.5
Number of women	1,499	1,499	1,542	1,542
Of the households that engage in the activity, percentage of women that participated in decision making				
Nonfarm business activity	56.8	58.9	55.9	51.5
Own wage/salary employment	75.9	79.4	83.3	78.0
Major household expenditures	55.4	56.6	57.6	51.4
Minor household expenditures	78.6	80.8	79.2	78.5
Whether to use family planning	80.8	81.1	80.6	77.9
Spending own money	88.3	86.7	89.0	88.3

Note: At end line, "use of family planning" was not asked if the respondent was age 50 and over; baseline figures were computed to be consistent with end line figures.

Table C10. Presence of groups in the community and membership of females

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who report group is present in the community				
Eastern Province Farmer's Cooperative	29.5	41.3	27.7	35.9
COMACO	31.6	54.6	14.2	29.3
Other agricultural producer's group	32.5	55.5	27.3	61.1
Livestock/fisheries producer's group	11.6	23.9	11.4	25.8
Water user's group	53.4	56.9	55.8	63.5
Forest user's group	14.4	23.3	12.6	21.7
Credit or microfinance group	26.8	42.9	23.3	33.7
Trade and business association	8.5	8.6	7.0	8.8
Civic groups	29.1	48.1	26.6	54.9
Religious group	83.1	62.4	80.9	62.5
District Women's Association	12.5	14.2	15.5	20.5
Other women's group	14.3	19.2	17.7	21.4
Other	4.7	3.8	6.4	4.2
Percentage of women who are an active member of the group				
Eastern Province Farmer's Cooperative	10.3	17.2	12.1	16.2
COMACO	7.3	12.1	3.6	4.8
Other agricultural producer's group	12.3	24.5	12.8	30.0
Livestock/fisheries producer's group	1.1	2.2	1.7	3.5
Water user's group	9.8	10.5	14.8	15.1
Forest user's group	1.1	2.4	1.2	1.3
Credit or microfinance group	6.7	12.8	5.1	7.6
Trade and business association	2.0	0.7	1.0	0.8
Civic groups	2.9	3.1	3.7	4.7
Religious group	56.9	35.1	54.9	35.3
District Women's Association	3.2	2.9	4.1	4.0
Other women's group	6.4	6.6	8.7	7.0
Other	2.7	2.3	5.0	2.4
Number of women	1,499	1,499	1,542	1,542

Exposure to Messaging/Information (Agriculture, Nutrition, and Gender) and Distance to Key Services

Table C11. Access to agricultural extension workers

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who met with an agricultural extension worker in the past 12 months				
Yes	27.2	29.5	23.6	26.2
Woman herself is an agricultural extension worker	0.1	0.0	0.0	0.2
No	72.6	70.3	76.3	73.1
Don't know /refused/missing	0.1	0.2	0.1	0.5
Number of women (unweighted)	1,499	1,499	1,542	1,542
If met, number of times she met with an agricultural extension workers in the past 12 months				
1	43.2	37.7	34.1	39.5
2	30.6	34.4	31.0	30.1

	Project		Comparison	
	Baseline	End line	Baseline	End line
3	14.2	14.1	20.2	15.6
4+	11.8	13.0	14.2	14.0
Don't know/refused/missing	0.3	0.8	0.4	0.8
Total	100.0	100.0	100.0	100
If met, sex of the agricultural extension worker at the last meeting				
Male	69.2	77.0	74.5	81.1
Female	15.3	14.6	14.9	11.1
Both male and female	15.5	8.2	10.4	7.9
Don't know/refused/missing	0.0	0.1	0.1	0.0
Total	100.0	100.0	100.0	100.0
Number of women	444	439	369	431

Table C12. Access to lead farmers

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who met with a lead farmer in the past 12 months				
Yes, any lead farmer	20.2	23.0	15.9	21.8
PROFIT+ lead farmer	3.4	2.3	0.4	1.1
BLA/COMACO lead farmer	5.8	7.2	1.8	6.2
Other lead farmer	12.2	14.3	14.0	14.9
Woman herself is a lead farmer	0.2	1.1	0.8	0.8
No	78.9	74.7	83.1	76.5
Don't know/refused/missing	0.7	1.2	0.2	0.9
Total	100.0	100.0	100.0	100.0
Number of women (unweighted)	1,499	1,499	1,542	1,542
If met, number of times met with a lead farmer in the past 12 months				
1	40.0	42.5	30.6	41.7
2	29.4	28.6	31.8	31.0
3	14.8	13.9	15.6	14.5
4+	14.9	15.0	21.4	12.1
Don't know /refused/missing	0.9	0.0	0.6	0.7
Total	100.0	100.0	100.0	100.0
If met, sex of the lead farmer at the last meeting				
Male	66.7	75.0	61.5	72.9
Female	14.2	15.7	25.5	14.1
Both male and female	18.2	9.3	13.0	13.0
Don't know /refused/missing	0.9	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of women	320	357	254	348

Table C13. Information/training received

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who received training on:				
Conservation farming	50.2	64.2	48.8	65.8
Problems associated with aflatoxin in groundnuts	19.6	24.9	13.2	20.0
Improved seed for groundnuts	14.6	15.9	11.0	12.3
Becoming a certified groundnut seed grower	9.3	11.2	4.6	8.5
Labor-saving methods for harvesting groundnuts	7.7	11.0	6.7	13.3
Processing options for groundnuts	16.7	38.8	13.5	36.8
Marketing of agricultural crops	16.1	20.2	16.7	19.9
Women's rights/roles in agriculture	20.2	23.9	17.2	26.1
Women's ability/right to own land	16.6	25.2	9.7	28.5
Women's rights/roles in the family	21.5	29.4	21.9	30.1
Budgeting as a household	18.7	34.0	19.6	34.4
Sharing profits from crops jointly with spouse	15.1	24.7	13.9	27.9
Financial management and/or business planning	8.7	17.3	7.7	17.5
Functional literacy	11.0	19.5	12.3	17.7
Making decisions with spouse about family planning	45.9	65.7	45.5	67.9
Nutrition	50.6	64.7	52.0	66.5
Attending health clinics together with spouse*	NA	62.6	NA	67.2
Any of the above**	81.6	91.5	79.8	92.9
Number of women	1,499	1,499	1,542	1,542

*Not collected at baseline.

** The baseline figure does not include "attending health clinics together with spouse."

Table C14. Supplier/organizer of information/training

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who received information/training from:				
Agricultural Support Program	19.1	16.5	15.9	14.7
CARE	0.4	1.6	0.5	1.5
Church-based group	12.0	10.2	9.5	10.4
Clark/Cargill Cotton	2.1	2.2	1.7	0.9
Community Development Project	0.5	1.2	0.8	1.1
COMACO/BLA	7.1	20.2	3.7	13.0
Cooperative/farmer group	8.6	7.3	9.5	10.1
District Farmer's Association	1.4	1.1	0.9	1.6
District Women's Association	2.4	1.7	1.1	2.2
Eastern Province Farmers' Cooperative	1.0	0.7	0.6	0.3
Fellow farmers	36.0	41.5	36.0	46.6
Locally organized group	5.0	7.1	6.7	7.1
MAL	7.5	14.0	6.8	14.8
Ministry of Health/health officer/facility/National Food & Nutrition Council*	58.9	18.4	61.4	15.7
PROFIT+	3.3	3.0	0.4	0.2
World Vision	1.1	1.7	0.2	0.3

	Project		Comparison	
	Baseline	End line	Baseline	End line
Zambia National Farmers' Union (ZNFU)/Conservation Farming Unit	1.5	4.7	2.9	4.5
Other NGO	3.7	1.5	3.1	1.8
Other private firm	5.9	0.4	5.2	0.6
Clinic*	NA	64.5	NA	69.4
Other	8.8	27.7	3.9	25.4
Number of women (unweighted)	1,499	1,499	1,542	1,542

Note: End line figures include responses to "attending health clinics together with spouse."*The response option of "clinic" was added at end line. This may explain the large decrease in "Ministry of Health/health officer/facility/National Food & Nutrition Council" from baseline to end line.

Table C15. Source of information received

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of women who received information/training through:				
Informal conversation	35.0	40.9	33.5	47.2
Radio program	19.6	21.9	12.7	15.1
Pamphlet/newspaper	0.4	0.7	0.3	0.2
Workshop	2.1	3.5	1.7	3.0
Field day	3.7	9.7	2.1	7.8
Demonstration plot	6.5	10.3	5.3	11.0
Visit	23.5	36.7	24.3	38.6
Meeting	56.7	70.6	60.7	70.3
Training with *Better Life Book*	0.5	0.4	0.4	0.7
Other training	8.7	5.9	9.4	4.3
Seed fair	0.1	0.4	0.7	0.1
Other	1.5	4.9	1.2	6.9
Famer field school	NA	1.0	NA	0.5
Agribusiness group/savings and credit group	NA	0.1	NA	0.0
Number of women	1,499	1,499	1,542	1,542

Note: End line figures include responses to "attending health clinics together with spouse." The response options "farmer field school" and "agribusiness group/ savings and credit group" were available at end line only.

Table C16. Percentage of households located less than five kilometers from key services

	Project		Comparison	
	Baseline	End line	Baseline	End line
Tarmac/tarred road	31.7	34.9	8.8	15.1
Private fertilizer retailer	17.6	20.4	15.5	17.1
Established market place	41.5	38.5	37.7	38.6
Hammer mill	73.0	80.0	62.7	72.0
Feeder road	84.6	89.3	81.8	80.6
Point where you can receive mobile cell phone network services	97.5	99.5	84.3	94.3
Bulking station/aggregation center	57.0	51.3	52.2	58.6
Agro-dealer	20.4	23.9	17.7	19.2
Agricultural camp/block office	50.8	51.6	44.7	49.7
Basic school	83.4	89.2	79.6	90.2
Clinic/health center	59.5	70.2	55.5	71.7
CAD	NA	38.5	NA	26.1
Number of households	1,532	1,532	1,567	1,567

Note: "CAD" asked only at end line.

Food Security

Table C17. Food security

	Project		Comparison	
	Baseline	End line	Baseline	End line
Percentage of households that did not have enough food in the past 12 months	39.5	44.9	36.0	47.9
Months in which household did not have enough food				
August	0.7	1.4	0.6	2.1
September	0.9	2.0	0.9	2.9
October	1.9	4.0	1.9	5.6
November	2.6	6.1	3.0	7.2
December	5.1	10.1	6.4	11.4
January	15.2	19.9	15.2	22.9
February	33.0	38.1	29.9	40.1
March	13.3	16.8	10.1	15.0
April	2.0	3.1	1.5	3.3
May	0.7	1.1	0.5	1.2
June	0.5	1.2	0.5	0.9
July	0.7	1.4	0.7	1.2
Number of women	1,499	1,499	1,542	1,542

Gender Norms and Gender-Based Violence

Table C18. Gender norms and attitudes of women, percentage of women who agree with each statement

	Project		Comparison	
	Baseline	End line	Baseline	End line
A good wife obeys her husband even if she disagrees	63.1	49.9	64.3	53.8
It is important for a man to demonstrate to his wife/partner that he is the boss	52.7	55.7	61.7	61.7
A woman's most important role is to take care of her home and cook for her family	90.0	92.2	91.0	95.2
Taking care of the children is the mother's responsibility	81.4	85.8	79.3	89.0
A man should have the final word about decisions in the home	67.9	59.4	71.5	66.3
A married woman should be able to own land	67.8	61.8	72.1	63.0
The husband and wife should decide together how to spend money from crop harvests	97.7	97.3	96.9	97.3
Women should be able to travel alone to markets to sell crops	70.6	68.3	71.3	67.8
A married woman should be able to attend agricultural training	95.1	94.4	91.4	93.5
Number of women	1,499	1,499	1,542	1,542

Table C19. Gender norms and attitudes of women, percentage of women who agree that a husband is justified in beating his wife in certain situations

	Project		Comparison	
	Baseline	End line	Baseline	End line
Goes out without telling him	32.4	22.6	35.1	25.4
Neglects the children	40.6	28.0	39.4	27.6
Argues with him	32.9	25.6	35.7	22.0
Refuses to have sex with him	30.3	22.0	34.8	23.5
Burns the food	25.6	17.3	28.8	17.7
Refuses to go to the field	35.4	26.6	37.3	27.6
Number of women	1,499	1,499	1,542	1,542

Table C20. Gender-based violence in the past 12 months by partner against women who are married/cohabitating

Percentage of women whose partner:	Project		Comparison	
	Baseline	End line	Baseline	End line
Physical violence				
Pushed her, shook her, or threw something at her	6.7	6.8	5.3	6.1
Slapped her or twisted her arm	13.7	12.1	12.9	12.1
Punched her with his fist or something that could hurt her	5.8	7.2	6.2	7.2
Kicked or dragged her	4.8	5.6	4.5	4.8
Tried to strangle or burn her	1.6	2.2	1.3	1.8
Threatened her with a knife, gun, or other weapon	0.9	1.8	1.0	1.4
Attacked her with a knife, gun, or other weapon	0.3	0.7	0.4	0.1
Any physical violence	16.6	16.1	15.1	14.9
Sexual violence				
Physically forced her to have sexual intercourse with him when she did not want to	22.0	24.2	22.6	24.5
Forced her to perform other sexual acts she did not want to	3.9	9.2***	4.9	11.1***
Any sexual violence	22.4	26.9*	24.0	26.5
Emotional violence				
Insulted her or made her feel bad about herself	24.0	29.5*	23.7	30.9***
Said or did something to humiliate her in front of others	12.3	13.7	11.0	13.8*
Did things to scare or intimidate her on purpose	13.9	16.2	12.3	16.0*
Threatened her or someone close to her	4.2	7.9***	3.8	7.3***
Any emotional violence	33.6	38.4*	31.5	38.5***
Economic violence				
Deprived her of food	1.8	2.5	2.1	1.5
Deprived her of medical care	1.8	3.6**	1.6	2.9*
Deprived her of clothing	3.9	5.1	3.6	3.4
Deprived her of accommodation/sent her away	9.1	8.5	6.1	8.2*
Kept her from working or having employment	1.8	4.6***	1.3	2.7**
Deprived her of school fees for the children	2.0	5.0***	2.5	3.7*
Deprived her of money	8.0	14.3***	8.0	12.8***
Any economic violence	16.4	22.5***	14.3	19.5***
Any physical or sexual violence	32.0	34.3	31.6	33.6
Any emotional or economic violence	37.2	44.2**	35.7	44.0***
Any violence	46.7	52.4**	46.3	51.7*
Number of women	1,415	1,415	1,470	1,470

*p<.05,;** p<.01; ***p<.001

Table C21. Gender-based violence against current partner in the past 12 months by women who are married/cohabitating

Percentage of women who:	Project		Comparison	
	Baseline	End line	Baseline	End line
Physical violence				
Pushed him, shook him, or threw something at him	1.5	1.9	1.1	1.7
Slapped him or twisted his arm	2.4	2.5	2.0	2.3
Punched him with her fist or something that could hurt him	0.8	0.9	0.6	0.5
Kicked or dragged him	0.1	0.3	0.1	0.1
Tried to strangle or burn him	0.1	0.3	0.1	0.1
Threatened him with a knife, gun, or other weapon	0.0	0.4+	0.2	0.1
Attacked him with a knife, gun, or other weapon	0.0	0.3+	0.2	0.1
Any physical violence	4.1	4.4	3.0	3.9
Sexual violence				
Physically forced him to have sexual intercourse with her when he did not want to	3.5	3.0	3.8	3.8
Forced him to perform other sexual acts he did not want to	1.1	0.8	0.4	1.6**
Any sexual violence	3.9	3.3	4.1	4.4
Emotional violence				
Insulted him or made him feel bad about himself	6.4	11.2***	7.3	13.3***
Said or did something to humiliate him in front of others	2.6	1.9	1.9	2.0
Did things to scare or intimidate him on purpose	5.6	9.2**	6.1	7.7
Threatened him or someone close to him	0.9	1.1	0.9	0.9
Any emotional violence	13.2	18.7**	12.4	18.0***
Economic violence				
Deprived him of food	1.3	2.1	1.1	2.6*
Deprived him of medical care	0.0	0.2+	0.1	0.3
Deprived him of clothing	0.0	0.5	0.0	0.4+
Deprived him of accommodation/sent him away	0.9	2.1*	0.6	1.2
Kept him from working or having employment	0.2	0.2	0.0	0.3+
Deprived him of school fees for the children	0.0	0.0+	0.1	0.0+
Deprived him on money	1.2	4.5***	1.5	3.1*
Any economic violence	3.0	7.5***	3.1	6.3**
Any physical or sexual violence	7.7	7.2	6.9	7.7
Any emotional or economic violence	15.6	22.3***	14.0	20.5***
Any violence	18.5	25.4***	17.2	23.4**
Number of women	1,415	1,415	1470	1,470

*p<.05; ** p<.01; ***p<.001

+Test not performed. There was no variation in responses at baseline and/or end line.

Table C22. Gender-based violence against women by someone other than current partner in the past 12 months

Percentage of women who reported someone other than current partner:	Project		Comparison	
	Baseline	End line	Baseline	End line
Physical violence				
Pushed her, shook her, or threw something at her	0.2	1.1	0.4	0.1
Slapped her or twisted her arm	0.6	0.6	0.6	0.3
Punched her with his fist or something that could hurt her	0.4	0.7	0.3	0.2
Kicked or dragged her	0.1	0.1	0.3	0.0
Tried to strangle or burn her	0.1	0.1	0.0	0.0
Threatened her with a knife, gun, or other weapon	0.0	0.1	0.1	0.2
Attacked her with a knife, gun, or other weapon	0.1	0.1	0.1	0.0
Any physical violence	0.9	2.0	1.4	0.8
Sexual violence				
Physically forced her to have sexual intercourse with him when she did not want to	0.8	0.8	0.8	0.7
Forced her to perform other sexual acts she did not want to	0.2	0.0	0.1	0.0
Any sexual violence	0.9	0.8	0.8	0.7
Emotional violence				
Insulted her or made her feel bad about herself	17.7	19.2	16.7	18.1
Said or did something to humiliate her in front of others	8.2	10.0	7.0	10.3
Did things to scare or intimidate her on purpose	3.6	4.5	2.4	4.4
Threatened her or someone close to her	1.0	1.6	0.9	1.4
Any emotional violence	22.4	23.3	19.5	23
Any physical or sexual violence	1.8	2.8	2.1	1.5
Any violence	23.1	24.4	20.5	23.4
Number of women	1,499	1,499	1,542	1,542

APPENDIX D. DATA COLLECTION TOOLS

Quantitative

- Quantitative Household and Individual Survey

Qualitative

- Baseline In-Depth Interview Guide for Women
- Baseline In-Depth Interview Guide for Men
- Baseline Focus Group Discussion Guide
- End Line In-Depth Interview Guide for Women
- End Line In-Depth Interview Guide for Men
- End Line Key Informant Interview Guide for Community Leaders
- End Line Key Informant Interview Guide for Community Agro-Dealers
- End Line Key Informant Interview Guide for BLA/COMACO Lead Farmer
- End Line Focus Group Discussion Guide for Female Agro-Business (PROFIT+) or Producer Group (BLA/COMACO) Members

Implementation Process Monitoring

- PROFIT+ Implementation Process Monitoring Key Informant Interview Questions: Master List
- BLA Implementation Process Monitoring Key Informant Interview Questions: Master List

Feed the Future FEEDBACK

Impact Evaluation
Gender and Groundnut Value Chains
in Eastern Zambia

Quantitative Survey

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Module A: Household Identification Sheet

Household Identification	Code	Interview Details	Code
Cluster Number		**A12** Main Adult Male Decision-Maker from baseline	
A01 Household Identification		Has person named in A12 lived in the this HH for the past 12 months?	1=Yes 2=No
		Is the person named in A12 still the main adult male decision maker?	1=Yes 2=No
A02 Province		**A13** Main Adult Female Decision-Maker from baseline	
A03 District		Has person named in A13 lived in the this HH for the past 12 months?	1=Yes 2=No, but moved within 25 km 3=No, moved more than 25 km away 4=No, deceased
A04 Constituency		Is the person named in A13 still the main adult female decision maker	1=Yes 2=No
A05 Ward		**A13a** How are A12 and A13 related to one another?	**(See codes on next page)**
		A13b Is A12, A13 or someone else the HH head?	
A06 Region		**A14a** Enumerator Name	
		A14b. Enumerator Code	
A07 CSA Number		**A14C**. Partner's enumerator code (if applicable)	
A08 SEA Number		**A21a** Supervisor Code	

A09 Village		**A21b** Supervisor Name	
A10 Household Cell Phone Number		Result of Interview Attempt	1=Start Interview 2=Continue Interview 3=Refused 4=Could not locate 5=HH ineligible because baseline adult female decision maker no longer present 6=incapacitated 7=Need to track; she moved within 25 km
A11 GPS Coordinates of Household	° ' "		
A11a Has the main adult female decision maker from baseline moved?	1=Yes 2=No – Go to A12		
A11b Please indicate the district to which the main adult female decision maker moved.			
A13a 1= Husband and wife 2= Living together as if husband and wife 3= Father and daughter 4= Mother and son 5= Father-in-law and daughter-in law 6= Mother-in-law and son-in-law 7= Siblings 8= Other relative relationship 9 = Not related			

Module B: Informed Consent

IT IS NECESSARY TO INTRODUCE THE HOUSEHOLD TO THE SURVEY AND OBTAIN THE CONSENT OF THE PROSPECTIVE RESPONDENT(S) TO PARTICIPATE. FIRST, IDENTIFY THE MAIN ADULT MALE DECISION-MAKER FROM BASELINE AND THE MAIN ADULT FEMALE DECISION MAKER FROM BASELINE IN THE HOUSEHOLD.

IF ONLY THE MAIN ADULT FEMALE HAS BEEN SELECTED FOR AN INTERVIEW, REVIEW THE "PARTICIPANT INFORMATION SHEET: WOMEN" WITH THE FEMALE RESPONDENT AND OBTAIN HER INFORMED CONSENT. PRIVACY SHOULD BE ENSURED DURING THE PARTICIPANT INFORMATION SHEET REVIEW. IF THERE IS AN INTERRUPTION DURING THE REVIEW, STOP THE REVIEW UNTIL PRIVACY IS RE-ESTABLISHED.

IF BOTH THE MAIN ADULT FEMALE AND MAIN ADULT MALE HAVE BEEN SELECTED FOR AN INTERVIEW, THE MALE ENUMERATOR SHOULD REVIEW THE "PARTICIPANT INFORMATION SHEET: MEN" WITH THE MALE RESPONDENT AND OBTAIN HIS INFORMED CONSENT WHILE THE FEMALE ENUMERATOR REVIEWS THE "PARTICIPANT INFORMATION SHEET: WOMEN" WITH THE FEMALE RESPONDENT AND OBTAINS HER INFORMED CONSENT. THE MALE AND FEMALE MUST BE SEPARATED AND PRIVACY ENSURED DURING THE PARTICIPANT INFORMATION SHEET REVIEW. IF THERE IS AN INTERRUPTION DURING THE REVIEW, STOP THE REVIEW UNTIL PRIVACY IS RE-ESTABLISHED.

Module C: Household Roster and Demographics

ASK THESE QUESTIONS ABOUT ALL HOUSEHOLD MEMBERS.

THE HOUSEHOLD IS OUR UNIT OF ENUMERATION AND YOU HAVE TO BE CLEAR ABOUT WHAT CONSTITUTES A HOUSEHOLD. A HOUSEHOLD IS NOT NECESSARILY A FAMILY. YOU SHOULD HAVE A LOOK AT THE COMPOSITION OF THE HOUSEHOLD AND BE SATISFIED THAT THIS GROUP OF PERSONS LIVE TOGETHER AND EAT TOGETHER FROM THE SAME KITCHEN. SOME RESPONDENTS HAVE PRIDE IN SHOWING HOW LARGE THEIR FAMILIES ARE AND WILL INCLUDE PERSONS WHO DO NOT LIVE THERE AS MEMBERS OF THE HOUSEHOLD. PLEASE BE MINDFUL OF SUCH SITUATIONS.

DURING THE LISTING OF HOUSEHOLDS, POLYGAMOUS FAMILIES WERE GENERALLY LISTED AS SEPARATE HOUSEHOLDS, WITH THE HUSBAND AND FIRST WIFE LISTED AS ONE HOUSEHOLD, AND OTHER WIVES LISTED AS HEADS OF THEIR RESPECTIVE HOUSEHOLDS. HOWEVER, IF YOU COME ACROSS A POLYGAMOUS FAMILY THAT MEETS ONE OF THE FOLLOWING TWO CRITERIA, YOU SHOULD CONSIDER THEM A SINGLE HOUSEHOLD:

1. THE WIVES LIVE AT THE SAME HOMESTEAD AND THERE IS COMMON PROVISION FOR FOOD AND OTHER NECESSITIES. IF THIS FAMILY LIVES TOGETHER AND MAKES COMMON PROVISION FOR FOOD AND SHARES PRODUCTION RESOURCES (E.G., LAND, EQUIPMENT, LABOR), ALL THE FAMILY MEMBERS WILL BE CONSIDERED AS BELONGING TO ONE HOUSEHOLD.
2. THE RESPONSIBILITY OF COOKING FOR EVERYONE IS SHARED BETWEEN THE WIVES ALTHOUGH THE COOKING MAY TAKE PLACE IN DIFFERENT KITCHENS. TYPICALLY THERE IS A DUTY ROSTER TO COOK FOR THE REST OF THE HOUSEHOLD MEMBERS.

FOR ALL HOUSEHOLDS:

PLEASE LIST THE NAMES OF EVERYONE CONSIDERED TO BE A MEMBER OF THIS HOUSEHOLD, STARTING WITH THE MAIN MALE DECISION MAKER.

"First, we would like to ask you about each member of your household. A household consists of a group of persons related by blood, marriage, or adoption, including other persons, such as house-help or farm laborers, if any, who *normally* live together in one house or closely related buildings and take their meals from the same kitchen. This group of persons looks to one person whom they regard as the head of the household."

LIST THE NAMES OF ALL HOUSEHOLD MEMBERS, THEN ASK:

"Does anyone else live here even if they are not at home now? These may include children in school or household members at work."

IF YES, COMPLETE THE LISTING. THEN, COLLECT THE REMAINING COLUMNS OF INFORMATION FOR EACH MEMBER, ONE PERSON AT A TIME.

Enumerator: "I want to ask about each member of the household who lived in this household in the past 12 months."(IF THIS HOUSEHOLD IS PART OF A POLYGAMOUS FAMILY, ASK ONLY ABOUT THE HOUSEHOLD MEMBERS AT THIS PARTICULAR HOUSEHOLD.)

Table C1. Demographic characteristics of household members

ID	Name Enumerator: List the household head first and then the male and female main adult main decision makers. In most cases, the adult male or female decision maker will be the household head.	Date of Birth (MM/YYYY)	What is the sex of […]? 1=male 2=female	What is the relationship of […] to the current head? See codes below	What is the marital status of […]?	Is […] attending formal school? 1 = yes 2 = no	What is the highest level of formal education […] completed? See codes below	In the last 12 months, how many months was […] away from the household? Must be 11 or less Enter "0" if never away
MEM	**NAME**	**C01**	**C02**	**C03**	**C04**	**C05**	**C06**	**C07**
1								
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Relationship to Head (C03)	Marital Status (C04)	Education Levels (C06)		
1=Head	1=Never married	00=None	06=Standard 5; Grade 6	13=Form 6 Lower
2=Spouse	2=Monogamously married	01=Sub-standard A; Grade 1	07=Standard 6; Grade 7	14=Form 6 Upper
3=Child (own/step)	3=Polygamously married	01=Sub-standard B; Grade 1	08=Form 1; Grade 8	15=College Student
4=Parent/parent-in-law	4=Divorced	02=Standard 1; Grade 2	09=Form 2; Grade 9	16=Undergraduate Student
5=Brother/sister	5=Widowed	03=Standard 2; Grade 3	10=Form 3; Grade 10	17=Certificate/Diploma
6=Other relative	6=Separated	04=Standard 3; Grade 4	11=Form 4; Grade 11	18=Bachelor's Degree
7=Unrelated	7=Cohabit	05=Standard 4; Grade 5	12=Form 5; Grade 12	19=Master's Degree and above

Module D. Dwelling Characteristics and Distance to Key Services

Enumerator: "Now I would like to ask a few questions about your home." IF THE HOMESTEAD HAS MULTIPLE DWELLINGS, ASK ABOUT THE MAIN DWELLING.

Table D1. Dwelling characteristics

Enumerator: Observe (or ask if unsure): Roof top material (outer covering) See codes below	Enumerator: Observe (or ask if unsure): Floor material See codes below	Enumerator: Observe (or ask if unsure): Exterior walls See codes below	How many rooms are there in this dwelling? (Do not count bathrooms, hallways, garage, toilet, cellar, kitchen)	What is the main type of toilet your household uses? See codes below	What is the main source of drinking water for your household? See codes below	Does this household have electricity? (include grid and solar) 1=Yes 2=No	What is the main source of cooking fuel for your household? See codes below
D01	**D02**	**D03**	**D04**	**D05**	**D06**	**D07**	**D08**

Type of Roof (D01)	Type of Floor (D02)	Type of Walls (D03)	Type of Toilet (D05)	Drinking Water Source (D06)	Cooking Fuel (D08)
1=Tile 2=Wood 3=Iron sheet 4=Asbestos 5=Plastic sheeting	1=Earth/mud 2=Concrete/flag stone/cement 3=Tile/bricks 4=Wood	1=Mud/unburnt bricks 2=Concrete/flag stone/cement 3=Tile/bricks 4=Wood	1=Flush, communal 1=Flush, private 3=Ventilated improved pit latrine (VIP),	1=Piped into dwelling 2=Piped into plot/yard 3=Public tap (someone else's private tap) 4=Tube well/borehole	1=Electricity 2=Piped or liquid propane gas 3=Kerosene 4=Charcoal 5=Firewood

6=Grass thatched 7=Mud/cow dung 8=Cardboards 9=Concrete 10=Other	5=Other	5=Iron sheet 6=Grass 7=Other	communal 4= Ventilated improved pit latrine (VIP), private 4=Pit latrine, communal 5=Pit latrine, private 6=Pan/bucket 7=No toilet 8=Bush 9=Other	5=Protected dug well 6=Protected spring 7=Rain water collection 8=Unprotected dug well/springs 9=River/pond/streams 10=Tankers truck/vendor 11=Bottled water 12=Other	6=Animal dung 7=Agricultural crop residue 8=Other

Table D2. Distance to key services

From your homestead, how far is it to the nearest…?		Distance 1 mile=1.6 kilometers Enumerator: Record in Kilometers Enter 0 if less than 1 km Enter -8 if do not know Enter -9 if refused
	KEYSERV	**D09**
Tarmac/tarred road	**A**	
Private fertiliser retailer (during the fertiliser selling season, i.e., October/November)	**B**	
Established market place with many buyers and sellers of locally-produced agricultural products	**C**	
Hammer mill	**D**	
Feeder road	**E**	
Point where you can receive mobile cell phone network services	**F**	
Bulking station/aggregation center	**G**	
Agro-dealer	**H**	
Agricultural camp/block office	**I**	
Basic school	**J**	
Clinic/health centre	**K**	
Community agro dealer/CAD	**L**	

Module E. Household-Level Shocks

Enumerator: "Now I would like to ask about events and situations that occurred in your household over the past three years that may have hurt your household or that may have unexpectedly benefitted the household financially."

Table E1. Negative economic shocks

	Type of Negative Shock (If same shock occurred more than once in last three years, ask for most recent)	Was there a […] in the last three years? 1=Yes 2=No, go to next shock	When did […] occur the last time? 1=Within last 12 months 2=1 to 2 years ago 3=2 to 3 years ago 4=Ongoing	Please rate the severity of […] economically. 1= No effect 2=Some effect 3=Severe effect
		E01	**E02**	**E03**
A	Serious illness or injury of a household member that kept them from normal activities			
B	Loss of regular job of a household member			
C	Decrease in remittances to the household (NOT due to death of household member)			
D	Loss of an able-bodied household member (through marriage, abandonment, divorce, etc. but NOT through death)			
E	Destruction of property including crops/livestock (e.g., through fire, theft, flood, etc.)			
F	Failure of business/crops			
F-1	Low crop yield due to rainfall pattern			
G	Loss of land or displacement			
H	Death of a household member			
I	Other, specify:			

Table E2. Positive economic shocks

Type of Positive Shock (If same shock occurred more than once in last three years, ask for most recent)		Was there a […] in the last three years? 1=Yes 2=No, go to next shock	When did […] occur? 1=Within last 12 months 2=1 to 2 years ago 3=2 to 3 years ago	Please rate the economic benefit of […]. 1=No effect 2=Somewhat beneficial 3=Very beneficial
		E04	**E05**	**E06**
A	New job for a household member			
B	New or increased remittances			
C	New or increased government grants or money from NGOs			
D	Inheritance, large gift, lottery winnings, marriage gift			
E	Scholarship for children or adults in the household			
F	Loan from a micro-enterprise program			
G	Increase in price for agricultural products/ very good harvest			
H	Other, specify:			

Module F. Farm Land

Enumerator: "I would like to ask about the fields and crops the household had during the October 2015 – September 2016 agricultural season. I would like to sketch out each field to identify where it is located, what crops are grown (**or were planted**) on it, and then determine its area. It there is a groundnut crop on it, I would also like to ask about the area of that crop." SEE INSTRUCTIONS IN MANUAL FOR SKETCHING CROPS AND ESTIMATING AREA. ENTER DATA IN MODLUES F AND G AFTER SKETCHING.

Table F1. All fields

Type of Field		During the October 2015 – September 2016 agricultural season, did the HH have any […]? 1=Yes 2=No, go to next type of field	How many […] did the HH have?
	FIELDTYPE	**F01**	**F02**
Cultivated/Cropped Fields			
Own cropped fields	1		
Rented in cropped fields (cash/in-kind payments)	2		
Borrowed in cropped fields (without payment)	3		
Other Fields			
Gardens	4		
Fallow fields (natural or improved)	5		
Rented out fields (received or will receive cash/in-kind payment)	6		

Borrowed out fields (without payment)	7		
Orchards	8		
Virgin land (never cultivated)	9		
Other, specify:	10		

Total number of **Cultivated/Cropped Fields** (FIELDTYPE= 1-3) **F03**

Total number of **All Fields** (FIELDTYPE = 1-10): **F04**

Module G. Cultivated/Cropped Fields

Table G1. Cultivated/cropped fields

Field ID	Indicate if field is owned, rented in, or borrowed in 1=Owned 2=Rented in 3=Borrowed in	Please list up to 4 main crops that were grown on the plot in the October 2015 – September 2016 season.				Total Area		Area of groundnut crop, if applicable	
						Area	Unit See codes	Area	Unit See codes
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
G01									
G02									
G03									
G04									
G05									
G06									
G07									
G08									
G09									
G10									

Module I-1. Groundnuts

Enumerator: "Now I would like to ask about fields where groundnuts were grown in the October 2015 – September 2016 agricultural season." TRANSFER THE FIELD IDS FOR FIELDS WHERE GROUNDNUTS WERE GROWN FROM TABLE G1 AND USE THE SKETCH MAP TO HELP THE RESPONDENT RECALL WHICH FIELD IS BEING DISCUSSED.

Table I1. Groundnut fields

Field ID	What main type of tree did the HH use to protect or improve the harvest? See codes below	How would you describe the quality of the soil of this field? 1=Very poor 2=Poor 3=Good 4=Very good 98=Don't know	What was the main tillage method used? See codes below	How many complete weedings did the HH do in this field?	How many times was the field sprayed with herbicide? (Complete sprays; Enter 0 if field not sprayed)	How many times was the field sprayed with insecticide? (Complete sprays; Enter 0 if not sprayed)	Did the HH apply animal manure and/or compost to this field? 1=Yes 2=No
FIELD	**I01**	**I02**	**I03**	**I04**	**I05**	**I06**	**I08**

Tree Type (I01)	Tillage Method (I03)
0=None planted 1=Faidherbia albida (musangu) 2=Gliricidia sepium 3=Sesbania sesban 4=Tephrosia vogelii (ububa) 5=Other (specify)	1=Conventional hand hoeing 2=Planting basins (potholes) 3=Zero tillage 4=Ploughing 5=Ripping 6=Ridging (before planting) 7=Bunding 8=Mounding

TRANSFER THE FIELD ID FROM TABLE G1. PERIOD OF REFERENCE = OCTOBER 2015 – SEPTEMBER 2016 AGRICULTURAL SEASON.

Table I2. Groundnuts: Labour and decision making

Field ID	Who owns the land/field that GNs were planted on? See codes below	What type of tenure is this field under? See codes below	Who gave permission to use this land/field? See codes below	Who decided which crops to grow on this field? See codes below	Who provided most of the labour for land preparation of GNs? See codes below. If I14=0,1,3,5, 7-10, go to I15	Were any of the children male? 1=Yes 2=No	Who provided most of the labour for planting of GNs? See codes below. If I15=0,1,3,5, 7-10, go to I16	Were any of the children male? 1=Yes 2=No	What main seed variety did the HH use for the first planting of GNs in the Oct 15-Sept16 season? See codes below	Who decided which seed variety of GN to plant in this field? See codes below	Who provided most of the labor for weeding of the GNs? See codes below. If I18=0,1,3, 5, 7-10, go to I19	Were any of the children male? 1=Yes 2=No
	I10	**I11**	**I12**	**I13**	**I14**	**I14A**	**I15**	**I15A**	**I16**	**I17**	**I18**	**I18A**

Own (I10)	Tenure (I11)	Decision Maker (I12, I13, I17, I22, I23, I24)	Main Source of Labor (I14, I15, I18, I19)	Groundnut Seeds (I16)
1=Self 2=Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=state land titled – title already given 2= state land titled – title still being processed 3=state land (not titled) 4=former customary land titled (title already given) 5=former customary land titled (title still being processed) 6=customary no title 7=chief certificate 8=I don't know 9=other	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	0=Did not do this activity 1=Family labour–female adults 2=Family labour-female adults and children 3=Family labour–male adults 4=Family labour-male adults and children 5=Family labour–male & female adults 6= Family labour–male & female adults & children 7=Family labour–children only (< 12 years) 8=Hired labour 9=Mechanical power 10=Other	94=CHIPEGO 95=MGV-4 96=CHALIMBANA (aka Congo) 97=FLAMINGO 98=NYANDA 99= L ocal groundnuts 100=Hybrid groundnuts 101=Recycled hybrid groundnuts 220=CHISHANGO 221=ICGVSM-99-568 (aka ICGV-99) 222=KATETE - ICG 12991 223=MGV-5 232= NATAL COMMON 238=KANJUTE 239=MAKURU RED 240=Other, specify

Who provided most of the labour for harvesting of GNs? See codes below. If I19=1,3, 5, 7-10, go to I20 If I19=2,4,6, go to I19B	You indicated you did not harvest GNs. Please confirm that no GNs were harvested in the Oct 15-Sept 16 season 1=Yes, go to next field. **If Yes for all fields, go to Module J** 2=No, go back to I19	Were any of the children male? 1=Yes 2=No	Did the HH eat any of the GN harvest from this field? 1=Yes 2=No	Was any of the GN harvest from this field sold? 1=Yes 2=No, go to next field, if no additional fields, go to I25	Who decided to sell the GN harvest from this field? See codes below	Who sold the GN harvest from this field? See codes below	Who decided how most of the money from the GN sale was used? See codes below
I19	**I19A**	**I19B**	**I20**	**I21**	**I22**	**I23**	**I24**

Decision Maker (I12, I13, I17, I22, I23, I24)	Main Source of Labor (I14, I15, I18, I19)
1=Self 2=Spouse/partner 3= Self and spouse/partner jointly 4=Other	0=Did not do this activity 1=Family labour–female adults 2=Family labour-female adults and children 3=Family labour–male adults 4=Family labour-male adults and children 5=Family labour–male & female adults 6= Family labour–male & female adults & children 7=Family labour–children only (< 12 years) 8=Hired labour 9=Mechanical power 10=Other

Table I3. Drying, shelling, and storage of groundnuts

On what surface did you dry most of the GNs harvested from the October 2015 – September 2016 agricultural season? See codes below	Did you store most of the GNs from the October 2015 – September 2016 agricultural season shelled or unshelled? 1=shelled 2=unshelled, go to I28	Who provided most of the labour for shelling? See codes below. If I27=0,1,3,5, 7-10, go to I28	Were any of the children male? 1=Yes 2=No	Who decided if the GNs would be stored shelled or unshelled? See codes below	How did the HH store most of the GNs after drying? See codes below
I25	**I26**	**I27**	**I27A**	**I28**	**I29**

Surface (I25)	Main Source of Labor (I27)	Decision Maker (I28)	Storage (I29)
1=On mat or tarpaulin 2=On drying rack 3=On concrete 4=On rooftop 5=In the field/on the ground 6= Used a Mandela cock 7=Other, specify:	0=Did not do this activity 1=Family labour–female adults 2=Family labour-female adults and children 3=Family labour–male adults 4=Family labour-male adults and children 5=Family labour–male & female adults 6= Family labour–male & female adults & children 7=Family labour–children only (< 12 years) 8=Hired labour 9=Mechanical power 10=Other	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=Groundnut granary with cover on top 2=Groundnut granary without a cover on top 3=Open storage outside the house 4=In the house – loose 5=In the house – in sacks 6=Other (specify)

Enumerator: **"**Now I would like to ask about harvest, sale and bartering of groundnuts."

Table I4. Harvest of groundnuts

What is the TOTAL quantity of GNs that your household harvested FROM ALL GROUNDNUT FILEDS in the October 2015 – September 2016 agricultural season? Please include both fresh and dry harvest.		
TOTAL Quantity Harvested	Are you reporting the quantity as shelled (shell removed) or unshelled (still in shell)? 1=shelled 2-unshelled	Unit (See codes at right)
I30	**130A**	**131**

Unit (I31)
1=90kg bag
2=75kg bag
3=50kg bag
4=25kg bag
5=10kg bag
6=20lt tin
13=5lt gallon
14=meda

Table I5. Sale of shelled groundnuts

Did your HH sell any shelled GNs between February 2016 and April 2017? 1=Yes 2=No, go to I47	How many times did your HH sell shelled GNs between February 2016 and April 2017?	What is the TOTAL quantity of shelled GNs that your HH sold for cash from February 2016 to April 2017?	
		TOTAL Quantity Sold for Cash	Unit See codes below
I34	**I35**	**I36**	**I37**

Enumerator: "Now I'd like to ask about some specific times your HH sold shelled groundnuts. Please think back to the largest quantity your HH sold between February 2016 and April 2017."

Transaction		What quantity did your HH sell for the […]?		When did your HH sell the […]?		To whom did your HH sell the […]?	How far was the point of sale from your homestead for the […]? 1 mile=1.6 km (Enter in kms) Enter 0 if at homestead	What was the price per unit for the […]?		Who primarily decided how money from the sale was used for the […]?
		Quantity Sold for Cash	Unit See codes below	Year	Month See codes below	See codes below		Price (ZMK)	Unit See codes below	See codes below
	TRANS	**I38**	**I39**	**I40**	**I41**	**I42**	**I43**	**I44**	**I45**	**I46**
Largest transaction of shelled GNs	**1**									
2nd largest transaction of shelled GNs (If only one transaction, go to I47)	**2**									

Unit (I37, I39, I45)	Decision Maker (I46)	Month (I41)	Buyer (I42)
1=90kg bag 18=tonnes 2=75kg bag 21=kilogram 3=50kg bag 4=25kg bag 5=10kg bag 6=20lt tin 13=5lt gallon 14=meda 15=muchumbu 16=ka B.P.	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=January 2=February 3=March 4=April 5=May 6=June 7=July 8=August 9=September 10=October 11=November 12=December	1=Small-scale trader or miller/processor 8=Directly to miller/processor through agent or designated buying (delivered to mill/processor gate) point 9=Out grower 2=Large-scale trader/wholesaler 10=COMACO (Community Markets for Conservation) 3=Retailer/marketer 4=Other households 11=Schools, hospitals or health centres 5=Eastern Province Famers Markt 12=Community agro dealer/CAD 6=Other cooperative 13=Share Africa Zambia 7=NGO/faith based organization/church 14=Blue Oak 15=NWK/Dunvant 16=Other, specify:

Table I6. Sale of unshelled groundnuts

Did your HH sell any unshelled groundnuts between February 2016 and April 2017? 1=Yes 2=No, go to I60	How many times did your HH sell unshelled groundnuts between February 2016 and April 2017?	What is the TOTAL quantity of unshelled groundnuts that your HH sold for cash from February 2016 to April 2017?	
		TOTAL Quantity Sold for Cash	Unit See codes on next page
I47	**I48**	**I49**	**I50**

Enumerator: **"**Now I'd like to ask about some specific times your HH sold unshelled groundnuts. Please think back to the largest quantity your HH sold between February 2016 and April 2017."

Transaction		What quantity did your HH sell for the […]?		When did your HH sell the […]?		To whom did your HH sell the […]?	How far was the point of sale from your homestead for the […]?	What was the price per unit for the […]?		Who primarily decided how money from the sale was used for the […]?
		Quantity Sold for Cash	Unit See codes below	Year	Month See codes below	See codes below	1 mile=1.6 km (Enter in kms) Enter 0 if at homestead	Price (ZMK)	Unit See codes below	See codes below
	TRANS	**I51**	**I52**	**I53**	**I54**	**I55**	**I56**	**I57**	**I58**	**I59**
Largest transaction of unshelled GNs	**1**									
2nd largest transaction of unshelled GNs (If only one transaction, go to I60)	**2**									

Unit (I50, I52, I58)	Decision Maker (I59)	Month (I54)	Buyer (I55)
1=90kg bag 18=tonnes 2=75kg bag 21=kilogram 3=50kg bag 4=25kg bag 5=10kg bag 6=20lt tin 13=5lt gallon 14=meda 15=muchumbu 16=ka B.P.	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=January 2=February 3=March 4=April 5=May 6=June 7=July 8=August 9=September 10=October 11=November 12=December	1=Small-scale trader or miller/processor 8=Directly to miller/processor through agent or designated buying (delivered to mill/processor gate) point 9=Out grower 2=Large-scale trader/wholesaler 10=COMACO (Community Markets for Conservation) 3=Retailer/marketer 4=Other households 11=Schools, hospitals or health centres 5=Eastern Province Famers Market 12=Community agro dealer/CAD 6=Other cooperative 13=Share Africa Zambia 7=NGO/faith based organization/church 14=Blue Oak 15=NWK/Dunvant 16=Other, specify:

Table I7. Barter of shelled groundnuts

Did your HH barter any shelled GNs for goods and/or labour between February 2016 and April 2017? 1=Yes 2=No, go to I71	How many times did your HH barter shelled GNs between February 2016 and April 2017?	What is the TOTAL quantity of shelled GNs that your HH bartered for goods and/or labour from February 2016 to April 2017?	
		TOTAL Quantity Bartered	Unit See codes below
I60	**I61**	**I62**	**I63**

Enumerator: "Now I'd like to ask about some specific times your HH bartered shelled groundnuts. Please think back to the largest quantity your HH bartered between February 2016 and April 2017."

Transaction		What quantity did your HH barter for the […]?		When did your HH barter the […]?		To whom did your HH barter the […]? See codes below	How far was the point of bartering from your homestead for the […]? 1 mile=1.6 km (Enter in kms) Enter 0 if at homestead	Who primarily decided how the goods/labour from the barter was used for the […]? See codes below
		Quantity Bartered	Unit See codes below	Year	Month See codes below			
	TRANS	**I64**	**I65**	**I66**	**I67**	**I68**	**I69**	**I70**
Largest transaction of shelled GNs	**1**							
2nd largest transaction of shelled GNs (If only one transaction, go to J71)	**2**							

Unit (I63, I65)	Decision Maker (I70)	Month (I67)	Buyer (I68)
1=90kg bag 18=tonnes 1=90kg bag 2=75kg bag 21=kilogram 3=50kg bag 4=25kg bag 5=10kg bag 6=20lt tin 13=5lt gallon 14=meda 15=muchumbu 16=ka B.P.	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=January 2=February 3=March 4=April 5=May 6=June 7=July 8=August 9=September 10=October 11=November 12=December	1=Small-scale trader or miller/processor 8=Directly to miller/processor through agent or designated buying delivered to mill/processor gate) point 9=Out grower 2=Large-scale trader/wholesaler 10=COMACO (Community Markets for 3=Retailer/marketer Conservation) 4=Other households 11=Schools, hospitals or health centres 5=Eastern Province Famers Market 12=Community agro dealer/CAD 6=Other cooperative 13=Share Africa Zambia 7=NGO/faith based organization/church 14=Blue Oak 15=NWK/Dunvant 16=Other, specify:

Table I8. Barter of unshelled groundnuts

Did your HH barter any unshelled GNs for goods and/or labour between February 2016 and April 2017? 1=Yes 2=No, go to I82	How many times did your HH barter unshelled GNs between February 2016 and April 2017?	What is the TOTAL quantity of unshelled GNs that your HH bartered for goods and/or labour from February 2016 to April 2017?	
		TOTAL Quantity Bartered	Unit See codes on next page
I71	**I72**	**I73**	**I74**

Enumerator: "Now I'd like to ask about some specific times your HH bartered unshelled groundnuts. Please think back to the largest quantity your HH bartered between February 2016 and April 2017 ."

Transaction		What quantity did your HH barter for the […]?		When did your HH barter the […]?		To whom did your HH barter the […]?	How far was the point of bartering from your homestead for the […]?	Who primarily decided how goods/labour from the barter was used for the […]?
		Quantity Bartered	Unit See codes below	Year	Month See codes below	See codes below	1 mile=1.6 km (Enter in kms) Enter 0 if at homestead	See codes below
	TRANS	**I75**	**I76**	**I77**	**I78**	**I79**	**I80**	**I81**
Largest transaction of unshelled GNs	**1**							
2nd largest transaction of unshelled GNs(If only one transaction, go to I82)	**2**							

Unit (I74, I76)	Decision Maker (I81)	Month (I78)	Buyer (I79)
1=90kg bag 18=tonnes 2=75kg bag 21=kilogram 3=50kg bag 4=25kg bag 5=10kg bag 6=20lt tin 13=5lt gallon 14=meda 15=muchumbu 16=ka B.P.	1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other	1=January 2=February 3=March 4=April 5=May 6=June 7=July 8=August 9=September 10=October 11=November 12=December	1=Small-scale trader or miller/processor 8=Directly to miller/processor through agent or designated buying delivered to mill/processor gate) point 9=Out grower 2=Large-scale trader/wholesaler 10=COMACO (Community Markets for Conservation) 3=Retailer/marketer 4=Other households 11=Schools, hospitals or health centres 5=Eastern Province Famers Market 12=Community agro dealer/CAD 6=Other cooperative 13=Share Africa Zambia 7=NGO/faith based organization/church 14=Blue Oak 15=NWK/Dunvant 16=Other, specify:

Enumerator: “Now I’d like to ask about processing of groundnuts.”

Table I9. Processing of groundnuts

		Did the HH process any GNs into […]? 1=Yes 2=No, go to next item	Did the HH eat any of the […]? 1=Yes 2=No	Was any of the […] sold or bartered? 1=Yes 2=No, go to next item	Who decided to sell or barter the […]? See codes below	Who sold or bartered the […]? See codes below	Who decided how most of the money (goods/labor) from the sale (barter) of […] was used? See codes below
	PROD	**I82**	**I83**	**I84**	**I85**	**I86**	**I87**
Oil	1						
Peanut butter	2						
Roasted nuts	3						
Boiled nuts	4						
Groundnut flour	5	If No, go to Module J		If No, go to Module J			

Decision Maker (I85, I86, I87)
1=Self 2= Spouse/partner 3= Self and spouse/partner jointly 4=Other

Module I-2. Did Not Plant Groundnuts in October 2015 – September 2016 Season

What was the MAIN reason your HH did not plant groundnuts in the September 2015 – October 2016 agricultural season? See codes below	What other reasons contributed to your HH not planting groundnuts in the September 2015 – October 2016 agricultural season? See codes below	Who decided not to grow groundnuts in the September 2015 – October 2016 agricultural season? See codes below
IA1	**IA2**	**IA3**

Reasons (IA1, IA2)	Decision Maker IA3
1=Needed land for other crops 2=Did not have groundnut seed 3=Did not have inputs (other than seed) 4=Rainfall pattern is bad for groundnuts 5=Lack of labor 6=Groundnut crop has failed in the past 7=Lack of a ready market for groundnuts 8=Had enough stock from the previous harvest 9=Crop rotation purposes 10=Expected price of groundnuts to reduce 11=Available land not suitable for groundnut growing 12=No other reason 13=Other, specify	1=Self 2= Spouse/partner 3=Self and spouse/partner jointly 4=Other

Module J. Partnership and Natal Family Information

Enumerator: "Now I would like to ask about your marital status and children." FIRST CONFRM THE REPSONDENT'S MONTH AND YEAR OF BIRTH, THEN BEGIN THE MODULE.

Table J1.

J01	Are you currently married or living with someone as if married?	1=Yes, currently married, go to J05 2=Yes, currently living with someone, go to J05 3=No
J02	Have you ever been married or lived with someone as if married?	1=Yes 2=No, go to J04
J03	What is your marital status now: are you separated, divorced, or widowed?	1=widowed 2=divorced 3=separated
J04	Are you currently in a relationship?	1=Yes, go to J09 2=No, go to J10
J05	Are you living with your spouse/partner now, or is he/she staying elsewhere?	1=Yes, living with him/her now 2=No, spouse/partner living elsewhere
J06	Who is/are your current partner(s)? Fill in the IDs of the partner(s) who are household members. Additionally, circle the response for "non-household member" if the respondent has any partners who live outside the household.	21 Household member – ID: 21 Household member – ID: 21 Household member – ID: 21 Household member – ID: 34=Non-household member
J07	[ASK TO MEN] How many wives or women do you live with as married? [ASK To WOMEN} Including yourself, in total, how many wives or partners does your husband live with as if married? Enter total number of wives and/or live in partners	Enter total number of wives or live in partners. If 1, go to J09
J08	[ASK TO WOMEN ONLY] What is your seniority (1st, 2nd, 3rd, 4th, etc.) among the wives/partners?	
J09	For how many years have you been with your current partner?	

	(if there are multiple partners, use the one the respondent has been with longest.)	
J10	How many living male children do you have? (Biological, including adult)	
J11	How many living female children do you have? (Biological, including adult)	
J12	How old is your youngest living child? (Age in years)	
J13	[ASK TO WOMEN ONLY] How old were you when you had your first child?	
J14	[ASK TO WOMEN AGE 15-49 ONLY] Are you currently doing something or using any method to delay or avoid getting pregnant?	1=Yes 2=No, got to Module K
J15	Which method are you using? (Circle all mentioned.)	1=Female sterilization 8=Female condom 2-=Male sterilization 9=Diaphragm 3=Pill 10=Foam/jelly 4=IUD 11=Lactaional amen. method 5=Injectables 12=Rhythm method 6=Implants 13=Withdrawal 7=Male condom 14=Other, specify

Module K. Access to Productive Capital

Enumerator: "Now I would like to ask about assets that you may have." THE PURPOSE OF THIS MODULE IS TO GET AN IDEA ABOUT MEN'S AND WOMEN'S ACCESS TO ASSETS AND THEIR ABILITY TO USE THE RESOURCE. FOR K02-A, ENTER THE NUMBER OF CULTIVATED/CROPPED AND OTHER FIELDS FROM MODULE F (F04).

Table K1. Access to productive capital

Productive Capital		Does anyone in your household currently have any […]? 1=Yes 2=No, go to next item	How many […] does your household currently have?	Who would you say owns most of the […]? See codes below
		K01	**K02**	**K03**
A	Agricultural fields (cultivated/cropped fields and other fields)	**1**	**(F04)**	
B	Large livestock (oxen, cattle, donkey)			
C	Small livestock (goats, pigs, sheep)			
D	Chickens, ducks, turkeys, pigeons			
E	Fish pond or fishing equipment (nets, rods and hooks)			
F	Farm equipment (non-mechanized)			
G	Farm equipment (mechanized)			
H	Nonfarm business equipment			
I	House (and other structures)			
J	Large consumer durables (fridge, TV, sofa)			
K	Small consumer durables (radio, cookware)			
L	Cell phone			
M	Other land not used for agricultural purposes (residential or commercial land)			

N	Bicycle			
O	Motorcycle			
P	Car/Truck			

Decision Making and Control over Capital (K03)
1=Self 2= Spouse/partner 3=Self and spouse/partner jointly 4=Other

Table K2. Financial assets

Type of Financial Asset		Does your HH currently have […]? 1=Yes 2=No, go to next item	Whose names are on the account? See codes below	Can you access […] by yourself? 1=Yes 2=No
		K08	**K09**	**K10**
A	Savings account in bank			
B	Second savings account in bank			
C	Savings in a group/association			
D	Cash and savings - not in bank/group/assoc.		Ask: Who does the cash/saving belong to?	
E	Pension or retirement account			
F	Other financial asset, specify:			

Account Name (K09)		
1=Self	5=Self and other HH members (group)	9=Self and non-family member
2=Self with partner	6=Self and other male family member outside HH	10=Group/Organization
3=Self and other male HH member	7=Self and other female family member outside HH	11=Other
4=Self and other female HH member	8=Self and other family members outside HH (group)	98=Don't know

Table K3. Access to credit

Lending Sources		Has anyone in your HH taken any loans or borrowed cash/in-kind from […] in the past 12 months? 1=Yes, cash 2=Yes, in-kind 3=Yes, cash and in-kind 4=No, go to next item 5=Don't know, go to next item	Who made the decision to borrow from […]?	Who made the decision about what to do with the money/ item borrowed from […]?
		K11	**K12**	**K13**
A	Non-governmental organization (NGO)			
B	Informal lender			
C	Formal lender (bank/financial institution)			
D	Friends or relatives			
E	Agribusiness group or group-based micro-finance or lending including SILCs/ VSLAs /SACCOs/merry-go-rounds			

Decision Making and Control over Capital (K12, K13)
1=Self 2= Spouse/partner 3=Self and spouse/partner jointly 4=Other

Table K4. Outgrower schemes

Has anyone in your household participated in any outgrower schemes? 1=Yes 2=No, go to Module L	Who made the decision to participate? See codes below	Who made the decision about how the inputs received were used? See codes below
K14	**K15**	**K16**

Decision Making and Control over Capital (K15, K16)
1=Self 2= Spouse/partner 3=Self and spouse/partner jointly 4=Other

Module L. Household Decision Making

Enumerator: "I would like to ask about your role in household decision making."

Table L1. Household decision making

	Activity If household does not engage in that particular activity, enter 99= "decision not made" and proceed to next activity.	When decisions are made regarding […], who is it that normally takes the decision? If 1=Self, go to next item See codes below	To what extent do you feel you can make your own personal decisions regarding […] if you wanted to? See codes below
		L01	**L02**
A	Non-farm business activity		
B	Your own (singular) wage or salary employment		
C	Major household expenditures (such as a large appliance for the house like refrigerator)		
D	Minor household expenditures (such food for daily consumption or other household needs)		
E	Whether or not to use family planning to space or limit births		
F	Spending your own money		

Decision Maker (L01)	Extent of Participation in Decision Making (L02)
1=Self 2= Spouse/partner 3=Self and spouse/partner jointly 4=Other	1=Not at all 2=Small extent 3=Medium extent 4=To a high extent

Module M. Group Membership and Leadership

Enumerator: "Now I would like to ask you about membership in groups and leadership."

Table M1. Individual leadership

If you were at a community meeting, are you comfortable that you could raise your opinion? See codes at right
M01

Comfort Level Codes (M01)
1=No, not at all comfortable 2=Yes, but with a great deal of difficulty 3=Yes, but with a little difficulty 4=Yes, fairly comfortable 5=Yes, very comfortable

Table M2. Group membership

Group Membership		Is there a […] in your community? 1=Yes 2=No, go to next group	Are you an active member of the […]? 1=Yes 2=No, go to next group	How much input do you have in making decisions in the […]? See codes below
GROUP		**M02**	**M03**	**M04**
A	Eastern Province Farmer's Cooperative			
B	COMACO			
C	Other agricultural producer's group/cooperative (including marketing groups)			
D	Livestock/fisheries producer's group (including marketing groups)			
E	Water users' group			
F	Forest users' group			
G	Agribusiness group, credit, or microfinance group (including SILC, GROW, SHG, SACCOs/merry-go-rounds/ VSLAs)			
H	Trade and business association			
I	Civic groups (improving community) or charitable group (helping others)			

J	Religious group			
K	[ASK TO WOMEN ONLY] District Women's Association (DWA)			
L	[ASK TO WOMEN ONLY] Other women's group (only if it does not fit into one of the other categories)			
M	Other group (specify)			

Making Decisions (M04)
1=No input
2=Input into very few decisions
3=Input into some decisions
4=Input into most decisions
5=Input into all decisions

Module N. Dietary Diversity

IN THIS MODULE YOU WILL ASK THE RESPONDENT TO PLEASE DESCRIBE EVERYTHING THAT THEY ATE YESTERDAY DURING THE DAY OR NIGHT, WHETHER AT HOME OR OUTSIDE THE HOME.

AS THE RESPONDENT RECALLS FOODS, ENTER "1" IN THE COLUMN BELOW THE FOOD GROUP. IF THE FOOD IS NOT LISTED IN ANY OF THE FOOD GROUPS BELOW, WRITE THE FOOD IN THE BOX LABELED "OTHER FOODS." IF FOODS ARE USED IN SMALL AMOUNTS FOR SEASONING OR AS A CONDIMENT, INCLUDE THEM UNDER THE CONDIMENTS FOOD GROUP.

A) "Think about when you first woke up yesterday. Did you eat anything at that time?"
IF YES: "Please tell me everything you ate at that time."
PROBE: "Anything else?" UNTIL RESPONDENT SAYS NOTHING ELSE, THEN CONTINUE TO PART B. IF NO, CONTINUE TO PART B.

B) "What did you do after that? Did you eat anything at that time?"
IF YES: "Please tell me everything you ate at that time."
PROBE: "Anything else?" UNTIL RESPONDENT SAYS NOTHING ELSE.

REPEAT QUESTION B ABOVE UNTIL RESPONDENT SAYS SHE WENT TO SLEEP UNTIL THE NEXT DAY. IF RESPONDENT MENTIONS MIXED DISHES LIKE A PORRIDGE, SAUCE, OR STEW, PROBE:

C) "What ingredients were in that [mixed dish]?"
PROBE: "Anything else?" UNTIL RESPONDENT SAYS NOTHING ELSE.

ONCE THE RESPONDENT FINISHES RECALLING FOODS EATEN, READ EACH FOOD GROUP WHERE '1' WAS NOT ENTERED, ASK THE FOLLOWING QUESTION AND ENTER '1' IF RESPONDENT SAYS YES, '0' IF NO, AND '9' IF DON'T KNOW: Yesterday during the day or night, did you drink/eat any [food group items]?

Table N1. Other Foods

OTHER FOODS: Please write down other foods to the right of this box that the respondent mentioned but are not in the list below. This will allow the survey supervisor or other knowledgeable individual to classify the food later.	Write foods eaten here (**N01**)

Table N2. Food groups

Food made from grains, such as bread, rice, noodles, porridge, or[other local grain food]	Pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside or [other local yellow/orange foods]	White potatoes, white yams, manioc, cassava [other local root crops] or any other foods made from roots	Any dark green leafy vegetables such as [local dark green leafy vegetables]	Ripe mangoes, ripe papayas or [other local vitamin A-rich fruits]	Any other fruits or vegetables	Liver, kidney, heart, or other organ meats	Any meat, such as beef, pork, lamb, goat, chicken, or duck	Eggs
N02	**N03**	**N04**	**N05**	**N06**	**N07**	**N08**	**N09**	**N10**
1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know

Fresh or dried fish, shellfish, or seafood	Any foods made from beans, peas, lentils, nuts, or seeds [add any local names]	Cheese, yogurt, or other milk products	Any oil, fats, or butter, or foods made with any of these	Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits	Condiments for flavor, such as chilies, spices, herbs, or fish powder	Grubs, snails, or insects	
N11	**N12**	**N13**	**N14**	**N15**	**N16**	**N17**	
1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	1 = Yes 2 = No 9 = Don't Know	

Module P: Months of Adequate Household Food Provisions

Enumerator: "Now I would like to ask about your household's food provisions during different months of the year."

In the past 12 months, were there months in which the household did not have enough food to meet its family's needs? 1=Yes 2=No, Go to Module Q	If yes, in which months between August 2016 and July 2017 did the HH not have enough food to meet its family's needs? Enumerator: Do NOT read the list of months. Simply record a 1=Yes for months the household mentioned being without enough food, and 2=No for months not mentioned by the household.											
P01	**P02**											
	1=August 2016	2=Sep. 2016	3=October 2016	4=Nov. 2016	5=Dec. 2016	6=Jan. 2017	7=Feb. 2017	8=March 2017	9=April 2017	10=May 2017	11=June 2017	12=July 2017

Module Q. Household Hunger Scale

Table Q1. Household hunger scale

In the past [4 weeks/30 days] was there ever no food to eat of any kind in your house because of lack of resources to get food? 1=Yes 2=No, go to Q03	How often did this happen in the past [4 weeks/30 days]? 1=Rarely (1-2 times) 2=Sometimes (3-10 times) 3=Often (more than 10 times)	In the past [4 weeks/30 days] did you or any household member go to sleep at night hungry because there was not enough food? 1=Yes 2=No, go to Q05	How often did this happen in the past [4 weeks/30 days]? 1=Rarely (1-2 times) 2=Sometimes (3-10 times) 3=Often (more than 10 times)	In the past [4 weeks/30 days] did you or any household member go a whole day and night without eating anything at all because there was not enough food? 1=Yes 2=No, go to Module R	How often did this happen in the past [4 weeks/30 days]? 1=Rarely (1-2 times) 2=Sometimes (3-10 times) 3=Often (more than 10 times)
Q01	**Q02**	**Q03**	**Q04**	**Q05**	**Q06**

Module R. Exposure to Messaging/Information (Agriculture, Nutrition, and Gender)

Table R1. Access to agricultural extension

Have you met with an agricultural extension worker in the past 12 months? 1=Yes 2= No, go to R04 (Enter -1 if respondent is an extension worker)	How many times did you meet with the agricultural extension worker in the past 12 months?	The last time you met with an extension worker, were they male or female? 1=Male 2=Female 3=Both male and female	Have you met with a lead farmer in the past 12 months? (Circle all that apply) 1=Yes, PROFIT+ lead farmer 2=Yes, COMACO (BLA) lead farmer 3=Other lead farmer 4=No, go to R07 (Enter -1 if respondent is a lead farmer)	How many times did you meet with the lead farmer in the past 12 months?	The last time you met with a lead farmer, were they a male or female? 1=Male 2=Female 3=Both male and female
R01	**R02**	**R03**	**R04**	**R05**	**R06**

Table R2. Advice/information provision

		Have you ever received any information/training on […]? 1=Yes 2=No, go to next item	Who were the most important suppliers or organizers of this information/training? (Allow up to 2 responses) See codes on next page	How did you receive this information/training? / How did this information/training come to you? 1=Informal conversation 7=Visit 2=Radio program 8=Meeting 3=Pamphlet/newspaper 9=Training with Better Life Book 4=Workshop 10=Other training 5=Field day 11=Seed Fair 6=Demonstration plot 12=Other, specify 13= Farmer field school 14=Agribusiness group/savings and credit group (Allow up to 2 responses)
	ADV	**R07**	**R08 1/2**	**R09 1/2**
Conservation farming (e.g., clear fire break, composting/fertliser making, no burning of famer plot, slash crop residues, use ridges with hand plow, use oxen for plowing, practice crop rotation)?	**A**			
Problems associated with Aflatoxin in groundnuts?	**B**			
Improved seed for groundnuts?	**C**			
Becoming a certified groundnut seed grower?	**D**			
Labor-saving methods for harvesting groundnuts?	**E**			
Processing options for groundnuts (e.g., oil expelling, peanut butter production)?	**F**			
Marketing of agricultural crops?	**G**			
Women's rights/roles in agriculture?	**H**			
Women's ability/right to own land?	**I**			
Women's rights/roles in the family?	**J**			
Budgeting as a household (or jointly with your spouse)?	**K**			

Sharing profits or deciding jointly how to use proceeds from crops with your spouse?	**L**			
		Have you ever received any information/training on […]? 1=Yes 2=No, go to next item	Who were the most important suppliers or organizers of this information/training? (Allow up to 2 responses) See codes on next page	How did you receive this information/training? / How did this information/training come to you? 1=Informal conversation 7=Visit 2=Radio program 8=Meeting 3=Pamphlet/newspaper 9=Training with Better Life Book 4=Workshop 10=Other training 5=Field day 11=Seed Fair 6=Demonstration plot 12=Other, specify 13= Farmer field school 14=Agribusiness group/savings and credit group (Allow up to 2 responses)
	ADV	**R07**	**R08 1/2**	**R09 1/2**
Financial management/and or business planning?	**M**			
Functional literacy?	**N**			
Making decisions together with your spouse on family planning?	**O**			
Nutrition (i.e., choice of food to eat)?	**P**			
Attending health clinics together with spouse	**Q**			

Supplier of Information/Training (R08)			
1=ADRA (Adventist Dev. & Relief Agency) 2=Agricultural Support Program (ASP) 3=Alliance Cotton 4=Amaka 5=Caritas Zambia 6=CARE 7=Church-based group 8=Clark/Cargill Cotton 9=CLUSA Group 10=CODEP (Community Dev. Project)	11=COMACO/BLA 12=Commercial banks 13=Cooperative/farmer group 14=District Farmer's Association 15=District Women's Association (DWA) 16=Eastern Province Farmers' Coop 17=Economic Expansion in Outlying Areas 18=Fellow farmers 19=HODI 20=ICAZ (Institute of Cultural Affairs of Zambia)	21=Locally organized group 22=NWK/Dunavant 23=MoA Extension 24=MoA: Rural Investment Fund (RFI) 25=MoA: SCAFE 26=MoA: Other agents (including vet) 27=MoA: FRA Cooperative 28=Ministry of Health/health officer/facility/National Food & Nutrition Council 28a=Naniwe 29= Private input suppliers/stockists/ agro-dealers/agents 30= Private output traders	31=PROFIT+ 32=Self Help Africa 32a=Share Africa Zambia 33=WCS (Wildlife Conservation Soc) 34=World Vision 34a=Zasaka/Nature Agro 35=ZNFU/Conservation Farming Unit 36=Other NGO, specify 37=Other private firm, specify 38=Other outgrower, specify 39=Other, specify 40-Clinic

Table R3. Information on agricultural commodity prices

Do you access information about agricultural commodity prices? 1=Yes 2=No, go to Module S	What is your main source of agricultural commodity price information? See codes below
R10	**R11**

Source of Agricultural Commodity Price Information (R11)	
1=COMACO/BLA 2=Conservation Farming Unit (CFU) 3=Eastern Province Farmer's Cooperative 4=Extension agent 5=Farmer/neighbor 6=Farmer's group/cooperative 7=Field day 8=Headman 9=Market place 10=NGO / faith-based organization/church	11=Pamphlet/newspaper 12=PROFIT+ 13=Outgrowers 14=Radio program 15=Shops 16=Trader/Marketer 17=Television 18=Workshop 19=ZNFU: SMS 20=ZNFU: Other sources (Billboards, newsletter persons) 21=Other (specify)

R12	1=Yes 2=No
A. Have you head of the groundnut seed variety MGV4?	
B. Have you head of the groundnut seed variety MGV5?	
C. Have you head of the groundnut seed variety Chishango?	

Module S-1. ASK WOMEN ONLY: Gender Attitudes, Transactional Sex, Violence, and Alcohol Consumption

IT IS IMPORTANT THAT YOU CARRY OUT THIS MODULE IN A PRIVATE ROOM OR PRIVATE LOCATION AWAY FROM OTHER PEOPLE SO THAT OTHERS CANNOT HEAR THE QUESTIONS OR HER RESPONSES. IF PRIVACY IS COMPROMISED DURING THIS MODULE (FOR EXAMPLE, ANOTHER FAMILY MEMBER ENTERS THE ROOM), YOU SHOULD STOP ASKING QUESTIONS UNTIL PRIVACY IS RE-ESTABLISHED. IN ADDITION, IF THE PARTICIPANT BECOMES DISTRAUGHT OR SAD DURING THESE QUESTIONS, YOU SHOULD PAUSE AND ASK HER IF SHE IS OKAY. ALSO ASK IF SHE WOULD LIKE TO CONTINUE WITH THE INTERVIEW, TO PAUSE MOMENTARILY, SKIP THESE QUESTIONS, OR STOP THE INTERVIEW COMPLETELY.

Enumerator: "Now I would like to ask you questions about some important aspects of a woman's life. There is some risk in the following portion of this study. We will ask you some questions relating to your relationship with your husband/partner and any experience of physical violence. It is possible that you may feel sad or uncomfortable when talking to us about this topic. If you do feel sad or uncomfortable, you will be able to talk to me or to our project staff. You can also end your participation in the interview at any time. We will not share your responses with anyone else and nobody else in your household is being asked these same questions. However, there is still a risk that your family or your husband/partner could find out about the study that they may not agree with your participation in the study. Also, if you would like, I can give you contact information for groups that help women when they are having difficulties with their partners."

Table S1. Gender attitudes

S01	First, I would like to ask you a few questions about your views about women's and men's roles in the house and community. I will read to you a number of opinions, please tell me if you agree or disagree with them. There are no right or wrong answers to these questions.	1=Agree 2=Disagree -8=Don't know
A	A good wife obeys her husband even if she disagrees.	
B	It is important for a man to demonstrate to his wife/partner that he is the boss.	
C	A woman's most important role is to take care of her home and cook for her family.	
D	Taking care of the children is the mother's responsibility.	
E	A man should have the final word about decisions in the home.	
F	A married woman should be able to own land.	
G	The husband and wife should decide together how to spend money from crop harvests.	
H	Women should be able to travel alone to markets to sell crops.	
I	A married woman should be able to attend agricultural training.	
S02	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	1=Yes 2=No -8=Don't know
A	If she goes out without telling him?	

B	If she neglects the children?	
C	If she argues with him?	
D	If she refuses to have sex with him?	
E	If she burns the food?	
F	If she refuses to go to the field?	
S03	Now I would like to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your current husband/partner? (If the respondent has no current partner, go to S04).	1=Yes, Often 2=Yes, Sometimes 3=No -8=Don't know
A	He is jealous or angry if you (talk/talked) to other men?	
B	He frequently accuses you of being unfaithful?	
C	He does not permit you to meet your girl friends?	
D	He tries to limit your contact with your family?	
E	He insists on knowing where you (are/were) at all times?	
F	He does not trust you with any money?	

Enumerator: "Now I would like to ask you some questions on your opinions and personal behaviors related to sexual activity."

S2. Transactional Sex

Table S2a. Transactional sex

What do you think about a woman having sex with a man because he has provided her with something she could not afford, such as transportation or a place to stay? (Choose one answer that best describes your view). Enumerator: Read out responses. 1=I think it is wrong morally 2=I think it violates her rights 3=I think it is her own choice 4=I think it is wrong but there is nothing that can be done about it 5=I see nothing wrong with it -8=Don't know
S04

Table S2b. Transactional sex

S05	Please think now about any man you had sex with more than once in the last 12 months but who you didn't consider to be your main partner at the time. Did you become involved with him because you expected him to do, or because he did do, any of the following: (If respondent indicates she did not have sex with someone not considered her main partner in the past 12 months, enter 98 for A-F and go to S06.)	1=Yes 2=No 3=No answer 98=Did not have sex with someone who was NOT main partner
A	Provided you with transportation.	
B	Provided you with somewhere to stay.	
C	Provided you with food.	
D	Gave you cash or money to pay your bills.	
E	Purchased an agricultural crop from you.	
F	Provided you anything else that you could not afford by yourself.	
S06	Now think now about any man you had sex with just as a once off in the last 12 months. Did you become involved with him because you expected him to do, or because he did do, any of the following: (If respondent indicates she did not have sex with someone as a once off in the past 12 months, enter 98 for G-L and go to S07.)	1=Yes 2=No 3=No answer 98=Did not have sex with someone who was NOT main partner
A	Provided you with transportation.	
B	Provided you with somewhere to stay.	
C	Provided you with food.	
D	Gave you cash or money to pay your bills.	
E	Purchased an agricultural crop from you.	
F	Provided you anything else that you could not afford by yourself.	

Enumerator: “Now I would like to ask you some questions about your relationship with your current partner.” (IF RESPONDENT HAS NO CURRENT PARTNER, GO TO S13).

Table S3. Violence with current partner

		Has your current husband/partner ever […]? 1=Yes 2=No, go to next item -8= Don’t know, go to next item	Has this happened in the last 12 months? 1=Yes 2=No, go to next item -8= Don’t know, go to next item	How many times did this happen in the last 12 months?
		S07	**S08**	**S09**
A	Insulted you or made you feel bad about yourself			
B	Said or done something to humiliate you in front of others			
C	Done things to scare or intimidate you on purpose (e.g., by the way he looked at you, by yelling and smashing things)			
D	Threatened you or someone close to you with harm			
E	Slapped you or twisted your arm			
F	Pushed you, shook you, or thrown something at you			
G	Punched you with his fist or with something that could hurt you			
H	Kicked or dragged you			
I	Tried to strangle or burn you			
J	Threatened you with a knife, gun, or other type of weapon			
K	Attacked you with a knife, gun, or other type of weapon			
L	Physically forced you to have sexual intercourse with him when you did not want to			
M	Forced you to perform other sexual acts you did not want to			
N	Deprived you of food			
O	Deprived you of medical care			
P	Deprived you of clothing			
Q	Deprived you of accommodation /sent you away			
R	Kept you from working or having employment			
S	Deprived you of school fees for the children			
T	Deprived you of money			

Table S4. Violence against Current Partner

		Have you ever […]? 1=Yes 2=No, go to next item -8= Don't know, go to next item	Has this happened in the last 12 months? 1=Yes 2=No, go to next item -8= Don't know, go to next item	How many times did this happen in the last 12 months?
		S10	**S11**	**S12**
A	Insulted your partner or made him feel bad about himself			
B	Said or done something to humiliate him in front of others			
C	Done things to scare or intimidate him on purpose (e.g., by the way you looked at him, by yelling and smashing things)			
D	Threatened him or someone close to him with harm			
E	Slapped him or twisted his arm			
F	Pushed him, shook him, or thrown something at him			
G	Punched him with your fist or with something that could hurt him			
H	Kicked or dragged him			
I	Tried to strangle or burn him			
J	Threatened him with a knife, gun, or other type of weapon			
K	Attacked him with a knife, gun, or other type of weapon			
L	Physically forced him to have sexual intercourse when he did not want to			
M	Forced him to perform other sexual acts he did not want to			
N	Deprived him of food			
O	Deprived him of medical care			
P	Deprived him of clothing			
Q	Deprived him of accommodation /sent him away			
R	Kept him from working or having employment			
S	Deprived him of school fees for the children			
T	Deprived him of money			

Enumerator: “Now I would like to ask you some questions about your relationships with other people.”

Table S5. Violence with others

		In the last 12 months, has anyone other than your current partner […]? 1=Yes 2=No, go to next item	How many times did this happen in the last 12 months?	The last time this occurred, who did this to you? See codes below	The last time this occurred, where did it occur? See codes below
		S13	**S14**	**S15**	**S16**
A	Insulted you or made you feel bad about yourself				
B	Said or done something to humiliate you in front of others				
C	Done things to scare or intimidate you on purpose (e.g., by the way he looked at you, by yelling and smashing things)				
D	Threatened you or someone close to you with harm				
E	Slapped you or twisted your arm				
F	Pushed you, shook you, or thrown something at you				
G	Punched you with his fist or with something that could hurt you				
H	Kicked or dragged you				
I	Tried to strangle or burn you				
J	Threatened you with a knife, gun, or other type of weapon				
K	Attacked you with a knife, gun, or other type of weapon				
L	Physically forced you to have sexual intercourse with him when you did not want to				
M	Forced you to perform other sexual acts you did not want to				

Who (S15)	**Where (S16)**
1=Mother/step/mother 13=Teacher 2=Father/step-father 14=Employer/someone at work 3=Sister/brother 15=Police/soldier 4=Daughter/son 16=Other, specify: 5=Other relative 6=Mother-in-law 7=Father-in-law 8=Other in-law 9=Driver of a vehicle (bus/lorry/car/etc.) you were in 10=Another passenger on a vehicle (bus/lorry/car/etc.) you were in 11=Briefcase buyer 12=Person at a market	1=At a market 2=At your house 3=At that person’s house 4=At a business (non-market) 5=In a vehicle 6=On the roadside 7=At a bar/bottle store/etc. 8=Other, specify

Enumerator: “Now I would like to ask about alcohol consumption.”

Table S6. Alcohol consumption

During the last 12 months, how often did you usually have any kind of drink containing alcohol (e.g., chibuku, bottled canned beer, traditional beer, wine, liquor)? 1=Every day 2=5 to 6 times per week 3=3 to 4 times per week 4=Twice a week 5=Once a week 6=2 to 3 times a month 7=Once a month 8=3 to 11 times a year 9=1 to 2 times in the past year 10=Never, go to S19	How often do you get drunk? 1=Often 2=Sometimes 3=Never	How often does your husband/partner get drunk? (If no current husband/partner, skip to S20) 1=Often 2=Sometimes 3=Never	How much do you yourself usually spend each week for alcoholic beverages? (ZMK)
S17	**S18**	**S19**	**S20**

Module S-2. ASK MEN ONLY Gender Attitudes, Transactional Sex, and Alcohol Consumption

Table S7. Gender attitudes

S21	I would now like to ask you a few questions about your views about women's and men's roles in the house and community. I will read to you a number of opinions, please tell me if you agree or disagree with them. There are no right or wrong answers to these questions.	1=Agree 2=Disagree 98=No opinion
A	A good wife obeys her husband even if she disagrees.	
B	It is important for a man to demonstrate to his wife/partner that he is the boss.	
C	A woman's most important role is to take care of her home and cook for her family.	
D	Taking care of the children is the mother's responsibility.	
E	A man should have the final word about decisions in the home.	
F	A married woman should be able to own land.	
G	The husband and wife should decide together how to spend money from crop harvests.	
H	Women should be able to travel alone to markets to sell crops.	
I	A married woman should be able to attend agricultural training.	

Enumerator: "Now I would like to ask you some questions on your opinions and personal behaviors related to sexual activity."

S8. Transactional Sex

Table S8a.

What do you think about a woman having sex with a man because he has provided her with something she could not afford, such as transportation or a place to stay? (Choose one answer that best describes your view). Enumerator: read out responses. 1=I think it is wrong morally 2=I think it violates her rights 3=I think it is her own choice 4=I think it is wrong but there is nothing that can be done about it 5=I see nothing wrong with it -8=Don't know
S22

Table S8b. Transactional sex

S23	Please think now about any woman you had sex with more than once in the last 12 months but who you didn't consider to be your main partner at the time. Did you become involved with her because you expected to do, or because you did do, any of the following: (If respondent indicates he did not have sex with someone not considered his main partner in the past 12 months, enter 98 for A-F and go to S24	1=Yes 2=No 3=No answer 98=Did not have sex with someone who was NOT main partner
A	Provided her with transportation.	
B	Provided her with somewhere to stay.	
C	Provided her with food.	
D	Gave her cash or money to pay her bills.	
E	Purchased an agricultural crop from her.	
F	Provided her anything else that she could not afford by herself.	
S24	Now think now about any woman you had sex with just as a once off in the last 12 months. Did you become involved with her because you expected to do, or because you did do, any of the following: (If respondent indicates he did not have sex with someone as a once off in the past 12 months, enter 98 for G-L and go to S25).	1=Yes 2=No 3=No answer 98=Did not have sex with someone who was NOT main partner
A	Provided her with transportation.	
B	Provided her with somewhere to stay.	
C	Provided her with food.	
D	Gave her cash or money to pay her bills.	
E	Purchased an agricultural crop from her.	
F	Provided her anything else that she could not afford by herself.	

Table S9. Alcohol consumption

During the last 12 months, how often did you usually have any kind of drink containing alcohol (e.g., chibuku, bottled canned beer, traditional beer, wine, liquor)? 1=Every day 2=5 to 6 times per week 3=3 to 4 times per week 4=Twice a week 5=Once a week 6=2 to 3 times a month 7=Once a month 8=3 to 11 times a year 9=1 to 2 times in the past year 10=Never, go to S26	How often do you get drunk? 1=Often 2=Sometimes 3=Never	How much do you yourself usually spend each week for alcoholic beverages? (ZMK)
S25	**S26**	**S27**

END OF SURVEY

Thank you for your participation.

Baseline In-Depth Interview Guide for Women

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	Start time: Stop time:
Respondent Code	
Code of Husband	
Age (in years)	
Highest Grade Completed	
Cluster Number	
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Exposure to Intervention Activities

First, I would like to learn about your experience with agricultural organizations and programs on groundnut farming that may be working in your community.

1. Some women who farm groundnuts belong to cooperatives, producer associations, a District Women's Association, or other community groups, while others do not. Do you belong to any of these groups?

   If yes:
   a. What activities does this group(s) do?
   b. What activities have you been involved in with this group(s?
   c. What support have you received from these groups? (If she is unsure, probe on provision of seeds, fertilizer, loans, or use of processing machines like oil expellers.)
   d. Do you hold any leadership roles in the groups that you belong to? Probe on what her role is.

   If no:
   a. Please tell me more about the decision to not belong to any of these groups.

2. Have you heard of PROFIT+? Please tell me what you know about PROFIT+.

   If she has heard of the program:
   a. What kinds of activities has PROFIT+ carried out here?
   b. Have you participated in these activities?
      i. If so, please tell me more about that.
      ii. If not, please tell me more about your decision to not participate.
   c. Have these activities been helpful or not so helpful? Please describe.
   d. Have you received any farming-related resources or support from PROFIT+? (If she is unsure, suggest seeds, fertilizer, or loans, or access to machines, tools, or other technology.)
   e. Has PROFIT+ done anything that has made it easier to get your crops to market or to sell your crops? Please describe.

3. Have you heard of BLA (Better Life Alliance)/COMACO? Please tell me what you know about BLA/COMACO.
   If she has heard of the program:
   a. What kinds of activities has BLA/COMACO carried out here?
   b. Have you participated in these activities?
      a) If so, please tell me more about that.
      b) If not, please tell me more about your decision to not participate.
   c. Have these activities been helpful or not so helpful? Please describe how.
   d. Have you received any farming-related resources or support from BLA/COMACO? (If she is unsure, suggest seeds, fertilizer, or loans, or access to machines, tools, or other technology.)
   e. Has BLA done anything that has made it easier to get your crops to market or to sell your crops? Please describe.

Groundnut Farming and Household Decision Making

Now I would like to learn about how decisions about groundnut farming are made in your household.

4. How would you describe the amount of time that you spend farming groundnuts compared with other crops? (Establish which crops the HH grows and then compare time spent.)

5. How do you and your husband typically divide up the labour of farming groundnuts? (Probe on the tasks that she does compared with the tasks that he does if not mentioned, such as land preparation, planting, weeding, harvesting, processing, and selling.)

6. Who usually decides which type of groundnut seed to plant?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

7. Who usually decides how much groundnut seed to plant?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

8. Who usually decides when to harvest the groundnut crop?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

9. Who usually decides if and how the groundnuts are processed (shelled, or processed into another product like oil, boiled nuts, roasted nuts, peanut butter, or groundnut flour)?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

10. Who usually decides how much of the harvested groundnut crop is sold versus how much is kept for household use?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

11. Who usually decides where to take groundnuts to be sold?
    a. Please tell me why _____ is the one who makes this decision.
    b. Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision? What are the typical locations where groundnuts are sold?

12. Who usually takes groundnuts to the location(s) you just mentioned to be sold? (Note: if the buyer comes to the household for sales, ask who usually deals with that buyer).
    a. Please tell me why _____ is the one who usually does this?
    b. Probe on: Has it always been _____ who usually does this? If not, when did this change? Tell me more about that? Why did it change?
    c. What role do other household members play in this decision?

13. Who usually decides how to use cash from the sale of groundnuts?
    a. Please tell me why _____ is the one who makes this decision
    b. Probe on: Has it always been _____ who makes this decision? C
    c. If not, when did this change? Tell me more about that? Why did it change?

14. What role do other household members play in this decision?

15. Please give me some examples of how money from selling groundnuts has been used in the past.

16. Would you like to have more input into any of the decisions that you do not currently make on your own? Please tell me more about that.

17. Would you prefer not to be the main decision-maker for any of the decisions that you currently make on your own? Please tell me more about that.

18. Now, I would like to ask you to think back to the October 2012 – September 2013 agricultural season and what your workload related to groundnut farming was like then. I would also like you to think about the season that just ended (October 2013 – September 2014) so that we can compare the two seasons with regard to your involvement in labour and decision making concerning various groundnut farming activities. These activities are land preparation, planting, weeding, harvesting, processing, and selling.

(Establish if the HH grew groundnuts in the 2013/14 season. If they did not grow groundnuts in the 2013/14 season, ask the reasons why. If they did grow groundnuts, establish the size of the field for both seasons and then ask the questions below.)

a) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in land preparation for groundnuts? (If she notes a difference, probe: Tell me more about that?)
(Examples of decisions: method of land preparation, size of field, who will do it)

b) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in planting groundnuts? (If she notes a difference, probe: Tell me more about that?)
(Examples of decisions: timing of planting, spacing, who will do it)

c) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in weeding groundnut fields? (If she notes a difference, probe: Tell me more about that?)
(Examples of decisions: timing of weeding, number of complete weedings, who will do it)

d) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in harvesting groundnuts? (If she notes a difference, probe: Tell me more about that?)

(Examples of decisions: timing of harvesting, who will do it)

e) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in processing (shelling or processing into another product like oil, boiled nuts, roasted nuts, peanut butter, or groundnut flour)? (If she notes a difference, probe: Tell me more about that?) (Examples of decisions: to store shelled or unshelled, whether or not to process into product, who will do it)

f) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in selling groundnuts? (If she notes a difference, probe: Tell me more about that?) (Examples of decisions: whether or not to sell, quantity to sell, who will sell)

Resource Asset and Control Profile

Next I would like to learn about who owns and uses certain assets in your household.

Enumerator Instructions: Read Questions 1-6 for each asset on the list. If the household does not have own a particular asset, mark an X in the first column and continue to the next asset. Note that for selected assets, certain questions are marked SKIP and you do not need to ask the question about that asset.

1. Does your household own [asset]?
2. Who in your household owns this asset?
3. Who in your household typically uses this asset?
4. Who in your household typically may decide who can use this asset?
5. Who in your household can decide to sell this asset?
6. If this asset is sold, who in your household typically decides how the money will be used?

Use the codes below when completing the table:

1	Self
2	Spouse
3	Self and spouse jointly
4	Other male HH member
5	Other female HH member
6	Self and other male HH member
7	Self and other female HH member
8	Spouse and other male HH member
9	Spouse and other female HH member
10	All HH members
10	Other, specify
12	Not applicable or decision not made

For the last item, "savings account", reword the questions to read:

1. Does your household have a savings account?
2. Whose names are on the savings account?
3. Can you access the savings account by yourself?
4. SKIP
5. SKIP
6. Who in your household typically decides how savings will be used?

Asset	1. Does your household own [asset]?	2. Who owns asset?	3. Who uses asset?	4. Who decides who may use asset?	5. Who decides to sell asset?	6. Who decides how $ will be used?
Agricultural Land						
Hand tools (hoe, axe, shovel, etc.)					SKIP	SKIP
Plough					SKIP	SKIP
Tractor, thresher, or planter						
Wheelbarrow					SKIP	SKIP
Small farm equipment (sprayer, grass cutter, hand planter, weeder, etc.)					SKIP	SKIP
Irrigation equipment (watering can, treadle pump)						
Processing equipment (mills, shellers, etc.)						
Cell phone						
Second cell phone, if applicable						
Bicycle						
Motorcycle, car, or truck						
Savings Account				SKIP	SKIP	

Thank you for your responses. (Summarize what the respondent said, for example: I see that there are some assets that you make decisions about, some you do not make decisions about, and some that you make decisions about with your husband).

19. Why are you the one who makes decisions about certain assets? Why is your husband the one who makes decisions about certain assets? (Note: Tailor this question if necessary based on the respondent's answers).

20. What happens when you and your husband disagree with about a decision about an asset?

    If possible, please give me an example of a disagreement you and your husband have had about one of these assets? How was this resolved (if it was)?

21. Would you like to be able to make decisions about any of the assets that you typically do not make decisions about on your own? Please tell me more about that. (Skip if respondent is sole decision-maker for all assets.)

Experience of Intimate Partner Violence

Now I would like to learn what you think about how couples interact and specifically about how you and your husband interact. There is some risk in the following portion of this study. We will ask you some questions about your experience of physical violence. It is possible that you may feel sad or uncomfortable when talking to us about this topic. If you do feel sad or uncomfortable, you will be able to talk to me or to other project staff. You can also end your participation in the interview at any time. We will not share your responses with anyone else and nobody else in your household is being asked these same questions. However, there is still a risk that your family or your husband could find out about the questions and that they may not agree with your participation in the study.

Do I have your permission to continue the interview at this time? (If yes, continue questions)

All couples interact with each other differently. Some couples argue all the time and some never argue. Some couples frequently hit or throw objects at each other and others do this only occasionally or never.

22. How would you describe your marriage in this regard?

23. Whose will usually prevails in your marriage?

    a) Why do you think this is so?

24. Does your husband try to control your behavior in any way? (If she does not understand, you can give examples like limiting your contact with friends or family, limiting your travel, etc.)

    a) If yes, please tell me more about that.

25. Has your husband ever hurt you? (Probe for physical violence if she does not mention)

If yes:

    a) How often does your husband hurt you?

b) What usually causes your husband to hurt you?
c) Please describe the last situation in which your husband hurt you.

26. Have you ever hurt your husband? (Probe for physical violence if she does not mention)

If yes:

a. How often do you hurt your husband?
b. What usually causes you to hurt your husband?
c. Please describe the last situation in which you hurt your husband.

Experience of Gender-Based Violence

Now I would like to ask about your personal safety in your farming-related work. In some communities, markets, and trading centers, women can be exposed to potential physical and sexual violence, while in others, this is not a concern.

27. How do women from this area typically get to markets or agricultural trading centers?

28. What problems have you heard that other women have had when they are on the way to markets or agricultural trading centers? Please tell me more about that.

29. How many days do women typically spend at markets or agricultural trading centers selling agricultural produce? (If more than one day, probe on where women sleep, eat, etc.)

30. What problems have you heard that other women have had with their safety in markets or agricultural trading centers? Please tell me more about that.

31. As a woman, what problems, if any, have you had with your safety when you are on the way to markets or agricultural trading centers? Please tell me more about that.

32. What problems, if any, have you had with your safety in markets or agricultural trading centers? Please tell me more about that.

Enumerator Instructions. If the informant has disclosed that her husband uses violence against her or that she has experienced violence in the community, say the following:

"It sounds like you have been dealing with some difficult times in your life. You should know that everyone has a right to live free of violence. I am giving everyone referrals for community sources of support and you may want to consider contacting these."

Note: All female participants should be given the referral sheet, whether or not they have disclosed violence.

Daily Activities

Now I would like to learn more about what you do in a typical day in May during harvesting time for groundnuts. Together we will make a list of your daily activities. Please tell me about when you wake up, when you go to bed, and all the activities in-between. Please tell me about everything that you do, including farming, other work to earn money, housework, caring for children, community activities, and leisure.

33. When do you wake up on a typical day?

34. What do you usually do after you wake up?

    For each activity:
    a) How much time does it usually take to do _____?

35. What do you do next?

Enumerator Instructions. Continue in this manner, activity by activity, asking what she does next and how much time it takes until bedtime.

When complete, tell respondent: Thank you for going through your typical day with me. Those are all of the questions that I have for you today. Is there anything that you would like to add to our discussion?

Thank you for your time and participation. The information that you have given me is very helpful. Do you have any questions for me?

Baseline In-Depth Interview Guide for Men

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Code of Wife	
Age (in years)	
Highest Grade Completed	
Cluster Number	
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Exposure to Intervention Activities

First, I would like to learn about your experience with agricultural organizations and programs on groundnut farming that may be working in your community.

1. Some people who farm groundnuts belong to cooperatives, producer associations, or other community groups, while others do not. Do you belong to any of these groups?

   If yes:

   a) What activities does this group(s) do?

   b) What activities have you been involved in with this group(s)?
   c) What support have you received from these groups? (If he is unsure, probe on provision of seeds, fertilizer, loans, or use of processing machines like oil expellers or other farming machinery.)
   d) Do you hold any leadership roles in the groups that you belong to? Please describe.

   If no:

   a) Please tell me more about the decision to not belong to any of these groups.

2. Does your wife belong to any agricultural groups or organizations? Which ones?

   If yes:
   a) How do you feel about your wife's participation in these groups? Please tell me more about that.

   If no or don't know:
   a) Under what circumstances would it be acceptable for your wife to participate in these groups?
   b) Under what circumstances would it not be acceptable?

3. Have you heard of PROFIT+? Please tell me what you know about PROFIT+.

   If he has heard of the program:

   a) What kinds of activities has PROFIT+ carried out here?
   b) Has anyone in your household participated in these activities?

   c) If so, please tell me more about that.
   d) If not, please tell me more about your decision to not participate.
   e) Have these activities been helpful or not so helpful? Please describe how.
   f) Have you received any farming-related resources or support from PROFIT+? (If he is unsure, suggest seeds, fertilizer, or loans, or access to machines, tools, or other technology.)
   g) Has PROFIT+ done anything that has made it easier to get your crops to market or to sell your crops?

4. Have you heard of BLA (Better Life Alliance)/COMACO? Please tell me what you know about BLA/COMACO.

   If he has heard of the program:

   a) What kinds of activities has BLA/COMACO carried out here?

b) Has anyone in your household participated in these activities?
   i. If so, please tell me more about that.
   ii. If not, please tell me more about your decision to not participate.
c) Have these activities been helpful or not so helpful? Please describe how.

d) Have you received any farming-related resources or support from BLA/COMACO? (If he is unsure, suggest seeds, fertilizer, or loans, or access to machines, tools, or other technology.)
e) Has BLA/COMACO done anything that has made it easier to get your crops to market or to sell your crops?

Groundnut Farming and Household Decision Making

Now I would like to learn about how decisions about groundnut farming are made in your household.

5. How would you describe the amount of time that you spend farming groundnuts compared with other crops? (Establish which crops the HH grows and then compare time spent.)

6. How do you and your wife typically divide up the labour of farming groundnuts? (Probe on the tasks that he does compared with the tasks that she does if not mentioned, such as land preparation, planting, weeding, harvesting, processing, and selling.)

7. Who usually decides which type of groundnut seed to plant?
   a) Please tell me why _____ is the one who makes this decision.
   b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
   c) What role do other household members play in this decision?

8. Who usually decides how much groundnut seed to plant?
   a) Please tell me why _____ is the one who makes this decision.
   b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
   c) What role do other household members play in this decision?

9. Who usually decides when to harvest the groundnut crop?
   a) Please tell me why _____ is the one who makes this decision.
   b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
   c) What role do other household members play in this decision?

10. Who usually decides if and how the groundnuts are processed (shelled, or processed into another product like oil, boiled nuts, roasted nuts, peanut butter, or groundnut flour)?
    a) Please tell me why _____ is the one who makes this decision.
    b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c) What role do other household members play in this decision?

11. Who usually decides how much of the harvested groundnut crop is sold versus how much is kept for household use?
    a) Please tell me why _____ is the one who makes this decision.

b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
c) What role do other household members play in this decision?

12. Who usually decides where to take groundnuts to be sold?
    a) Please tell me why _____ is the one who makes this decision.
    b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c) What role do other household members play in this decision?
    d) What are the typical locations where groundnuts are sold?

13. Who usually takes groundnuts to the location(s) you just mentioned to be sold? (Note: if the buyer comes to the household for sales, ask who usually deals with that buyer).
    a) Please tell me why _____ is the one who usually does this?
    b) Probe on: Has it always been _____ who usually does this? If not, when did this change? Tell me more about that? Why did it change?
    c) What role do other household members play in this decision?

14. Who usually decides how to use cash from the sale of groundnuts?
    a) Please tell me why _____ is the one who makes this decision.
    b) Probe on: Has it always been _____ who makes this decision? If not, when did this change? Tell me more about that? Why did it change?
    c) What role do other household members play in this decision?

15. Please give me some examples of how money from selling groundnuts has been used in the past.

16. Would you like to have more input into any of the decisions that you do not currently make on your own? Please tell me more about that.

17. Would you prefer not to be the main decision-maker for any of the decisions that you currently make on your own? Please tell me more about that.

18. Now, I would like to ask you to think back to the October 2012 – September 2013 agricultural season and what your workload related to groundnut farming was like then. I would also like you to think about the season that just ended (October 2013 – September 2014) so that we can compare the two seasons with regard to your involvement in labour and decision making concerning various groundnut farming activities. These activities are land preparation, planting, weeding, harvesting, processing, and selling.

(Establish if the HH grew groundnuts in the 2013/14 season. If they did not grow groundnuts in the 2013/14 season, ask the reasons why. If they did grow groundnuts, establish the size of the field for both seasons and then ask the questions below.)

a) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in land preparation for groundnuts? (If he notes a difference, probe: Tell me more about that?) (Examples of decisions: method of land preparation, size of field, who will do it)
b) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in planting groundnuts? (If he notes a difference, probe: Tell me more about that?)(Examples of decisions: timing of planting, spacing, who will do it)

c) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in weeding groundnut fields? (If he notes a difference, probe: Tell me more about that?)(Examples of decisions: timing of weeding, number of complete weedings, who will do it)
d) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in harvesting groundnuts? (If he notes a difference, probe: Tell me more about that?) (Examples of decisions: timing of harvesting, who will do it)
e) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in processing (shelling or processing into another product like oil, boiled nuts, roasted nuts, peanut butter, or groundnut flour)? (If he notes a difference, probe: Tell me more about that?) (Examples of decisions: to store shelled or unshelled, whether or not to process into product, who will do it)
f) How did the 2013/14 season compare with the 2012/13 season in terms of your involvement (providing labour/decision making) in selling groundnuts? (If he notes a difference, probe: Tell me more about that?) (Examples of decisions: whether or not to sell, quantity to sell, who will sell)

Resource Asset and Control Profile

Next I would like to learn about who owns and uses certain assets in your household.

Enumerator Instructions: Read Questions 1-6 for each asset on the list. If the household does not have own a particular asset, mark an X in the first column and continue to the next asset. Note that for selected assets, certain questions are marked SKIP and you do not need to ask the question about that asset.

1) Does your household own [asset]?
2) Who in your household owns this asset?
3) Who in your household typically uses this asset?
4) Who in your household typically may decide who can use this asset?
5) Who is your household can decide to sell this asset?
6) If this asset is sold, who in your household typically decides how the money will be used?

Use the codes below when completing the table:

1	Self
2	Spouse
3	Self and spouse jointly
4	Other male HH member
5	Other female HH member
6	Self and other male HH member
7	Self and other female HH member
8	Spouse and other male HH member
9	Spouse and other female HH member

10	All HH members
11	Other, specify
12	Decision not made

For the last item, "savings account", reword the questions to read:

1. Does your household have a savings account?
2. Whose names are on the savings account?
3. Can you access the savings account by yourself?
4. SKIP
5. SKIP
6. Who in your household typically decides how savings will be used?

Asset	1. Does your household own [asset]?	2. Who owns asset?	3. Who uses asset?	4. Who decides who may use asset?	5. Who decides to sell asset?	6. Who decides how $ will be used?
Agricultural Land						
Hand tools (hoe, axe, shovel, etc.)					SKIP	SKIP
Plough					SKIP	SKIP
Tractor, thresher, or planter						
Wheelbarrow					SKIP	SKIP
Small farm equipment (sprayer, grass cutter, hand planter, weeder, etc.)					SKIP	SKIP
Irrigation equipment (watering can, treadle pump)						
Processing equipment (mills, shellers, etc.)						
Cell phone						
Second cell phone, if applicable						
Bicycle						
Motorcycle, car, or truck						
Savings Account				SKIP	SKIP	

Thank you for your responses. (Summarize what the respondent said, for example: I see that there are some assets that you make decisions about, some you do not make decisions about, and some that you make decisions about with your wife).

7. Why are you the one who makes decisions about certain assets (give examples from the completed chart)?
   a) Why is your wife the one who makes decisions about certain assets (give examples from the completed chart, if the man makes all the questions, skip this question)?

8. What happens when you and your wife disagree with about a decision about an asset?
   a) If possible, please give me an example of a disagreement you and your wife have had about one of these assets? How was this resolved (if it was)?

9. Would you like to be able to make decisions about any of the assets that you typically do not make decisions about on your own? Please tell me more about that. (Skip if respondent is sole decision-maker for all assets.)

Baseline Focus Group Discussion Guide for Women and Men

Zambia GNVC Impact Evaluation

Name of Interviewer	
Name of Note taker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Age (in years) of participants	**1. 6.** **2. 7.** **3. 8.** **4. 9.** **5. 10.**
Highest Grade Completed **for each participant**	**1. 6.** **2. 7.** **3. 8.** **4. 9.** **5. 10.**
Cluster Number	
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Materials: Large flip chart paper, markers, pre-cut colored circles, tape

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question.

Introduction

Good morning/afternoon, my name is _____ and this is my assistant _____. Thank you for joining us for a discussion about groundnut and maize farming. Today we will be talking about HH-level decision making related to groundnut and maize farming and how husbands and wives make decisions. We would like to spend three hours talking with you about this topic. We will first talk with you separately from the other group and then bring the men's and women's groups together to discuss and compare what each group created.

I am the moderator and I will be guiding our discussion today. It is my job to make sure that we get to all of the topics that we would like to cover. My assistant will be taking notes on our discussion. Everything you say during the discussion will remain confidential. We will not identify anyone by name in our report.

Before we start, I would like to remind you that there are no right or wrong answers in this discussion. We are interested in knowing what each of you thinks, so please feel free to share your point of view, regardless of whether you agree or disagree with what others say. It is very important that we hear everyone's opinions. We will be recording the discussion so that we can capture all of your ideas, so we request that only one person speak at a time. Please listen respectfully, even if you disagree with what another person is saying.

Introduction Questions

As an introduction, let's go around the group and have everyone tell us their first name.

1. Who in this group grows groundnuts?
2. Who grows maize?

Seasonal Activity Calendar

Enumerator Instructions. Prepare a flip chart with the blank seasonal calendar as shown below. Separate flip charts may be needed for groundnut and maize farming.

Sample Blank Calendar

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Labor
Rainfall													N/A
No Road Access													N/A
Groundnuts													
Land preparation													
Planting													
Weeding													
Harvesting													
Transport for storage													
Shelling for sale													
Selling													
Peak Labor (women)													N/A
Peak Labor (men)													N/A
Other Periods of High Labor													
Maize													

Also prepare a flip chart to display the codes that will be used for Main Source of Labor:

Code		Code	Main Source of Labor
1	Family labour – female adults	8	Hired labour – female adults
2	Family labour - female adults and children	9	Hired labour - female adults and children
3	Family labour – male adults	10	Hired labour – male adults
4	Family labour – male adults and children	11	Hired labour – male adults and children
5	Family labour – male and female adults	12	Hired labour – male and female adults
6	Family labour – male and female adults and children	13	Hired labour – male and female adults and children
7	Family labour – children (under 12)	14	Hired labour – children (under 12)

	15	Mechanical labour
	16	Animal/draught labor

For the questions below related to months when an activity occurs, mark an X on the calendar for the month(s) the group agrees are *typical or usual* month(s) for the activity to occur. For questions on the main source of labour, enter the code that the group agrees is true for *typical* households in the area.

Introduce the Activity

We would like to create a seasonal activity calendar for groundnuts. We will look at different groundnut farming activities - such as land preparation, planting, weeding, harvesting, shelling, and selling –and when they typically or usually take place over the course of a year. We will also look at who typically or usually provides labour for each activity.

Rainfall and Roads

1. First, I would like to ask about the rainy season. When does the rainy season typically begin and end in a normal year?

2. Are there months when roads are impassable due to rains?

Groundnut Farming

Next, I would like to ask about the different groundnut farming activities that take place each agricultural season. For the purposes of this activity, we will consider the agricultural season to be October 1 – September 30.

3. How is land usually prepared for groundnuts in this community (methods)?
    a) In what month(s) do HHs typically prepare land for planting groundnuts?
    b) Who typically provides most of the labor for land preparation?

4. In what month(s) do HHs typically plant groundnuts?
    a) Who typically provides most of the labor for planting?

5. In what month(s) do HHs typically weed their groundnut fields?
    a) Who typically provides most of the labor for weeding?

6. How are groundnuts usually harvested in this community (methods)?
    a) In what month(s) do HHs typically harvest groundnuts? (Probe on fresh and dried)
    b) Who typically provides most of the labor for harvesting?

7. In what months do households usually transport dried groundnuts to their HH for storage? (Note: includes loading and unloading of groundnuts.)
    a) Who typically provides most of the labor for transporting groundnuts for storage?

8. Do households typically sell their groundnuts shelled or unshelled?
    a) If they sell the groundnuts shelled, in what month(s) does shelling generally occur?
    b) Who typically provides most of the labor for shelling?

9. In what month(s) are groundnuts typically sold? (Probe on both fresh and dried)

a) Who typically does the selling?
b) When is most of the harvest sold during a typical year?
c) When is the price of groundnuts highest?
d) When is the price of groundnuts lowest?

10. What are the peak months for women's labor related to groundnut farming?
    a) What are women doing during these months?

11. What are the peak months for men's labor related to groundnut farming?
    a) What are men doing during these months?

12. Is there any other activity important to groundnut farming which we haven't talked about that women or men spend a lot of time doing?
    a) If so, what is it and when does it occur?

13. Unrelated to groundnuts, are there other times/seasons when there is very high labor for women or men? (Establish which crops are locally grown and ask about top 3; e.g., maize, cotton, tobacco, soya bean, sweet potato.)
    a) If so, please describe.
    b) Who typically provides most of the labor?

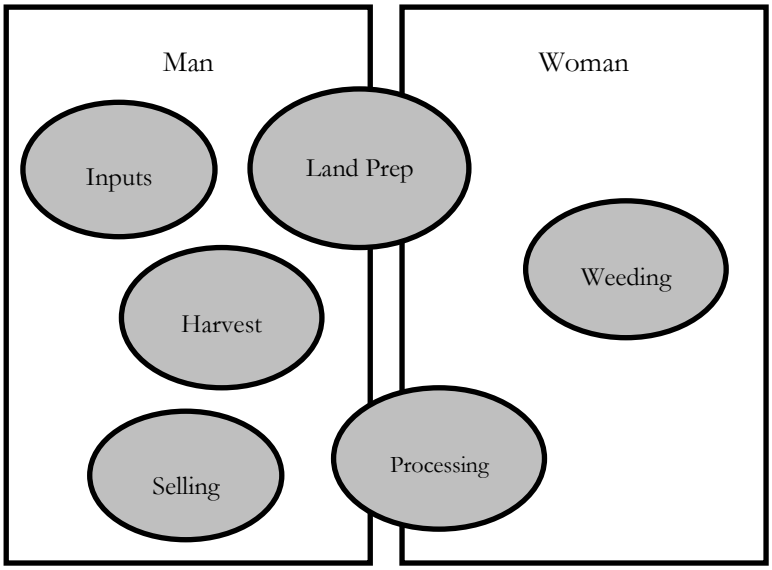
Decision Diagramming Activity

There are many decisions that go into groundnut and maize farming. We would like to hear from you about the roles that men and women play in making those decisions.

In this next activity, we will discuss the key decisions HHs make related to groundnut and maize farming in six areas: 1) input acquisition, 2) land preparation, 3) weeding, 4) harvesting, 5) processing, and 6) selling. As we determine what each key decision is, we will write it on a circle (show the circles to the group). We will then place each circle on the diagram depending on whether decisions about that activity are made mostly by husbands or wives (show the flip chart paper to the group).

If the husband mostly makes the decisions by himself, then we will put the circle on the "Man" side (demonstrate). If the wife mostly makes the decisions by herself, then we will put the circle on the "Woman" side (demonstrate). If the husband and wife are both equally involved in making the decisions, we will put the circle in the middle (demonstrate). If the husband and wife are both involved in making the decisions, but one has more influence, the circle will go closer to that person's side.

Example of Venn Diagram



1. First, let's talk about decisions regarding input acquisition for groundnuts.
    a) For each of the following decisions:
        i. What type of seed to use?
        ii. Where to source the seed?
    b) What do people generally consider when making this decision?
    c) Who typically makes that decision? Is it mostly the husband or wife or both?
    d) Why is that person(s) the one who makes the decision?

2. Next, let's talk about decisions regarding land preparation for groundnuts.
    a) For each of the following decisions:
        i. What method to use?
        ii. Who will prepare the land (labour)?
        iii. When to prepare land?)
    b) What do people generally consider when making this decision?
    c) Who typically makes that decision? Is it mostly the husband or wife or both?
    d) Why is that person(s) the one who makes the decision?

3. Next, let's talk about decisions regarding weeding of groundnut fields.
    a) For each of the following decisions:
        i. Who will do the weeding (labour)?
        ii. When to do the weeding?
        iii. Which fields to start with/prioritize?
    b) What do people generally consider when making this decision?
    c) Who typically makes that decision? Is it mostly the husband or wife or both?
    d) Why is that person(s) the one who makes the decision?

4. Next, let's talk about decisions regarding harvesting of groundnut fields.
    a) For each of the following decisions:
        i. Who will do the harvesting (labour)?
        ii. When to do the harvesting?
        iii. Which fields to start with/prioritize?
    b) What do people generally consider when making this decision?
    c) Who typically makes that decision? Is it mostly the husband or wife or both?
    d) Why is that person(s) the one who makes the decision?

5. Next, let's talk about the decision regarding whether or not to store groundnuts shelled or unshelled. (As you may recall from the seasonal activity calendar, you indicated that most HHs in this area store their groundnuts unshelled/shelled).
    a) What do people generally consider when making this decision?
    b) Who typically makes that decision? Is it mostly the husband or wife or both?
    c) Why is that person(s) the one who makes the decision?

6. Finally, let's talk about sales of groundnuts.
    a) For each of the following decisions:
        i. When to sell?
        ii. Quantity to sell?
        iii. Whether to sell shelled or unshelled?
        iv. Where to sell?
        v. Who will do the selling?
        vi. What to do with the cash from the sale?
    b) What do people generally consider when making this decision?
    c) Who typically makes that decision? Is it mostly the husband or wife or both?
    d) Why is that person(s) the one who makes the decision?

7. Are there any important decisions related to groundnut farming that we have missed? If so what are they? Write each on a circle and, ask:
    a) What do people generally consider when making this decision?
    b) Who typically makes that decision? Is it mostly the husband or wife or both?
    c) Why is that person(s) the one who makes the decision?

Thank you for your help in making this diagram. We would now like to discuss how you feel about your role in making decisions related to groundnut farming. (OK as is, want larger role, want smaller role).

8. Overall, how do you feel about the amount of input that (men/women) have in making decisions related to groundnut farming?

9. For the decisions that you said that (men/women) usually do <u>not</u> make, would you like to have more input in these decisions? Which ones?
    a) If yes, please tell me why you would prefer to have more input in this decision.

10. For the decisions that you said (men/women) usually make with their(husbands/wives), would you prefer to be able to make these decisions by yourselves without your spouse? Which ones?
    a. If yes, please tell me why you would prefer to make this decision by yourselves without your husbands/wives.

Exposure to PROFIT+ and BLA

Lastly, I would like to ask you a few questions about programs that may be working in your community on groundnut farming.

11. Please tell me what you know about PROFIT+.
    If the group has heard of the program:
    a) What kinds of activities have they carried out here?
    b) What do men/women (same sex as group) in your community think about PROFIT +?
    c) What do men think about their wives' participation in PROFIT+ activities?
    d) Have these activities been helpful or not so helpful to groundnut farming? Please describe.

12. Please tell me what you know about BLA (Better Life Alliance)/COMACO.
    If the group has heard of the program:
    a) What kinds of activities have they carried out here?
    b) What do men/women (same sex as group) in your community think about BLA/COMACO?
    c) What do men think about their wives' participation in BLA/COMACO activities?
    d) Have these activities been helpful or not so helpful to groundnut farming? Please describe.

13. Please tell me about any other programs that are working in your community on groundnut farming. (If any, probe on community opinion of activities and whether they see as helpful and how)

Those are all of the questions that I have for our discussion today before we join the other group. Do you have anything else that you would like to add?

Plenary Discussion

Enumerator instructions. Now bring the men and women together in one group. Show the group the men's and the women's diagrams.

Ask, What differences do you see? Probe on these differences with the group to understand why there are such differences.

Once finished with the comparison, ask the group whether they have any questions about the discussion today. Explain that you will make a copy of the calendars and diagrams they developed and leave the originals with them for their reflection. Thank them for their time and participation.

End Line In-Depth Interview Guide for Women

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question. Please remember the 80/20 rule: the participant should be talking for 80% of the time and you should not be talking for more than 20%.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Code of Husband	
Age (in years)	
Highest Grade Completed	
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Exposure to Intervention Activities

I would like to learn about your involvement with groups and individuals that support groundnut farming. INTERVIEWER INSTRUCTIONS: Always probe for BLA/COMACO or PROFIT+ when asking about group.

1. Do you or anyone else in your household belong to any group that provides your household with inputs for groundnut farming?

   IF NO, go to next question.

   IF YES:
   - Who in the household is a member of the group?
   - What is the name of the group? What inputs do they specifically provide for related to groundnut farming?
   - IF THEY PROVIDE SEED, do they recover seed from you? What is the arrangement by which they recover seed?
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? What could it do differently to be of greater assistance?

2. Do you buy inputs specifically for groundnut farming? Such as improved seed or herbicide.

   If NO:
   - Where do you obtain seed for groundnut farming?

   If YES:
   - Please tell me more about what inputs you use. Where do you buy them from? (Probe for which inputs. Probe for community agro-dealer/CAD.)
   - How has your source of inputs changed in the past 3 years, if at all? Please explain.
   - How has the type of inputs changed in the past 3 years, if at all? Please explain.

3. Are there any demonstration plots in your community? This is a plot where farming practices, such as use of improved seed, conservation tillage methods, use of herbicide are demonstrated to show their relationship to yield.

   If NO: Continue to next question.
   If YES: Do you visit the demonstration plot?

   If NO: Please tell me why you do not visit the demonstration plot.
   If YES:
   - Please tell me what is demonstrated on the plot related to groundnut farming. [Probe for use of improved seed, use of herbicide, use of manure/fertilizer, tillage method (basins/ripping), drying method (Mandela cock), use of gliricidia, double rows/plant spacing.]
   - How has the demonstration plot been helpful? What concerns have you had with it? What could be done differently for the demonstration plot to be of greater assistance?

4. Do you or another household member belong to a savings and internal lending (SILC) or savings group? This is a group where members save money, and can take out loans, and get an annual share paid out.
   IF NO: Continue to next question.
   IF YES:
   - Who in the house is a member? Who manages the group (indicate gender)? (Probe for CAD or BLA lead farmer)
   - Please tell me about the group and how it functions.
   - How did you come to join this group?
   - Have you saved money through this group? If yes, how have you used the savings?
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? What could it do differently to be of greater assistance?

5. Do you or another household member belong to a group that buys groundnuts from your household?

   IF NO, continue to next question.
   IF YES:
   - Please tell me about that. Who in the household is a member?
   - What is the name of the group? What is the arrangement by which they buy your groundnuts?
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? What could it do differently to be of greater assistance?

6. Has your household sold groundnuts in the past 3 years?

   IF NO: Continue to next section

   IF YES: Who do you sell groundnuts to? (Probe for COMACO or CADs).
   - Please tell me about your experience selling groundnuts. What has worked well? What has not worked well?
   - What additional assistance would be helpful?

7. Do you or another household member belong to any group which has talked about "household approaches to decision making" or "joint household decision making and budgeting" between husbands and wives?

   IF NO, continue to next question.

   IF YES:
   - Please tell me about the group(s). (Probe for who manages it (indicate sex), if not mentioned, probe for CAD or BLA lead farmer).
   - Please describe to me what was discussed.
   - What did/do you think about the household approach/joint decision making?
   - Did you make any changes in your own life/household as a result of learning about the household approach/joint decision making?
     - IF NO, go to next question.
     - IF YES, how did others in your household respond? What, if anything, is different because of these changes?

Labor for Groundnut Farming

I would like to learn about how your household divides up labor for groundnut farming.

8. Who does land preparation? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
   - Who decides about how and when land preparation will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

9. Who does the planting? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
   - Who decides about how and when planting will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

10. Who does the weeding? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when weeding will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

11. Who does the harvesting? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when harvesting will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

12. Who does the shelling (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about if and when shelling will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

13. Who does the processing (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when processing will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

14. Who does the selling (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when selling will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

Groundnut Farming and Household Decision Making

Next, I would like to ask about how your household makes decisions related to groundnut farming.

15. Who usually decides which type of groundnut seed to plant? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

16. Please tell me your views on each of the following groundnut seed varieties:
    - MGV-4
    - MGV-5
    - Chishango

17. Have you ever tried to access/buy an improved seed variety, such as MGV4, MGV5, Chishango, or another improved variety? If yes, please tell me about your attempts to access/buy it? (e.g., Could you find it? Could you afford it?)

18. Who usually decides how much groundnut seed to plant? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

19. Who usually decides how much of the harvested groundnut crop is sold versus how much is kept for household use? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

20. Who usually decides where to take groundnuts to be sold? Where are groundnuts usually taken for sale? How has this changed, if at all, in the past 3 years? Please tell me why this person is the one who makes this decision.

21. Who usually takes groundnuts to the location(s) you just mentioned to be sold? (Note: if the buyer comes to the household for sales, ask who usually deals with that buyer). How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who usually does this?

22. Who usually decides how to use cash from the sale of groundnuts? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

23. Please give me some examples of how your household has used money from selling groundnuts in the past.

24. Would you like to have more input into any of the decisions that you do not currently make on your own? Please tell me more about that.

25. Would you prefer not to be the main decision-maker for any of the decisions that you currently make on your own? Please tell me more about that.

Resource Asset and Control Profile

Next, I would like to learn about who owns and uses certain assets in your household.

Enumerator Instructions: For Q1, use gain, lost, or sold as the response options.

For Q2, if the household owns the asset, put YES in column 2 and ask the remaining questions. If the household does not have own a particular asset, put NO in column 2 and continue to the next asset. Note that for selected assets, certain questions are marked SKIP and you do not need to ask the question about that asset.

Use the codes below for Qs 3-8.

1	Self
2	Spouse
3	Self and spouse jointly
4	Other male HH member
5	Other female HH member
6	Self and other male HH member
7	Self and other female HH member
8	Spouse and other male HH member
9	Spouse and other female HH member
10	All HH members
11	Other, specify
12	Not applicable or decision not made

For the last item, "savings account", reword the questions to read:

1. In the past three years, have you or anyone in your HH opened or closed a savings account in a bank?
2. Does your household have a savings account in a bank?
3. Whose names are on the savings account?
4. Can you access the savings account by yourself?
5. SKIP
6. SKIP
7. Who in your household typically decides how savings will be used?
8. In the past three years, is there anyone in the HH who could not access the savings account, who can access it now?

Asset	1. Did the HH gain, lose, or sell [asset] in the past 3 years?	2. Does your HH own [asset]?	3. Who in your HH owns this [asset]?	4. Who in your HH typically uses this[asset]?	5. Who in your HH typically decides who can use [asset]?	6. Who in your HH can decide to sell this [asset]?	7. If this [asset] is sold, who in your HH typically decides how $ will be used?	8. In the past 3 years, has someone in the household who couldn't use the [asset] become able to use it?
Agricultural Land								
Hand tools (hoe, axe, shovel, etc.)					SKIP	SKIP		SKIP
Plough or ripper					SKIP	SKIP		SKIP
Tractor, thresher, or planter								
Wheelbarrow					SKIP	SKIP		SKIP
Small farm equipment (sprayer, grass cutter, hand planter, weeder,)					SKIP	SKIP		SKIP
Irrigation equipment (watering can, treadle pump)								
Processing equipment (mills, shellers, etc.)								
Cell phone								
Additional cell phones								
Bicycle								
Motorcycle, car, or truck								
Savings Account					SKIP	SKIP		

Next, summarize what the respondent said about decisions related to assets, for example, "I see that there are some assets that you make decisions about, some you do not make decisions about, and some that you make decisions about with your husband."

9. How is it decided who makes decisions about certain assets? (Note: Tailor this question if necessary based on the respondent's answers).
    - How has this changed, if at all, in the last 3 years?

10. What happens when you and your husband disagree on a decision about an asset?
    - How has this changed, if at all, in the last 3 years?
    - If possible, please give me an example of a disagreement you and your husband have had about one of these assets? How was this resolved (if it was)?

11. Would you like to be able to make decisions about any of the assets that you typically do not make decisions about on your own? Please tell me more about that. (Skip if respondent is sole decision-maker for all assets.)

Experience of Intimate Partner Violence

Now I would like to learn what you think about how couples interact and specifically about how you and your husband interact. There is some risk in the following portion of this study. We will ask you some questions about your experience of physical violence. It is possible that you may feel sad or uncomfortable when talking to us about this topic. If you do feel sad or uncomfortable, you will be able to talk to me or to other project staff. You can also end your participation in the interview at any time. We will not share your responses with anyone else and nobody else in your household is being asked these same questions. However, there is still a risk that your family or your husband could find out about the questions and that they may not agree with your participation in the study.

Do I have your permission to continue the interview at this time? (If yes, continue questions)

All couples interact with each other differently. Some couples argue all the time and some never argue. Some couples frequently hit or throw objects at each other and others do this only occasionally or never.

1. How would you describe your marriage in this regard?

2. Whose will usually prevails in your marriage? Why do you think this is so?
    - How has this changed, if at all, in the past 3 years?

3. Does your husband try to control your behavior in any way? (If she does not understand, you can give examples like limiting your contact with friends or family, limiting your travel, etc.). If yes, please tell me more about that.
    - How has this changed, if at all, in the past 3 years?

4. Has your husband ever hurt you? (Probe for physical violence if she does not mention)

IF YES:
- How often does your husband hurt you?
- What usually causes your husband to hurt you?
- Please describe the last situation in which your husband hurt you.

- How has this changed, if at all, in the past 3 years?

5. Have you ever hurt your husband? (Probe for physical violence if she does not mention)
   IF YES:
   - How often do you hurt your husband?
   - What usually causes you to hurt your husband?
   - Please describe the last situation in which you hurt your husband.
   - How has this changed, if at all, in the past 3 years?

Experience of Gender-Based Violence

Now I would like to ask about your personal safety in your farming-related work. In some communities, markets, and trading centers, women can be exposed to potential physical and sexual violence, while in others, this is not a concern.

6. How do women from this area typically get to markets or agricultural trading centers?

7. What problems have you heard that other women have had when they are on the way to markets or agricultural trading centers? Please tell me more about that.

8. How many days do women typically spend at markets or agricultural trading centers selling agricultural produce? (If more than one day, probe on where women sleep, eat, etc.)

9. What problems have you heard that other women have had with their safety in markets or agricultural trading centers? Please tell me more about that.

10. As a woman, what problems, if any, have you had with your safety when you are on the way to markets or agricultural trading centers? Please tell me more about that.

11. What problems, if any, have you had with your safety in markets or agricultural trading centers? Please tell me more about that.

Enumerator Instructions. If the informant has disclosed that her husband uses violence against her or that she has experienced violence in the community, say the following:

"It sounds like you have been dealing with some difficult times in your life. You should know that everyone has a right to live free of violence. I am giving everyone referrals for community sources of support and you may want to consider contacting these."

Note: All female participants should be offered the referral sheet, whether or not they have disclosed violence.

End Line In-Depth Interview Guide for Men

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question. Please remember the 80/20 rule: the participant should be talking for 80% of the time and you should not be talking for more than 20%.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Code of Wife	
Age (in years)	
Highest Grade Completed	
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Exposure to Intervention Activities

I would like to learn about your involvement with groups and individuals that support groundnut farming. INTERVIEWER INSTRUCTIONS: Always probe for BLA/COMACO or PROFIT+ when asking about group.

1. Do you or anyone else in your household belong to any group that provides your household with inputs for groundnut farming?

   IF NO, go to next question.

   IF YES:
   - Who in the household is a member of the group?
     - If it his wife, ask: What do you think of her participation in the group?
   - What is the name of the group? What inputs do they specifically provide for related to groundnut farming?
   - IF THEY PROVIDE SEED, do they recover seed from you? What is the arrangement by which they recover seed?
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? What could it do differently to be of greater assistance?

2. Do you buy inputs specifically for groundnut farming? Such as improved seed or herbicide?

   If NO:
   - Where do you obtain seed for groundnut farming?

   If YES:
   - Please tell me more about what inputs you use and where you buy them. (Probe for which inputs. Probe for community agrodealer/CAD.)
   - How has your source of inputs changed in the past 3 years, if at all? Please explain.
   - How has the type of inputs changed in the past 3 years, if at all? Please explain.

3. Are there any demonstration plots in your community? This is a plot where farming practices, such as use of improved seed, conservation tillage methods, use of herbicide are demonstrated to show their relationship to yield.

   If NO: Continue to next question.
   If YES: Do you visit the demonstration plot?

   If NO: Please tell me why you do not visit the demonstration plot.

   If YES:
   - Please tell me what is demonstrated on the plot related to groundnut farming. [Probe for use of improved seed, use of herbicide, use of manure/fertilizer, tillage method (basins/ripping), drying method (Mandela cock), use of gliricidia, double rows/plant spacing.]

- How has the demonstration plot been helpful? What concerns have you had with it? What could be done differently for the demonstration plot to be of greater assistance?

4. Do you or another household member belong to a savings and internal lending (SILC) or agribusiness and saving group? This is a group where members save money, and can take out loans, and get an annual share paid out.

   IF NO: Continue to next question.
   IF YES:
   - Who in the house is a member?
   - Please tell me about the group and how it functions. Who manages the group (indicate sex)? (Probe for CAD or BLA lead farmer.)
   - Have you (or wife, if she is the member) saved money through this group? If yes, how have you used the savings?
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? (If it is the wife that is the member, ask what he thinks about his wife participating) What could it do differently to be of greater assistance?

5. Do you or another household member belong to a group that buys groundnuts from your household?

   IF NO, continue to next question.
   IF YES:
   - Please tell me about that. Who in the household is a member?
   - What is the name of the group? What is the arrangement by which they buy your groundnuts.
   - Please tell me your opinion of this group. How has it been helpful? What concerns have you had with the group? (if it is the wife that is the member, ask what he thinks about his wife participating). What could it do differently to be of greater assistance?

6. Has your household sold groundnuts in the last 3 years?

   IF NO. Continue to next section
   IF YES: Who do you sell groundnuts to? (Probe for COMACO and CADs).
   a. Please tell me about your experience selling groundnuts. What has worked well? What has not worked well?
   b. What additional assistance would be helpful?

7. Do you or another household member belong to any group which has talked about "household approaches" to decision making or "joint household decision making" between husbands and wives has been discussed?

   IF NO, continue to next question.

   IF YES:
   - Please tell me about the group(s). (Probe for who manages it (indicate sex), if not mentioned, to see if it is CAD or BLA lead farmer)
   - Please describe to me what was discussed.

- What did/do you think about the household approach/joint decision making?
- Did you make any changes in your own life/household as a result of learning about the household approach/joint decision making?
    - IF No, go to next question.
    - If YES, how did others in your household respond? What if anything is different because of these changes?

Labor for Groundnut Farming

I would like to learn about how your household divides up labor for groundnut farming.

8. Who does land preparation? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when land preparation will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

9. Who does the planting? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when planting will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

10. Who does the weeding? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when weeding will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

11. Who does the harvesting? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when harvesting will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

12. Who does the shelling (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about if and when shelling will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

13. Who does the processing (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when processing will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

14. Who does the selling (if done)? How has this changed, if at all, in the past 3 years? Why is this person(s) responsible?
    - Who decides about how and when selling will be done? How has this changed, if at all, in the past 3 years? Why does this person decide?

Groundnut Farming and Household Decision Making

Next, I would like to ask about how your household makes decisions related to groundnut farming.

15. Who usually decides which type of groundnut seed to plant? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

16. Please tell me your views on each of the following groundnut seed varieties:
    - MGV-4
    - MGV-5
    - Chishango

17. Have you ever tried to access/buy an improved seed variety, such as MGV4, MGV5, Chishango, or another improved variety? If yes, please tell me about your attempts to access/buy it? (e.g., Could you find it? Could you afford it?)

18. Who usually decides how much groundnut seed to plant? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

19. Who usually decides how much of the harvested groundnut crop is sold versus how much is kept for household use? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

20. Who usually decides where to take groundnuts to be sold? Where are groundnuts usually taken for sale? How has this changed, if at all, in the past 3 years? Please tell me why this person is the one who makes this decision.

21. Who usually takes groundnuts to the location(s) you just mentioned to be sold? (Note: if the buyer comes to the household for sales, ask who usually deals with that buyer). How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who usually does this?

22. Who usually decides how to use cash from the sale of groundnuts? How has this changed, if at all, in the past 3 years? Please tell me why this person(s) is the one who makes this decision.

23. Please give me some examples of how your household has used money from selling groundnuts in the past.
24. Would you like to have more input into any of the decisions that you do not currently make on your own? Please tell me more about that.

25. Would you prefer not to be the main decision-maker for any of the decisions that you currently make on your own? Please tell me more about that.

Resource Asset and Control Profile

Next, I would like to learn about who owns and uses certain assets in your household.

Enumerator Instructions: For Q1, use gain, lost, or sold as the response options.

For Q2, if the household owns the asset, put YES in column 2 and ask the remaining questions. If the household does not have own a particular asset, put NO in column 2 and continue to the next asset. Note that for selected assets, certain questions are marked SKIP and you do not need to ask the question about that asset.

Use the codes below for Qs 3-8.

1	Self
2	Spouse
3	Self and spouse jointly
4	Other male HH member
5	Other female HH member
6	Self and other male HH member
7	Self and other female HH member
8	Spouse and other male HH member
9	Spouse and other female HH member
10	All HH members
11	Other, specify
12	Not applicable or decision not made

For the last item, "savings account", reword the questions to read:

1. In the past three years, have you or anyone in your HH opened or closed a savings account in a bank?
2. Does your household have a savings account in a bank?
3. Whose names are on the savings account?
4. Can you access the savings account by yourself?
5. SKIP
6. SKIP
7. Who in your household typically decides how savings will be used?
8. In the past three years, is there anyone in the HH who could not access the savings account, who can access it now?

Asset	1. Did the HH gain, lose, or sell [asset] in the past 3 years?	2. Does your HH own [asset]?	3. Who in your HH owns this [asset]?	4. Who in your HH typically uses this[asset]?	5. Who in your HH typically decides who can use [asset]?	6. Who in your HH can decide to sell this [asset]?	7. If this [asset] is sold, who in your HH typically decides how $ will be used?	8. In the past 3 years, has someone in the household who couldn't use the [asset] become able to use it?
Agricultural Land								
Hand tools (hoe, axe, shovel, etc.)					SKIP	SKIP		SKIP
Plough or ripper					SKIP	SKIP		SKIP
Tractor, thresher, or planter								
Wheelbarrow					SKIP	SKIP		SKIP
Small farm equipment (sprayer, grass cutter, hand planter, weeder,)					SKIP	SKIP		SKIP
Irrigation equipment (watering can, treadle pump)								
Processing equipment (mills, shellers, etc.)								
Cell phone								
Additional cell phones								
Bicycle								
Motorcycle, car, or truck								
Savings Account					SKIP	SKIP		

Next, summarize what the respondent said about decisions related to assets, for example, "I see that there are some assets that you make decisions about, some you do not make decisions about, and some that you make decisions about with your husband."

9. How is it decided who makes decisions about certain assets? (Note: Tailor this question if necessary based on the respondent's answers).
    - How has this changed, if at all, in the last 3 years?

10. What happens when you and your husband disagree on a decision about an asset?
    - How has this changed, if at all, in the last 3 years?
    - If possible, please give me an example of a disagreement you and your husband have had about one of these assets? How was this resolved (if it was)?

11. Would you like to be able to make decisions about any of the assets that you typically do not make decisions about on your own? Please tell me more about that. (Skip if respondent is sole decision-maker for all assets.)

End Line Key Informant Interview Guide for Community Leaders

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question. Also, please remember the 80/20 rule – you should not talk more than 20% of the time.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in the community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Age (in years)	
Sex	
Marital Status	
Highest Grade Completed	
Position in Community	
District of Residence	
Village/Locality	

Groundnut Farming

First, I would like to ask you about groundnut farming in your community, and any changes you may have observed in the last three years.

1. Do you know of any households in which women grow groundnuts? Thinking of these households, what changes, if any, have you observed in the last three years with regard to:
    - How groundnuts or other crops are produced? (Probe for examples s/he has observed; probe for household decision making on groundnut production if not mentioned.)
    - How groundnuts or other crops are marketed/sold? (Probe for examples s/he has observed; probe for household decision making on groundnut marketing/sales if not mentioned.)
    - How cash from the sale of groundnuts or other crops is used? (Probe for examples s/he has observed; probe for household decision making on groundnut marketing/sales if not mentioned.)

2. (If the respondent has noted changes): What do you attribute these changes to?

3. Has groundnut yield changed, if at all, in this area in the past three years? If yes, please describe.

4. (If the respondent has noted changes): What do you attribute these changes to?

5. How has marketing/sale of groundnuts changed, if at all, in this area in the past three years?

6. (If the respondent has noted changes): What do you attribute these changes to?

Knowledge of PROFIT+ and BLA/COMACO

Next, I would like to ask you about two projects operating in your area. One is called PROFIT+ and the other is called the Better Life Alliance, although some people know this project as COMACO.

First, I would like to ask you about PROFIT+ and households that were beneficiaries of that project. Then I would like to ask you about BLA/COMACO and households that were beneficiaries of that project.

PROFIT+

7. Have you heard of PROFIT+?

   IF NO, go to Q 11.
   IF YES:

    - Please tell me what you know about PROFIT+. If not mentioned, probe for activities related to groundnut production and sales, and joint household decision making and budgeting.
    - What do your community members think of PROFIT+? What do they like about the project? Dislike?

8. Do you know of any households that were beneficiaries of PROFIT+? (If NO, go to Q 11).

9. Thinking of these households, what changes, if any, have you observed in the past three years with regard to:

    - Production of groundnuts or other crops? (Probe for examples s/he has observed; probe for household decision making on groundnut production, division of labor, access to/control of groundnut-related assets, if not mentioned.)
    - Marketing/sales of groundnuts or other crops? (Probe for examples s/he has observed; probe for household decision making on groundnut production, division of labor, access to/control of groundnut-related assets, if not mentioned.)
    - Use of cash from sale of groundnuts or other crops? (Probe for examples s/he has observed; (probe for household decision making on groundnut production, division of labor, access to/control of groundnut-related assets, if not mentioned.)

10. (If the respondent has noted changes): What do you attribute these changes to?

11. Do you know anyone in the community who is a CAD? If no, is this community served by a CAD from another village?

BLA/COMACO

12. Have you heard of BLA/COMACO?

    If NO, go to Q 15.

    If YES:

    - Please tell me what you know about BLA/COMACO. If not mentioned, probe for activities related to groundnut production and sales, joint household decision making.
    - What do your community members think of BLA/COMACO? What do they like about the project? Dislike?

13. Do you know of any households that were beneficiaries of BLA/COMACO? (If NO go to Q 15.)

14. Thinking of these households, how do you think decision making and budgeting between husbands and wives has changed in the past 3 years, if at all, with regard to:

    - Production of groundnuts or other crops? (Probe for examples s/he has observed; probe for household decision making on groundnut production, division of labor, access to/control of groundnut -related assets, if not mentioned.)
    - Marketing/sales of groundnuts or other crops? (Probe for examples s/he has observed; probe for household decision making on groundnut production, division of labor, access to/control of groundnut-related assets, if not mentioned.)
    - Use of cash from sale of groundnuts or other crops? (Probe for examples s/he has observed; (probe for household decision making on groundnut production, division of labor, access to/control of groundnut -related assets, if not mentioned.)

15. Have you heard of Farm Talk radio? This is a radio program produced by COMACO. (If no, go to Question 17)

    - If yes, did you listen to it? Can you recall some of the topics that were discussed?

16. Did/do community members listen to Farm Talk radio?

    - If yes, what do people think of it? What do they like? What do they dislike?

Other Activities and Changes in the Community

17. We are also interested in knowing about any other groups working in your community doing work similar to PROFIT+ or BLA/COMACO that you may be aware of. We would like to know who such groups are and what kinds of activities they are conducting. Please describe the work of any government or nongovernmental groups or other initiatives that:

    - Promote empowerment of women? Probe for details.
    - Promote joint household decision making? Probe for details.
    - Offer training on leadership, business, and entrepreneurship? Probe for details.
    - Promote improved technologies for groundnuts? Probe for details.
    - Provide inputs or market for groundnuts OR provide links to inputs and market for groundnuts? Probe for details.
    - Provide marketing information related to groundnuts? Probe for details.

Finally, we would like to ask about any changes the community has experienced in the past three years with regard to infrastructure and other things that can affect production and sales of crops.

18. In the past three years, have there been any infrastructure projects in this area, such as new or improved roads, or other construction? If yes, please describe. (Probe on markets if not mentioned).

19. Have there been any natural disasters or climate issues in the past three years that affected farming, especially for groundnuts? If yes, please describe. (Probe on rainfall if not mentioned).

20. Have there been any changes in access to transportation in the past three years (changes in frequency of buses, other modes of transport, flooding impacting roads, etc.). If yes, please describe.

21. Have there been any changes in the past three years in communications (such as TV/radio/phone) related to information on farming and/or market, especially groundnut farming? If yes, please describe.

22. Have there been any changes in access to finance or credit in this area in the past three years? If yes, please describe.

23. Has this community experienced any other changes in the past three years that have affected:

- Groundnut production?
- Marketing/sales of groundnuts?

End Line Key Informant Interview Guide for Community Agro Dealers (CADs)

Zambia GNVC Impact Evaluation

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question. Also, please remember the 80/20 rule – you should not talk more than 20% of the time.

Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Age (in years)	
Highest Grade Completed	
Marital Status	
District of Residence	
Village/Locality	
Number of years as a CAD	

Experience with PROFIT+

First, I would like to ask you about your experience working with PROFIT+.

1. What PROFIT+ trainings did you attend related to:
    - Groundnut farming? Probe for number or trainings, mode of training (e.g., workshop, other), and topics covered.
    - Gender/Joint household decision making and budgeting? Probe for number or trainings, mode of training (e.g., workshop, other), and topics covered.
    - Leadership, business management, entrepreneurship, and negotiation skills? Probe for number or trainings, mode of training (e.g., workshop, other), and topics covered.
    - Other trainings? Probe for number or trainings, mode of training (e.g., workshop, other), and topics covered.

2. In what other ways did PROFIT+ support you in your role as a CAD? Probe for grants/loans, connections with input suppliers/market, other.

3. Were you a demo host farmer (DHF) for PROFIT+ before becoming a CAD? If so please tell me about the roles and responsibilities you had as a DHF.
    - Please explain the work you did with lead farmers and farmer field schools? If not mentioned, probe for:
        - How many lead farmers did you work with?
        - Can you estimate how many farmers attended farmer fields schools (ask for breakdown by sex)?
        - What topics did you cover in farmer field schools?

4. Please describe your roles and responsibilities as a CAD.

5. Please explain the work you do with your SILC/savings groups. Probe for:
    - How and when the group was formed
    - Who the members are (number, sex)
    - How as a CAD you support group members (link to inputs, market)
    - How the group's savings scheme operates
    - Other functions

6. Other than your savings group members, how do you work with your community as a CAD?

7. Do you have any other responsibilities as a CAD that we have not talked about yet? If yes, please describe.
8. How has your work as a CAD impacted your own life and that of other household members? Probe for both professional and personal impact.

PROFIT+ messages and activities supporting female farmers

We are also very interested in learning more about how CADs support women farmers and the unique challenges they may face as women in production, marketing, and sales of groundnuts.

9. We have heard that PROFIT+ promoted a "household approach" to decision making (gender). Please describe this approach? (**If they do not know the term "household approach", ask about joint household decision making and budgeting.**)

10. What are the main messages promoted under the "household approach"?

11. How are/were these messages received by: (Probe for both **acceptance and resistance** to the messages by each of the groups below for EACH message listed).

    - Women in farmer field schools?
    - Men in farmer field schools?
    - Women in SILC/savings groups?
    - Men in SILC/savings groups?

12. How have the men and women you worked with adopted the "household approach", if at all? How do you think household decision making has changed in the past three years, if at all, regarding:

    - Production of groundnuts or other crops? (probe for examples she has observed among couples she has worked with)
    - Marketing/sales of groundnuts or other crops? (probe for examples she has observed)
    - Use of cash from sale of groundnuts or other crops? (probe for examples she has observed)

13. Think of households that you feel have adopted the "household approach" (joint decision making and budgeting).

    - How do you think this has affected women's time, if at all? If not mentioned, probe on how it may have affected time spent:

        - Farming?
        - Doing household chores?
        - Taking care of children?

    - How do you think this has affected the time of children in these households, if at all (probe for farming, household chores, and taking care of younger children)?

- How do you think this has affected the time of husbands, if at all? If not mentioned, probe on whether men's involvement in household chores and childcare has changed. If so, probe for examples.

14. Have you seen any other effects of the "household approach" that we have not talked about?

15. Thinking generally about the "household approach," is there anything you would you change about how gender and joint decision making was promoted by PROFIT+? If so what?

Groundnuts

We are particularly interested in groundnut farming for this study.

16. As a DHF or CAD, did you demonstrate the following practices **related to groundnuts**:

    - Ripping and basin-making for tillage? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - Use of herbicides? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - "Mandela cock" for drying to prevent aflatoxin? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - Other practice? Please describe. If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - How do you think adoption of the promoted practices affected groundnut production for women, if at all? Please give examples related to the particular agricultural practice(s) you believe made a difference. If not mentioned, probe on:
        - Time allocation for farming, household chores, etc.
        - Yield
        - Profits

17. In your shop, do you sell:

    - The groundnut seed variety MGV4? (If not, probe for why.)
    - The groundnut seed variety MGV5? (If not, prove for why.)
    - The groundnut seed variety Chishango (If not, probe for why.)

18. Do you promote/encourage famers to use:

    - MGV4? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences, if any, were there between men and women? If not, why?
    - MGV5? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences, if any, were there between men and women? If not, why?

- Chishango? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences, if any, were there between men and women? If not, why?

19. How do you believe the improved seed affected female farmer's groundnut farming, if at all? Probe on potential effects on production and marketing/sales, if not mentioned.

20. How would you describe the demand for improved groundnut seed in this area?

    - What challenges, if any, have you had in meeting the demand for improved seed among your customers (i.e., is there an adequate supply of improved seed)?

21. As a CAD, do you aggregate groundnuts for sale? If yes please tell me more about that – number of farmers, volume of groundnuts, who you sell to (ask generally and also specifically about October 2015 – September 2016 season).

    - How do you believe this (aggregating groundnuts) affected female farmer's groundnut farming, if at all? Probe on potential effects on production and marketing/sales, if not mentioned.
    - In general, how is the demand for groundnuts in this area (high demand, low demand)?
    - How does demand vary by agricultural season, if at all?

22. How did the rains affect groundnut yield in the October 2015 – September 2016 season? What other climate factors, if any, affected groundnut yield?

23. If a woman in the community asked your advice on growing groundnuts in order to sell them for profit, how would you advise them with regard to the:

    - Risks?
    - Benefits?
    - Market demand?
    - Other?

Community

24. We are also interested in knowing about any other groups working in your community doing work similar to PROFIT+ that you may be aware of. We would like to know who such groups are and what kinds of activities they are conducting. Please describe the work of any groups or other initiatives that:

    - Promote empowerment of women? Probe for details.
    - Promote joint household decision making? Probe for details.
    - Offer training on leadership, business, and entrepreneurship? Probe for details.
    - Promote improved technologies for groundnuts? Probe for details.
    - Provide links to inputs or market for groundnuts? Probe for details.
    - Provide market information related to groundnuts? Probe for details.

End Line Key Informant Interview Guide for BLA/COMACO Lead Farmers

Zambia GNVC Impact Evaluation

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Introduction

Thank you for agreeing to participate in this interview. I would like to remind you that you may decline to answer any question for any reason, and you may withdraw at any time. Your responses will remain confidential and will not be shared with anyone in your household or community.

Name of Interviewer	
Name of Notetaker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Respondent Code	
Age (in years)	
Highest Grade Completed	
Marital Status	
District of Residence	
Village/Locality	
Number of years as a lead farmer	

Experience with BLA/COMACO

First, I would like to ask you about your experience working with BLA/COMACO.

1. What BLA/COMACO trainings did you attend related to:

    - Groundnut farming? Probe for number of trainings, mode of training (e.g., workshop, other), and topics covered.
    - Gender (Joint household decision making and budgeting)? Probe for number or trainings, mode of training (e.g., workshop, other), and topics covered.
    - Leadership and/or entrepreneurship? Probe for number of trainings, mode of training (e.g., workshop, other), and topics covered.
    - Other trainings? Probe for number of trainings, mode of training (e.g., workshop, other), and topics covered.

2. In what other ways did BLA/COMACO support you in your role as a lead farmer?
3. Please describe your roles and responsibilities as a lead farmer.
4. Please describe the work you do with producer groups? Probe for:
    - How and when the group(s) was formed
    - Who are the members (number, sex)?
    - How as a lead farmer they support group members
    - Other functions
5. Did you have any other responsibilities as a lead farmer that we have not talked about yet? If yes, please describe.
6. How has your work as a lead farmer impacted your own life or that of members of your household? Probe for both professional and personal impact.

BLA messages and activities supporting female farmers

We are also very interested in learning more about how lead farmers support women farmers and the unique challenges they may face as women in groundnut production and marketing/sales and use of proceeds.

7. What are the main messages that BLA/COMACO promoted relating to gender (joint household decision making and budgeting)?

8. How are/were these messages received by: (Probe for both **acceptance and resistance** to the messages by each of the groups below for EACH message.)

    - Women in producer groups?
    - Their husbands?
    - Men in farmer producer groups?
    - Their wives?

9. Did you listen to Farm Talk radio with your producer groups? If yes:

- Did husbands and wives attend together?
- What do you recall group members saying about the segments? Describe any differences by sex.
- Can you give me examples of the some of the topics you heard related to gender?

10. How have men and women adopted the gender messages promoted by BLA/COMACO, if at all? How do you think household decision making has changed in the past three years, if at all, regarding:

    - Production of groundnuts or other crops? (Probe for examples she has observed.)
    - Marketing/sales of groundnuts or other crops? (Probe for examples she has observed.)
    - Use of cash from sale of groundnuts or other crops? (Probe for examples she has observed.)

Think of households that you feel have adopted the gender messages promoted by BLA/COMACO.

11. How do you think this has affected women's time, if at all? If not mentioned, probe on how it may have affected time spent:

    - Farming?
    - Doing household chores?
    - Taking care of children?

12. How do you think this has affected the time of children in these households, if at all (probe for time spent farming, doing household chores, taking care of younger children)?

13. How do you think this has affected the time of husbands, if at all? If not mentioned, probe on whether men's involvement in household chores and childcare has changed. If so, probe for examples.

14. Have you seen any other effects of the gender messages promoted by BLA/COMACO that we have not talked about?

15. Thinking generally about how gender and household decision making were promoted by BLA, is there anything you would change? If so, what?

Groundnuts
We are particularly interested in groundnut farming for this study.

16. As a lead farmer, did you demonstrate the following practices **related to groundnuts**?

    - Ripping and basin-making for tillage? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - Use of herbicides? If yes, how did farmers respond? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - Use of compost or manure? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - Using gliricidia to improve soil fertility? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
    - "Mandela cock" for drying to prevent aflatoxin? If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?

- Other practices? Please describe. If yes, did farmers adopt this practice? Why or why not? Were there any differences by gender?
- How do you think adoption of the promoted practices affected groundnut production for women, if at all? Please give examples related to the particular practice(s) you believe made a difference. If not mentioned, probe on:

    - Time allocation for farming, household chores, etc.
    - Yield
    - Profits

17. Did you promote any of the following improved seed varieties to producer group members?

    - MGV4? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences were there between men and women, if any?
    - MGV5? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences were there between men and women, if any?
    - Chishango? If yes, how did farmers like this variety (probe for likes and dislikes)? What differences were there between men and women, if any?

18. Did BLA/COMACO provide you and/or your producer group members with improved groundnut seed? If yes, what variety? In general, was there sufficient seed for all members of your producer group(s)? Please explain.

19. If yes to Q 15 or Q 16: How do you believe the improved seed affected female farmer's groundnut farming, if at all? Probe on potential effects on production and marketing/sales, if not mentioned.

20. Did you aggregate groundnuts for sale to BLA/COMACO? If yes, please tell me more about that – number of farmers, volume of groundnuts, (ask generally and also specifically about the October 2015 – September 2016 season).

21. How do you believe this (aggregating groundnuts) affected female farmer's groundnut farming, if at all? Probe on potential effects on production and marketing/sales, if not mentioned.

22. Was BLA/COMACO able to buy all of the groundnuts that you aggregated?
    - If not, what did farmers do with the remaining groundnuts?
        - If sold, who did they sell to?
    - In general, how is the demand for groundnuts in this area (high demand, low demand)
    - How does demand vary by agricultural season, if at all?

23. We understand that BLA/COMACO has a sheller at the Chipata hub and buy groundnuts unshelled instead of shelled. (Probe to determine when they shifted to buying unshelled only). Then ask:
24. In your opinion, how has selling groundnuts unshelled instead of shelled impacted women's groundnut farming, if at all? If not mentioned, probe on:

    - Time allocation
    - Volumes sold

25. How did the rains affect groundnut yield in the October 2015 – September 2016 season? What other climate factors, if any, affected groundnut yield?

26. If a woman in the community asked your advice on growing groundnuts in order to sell them for profit, how would you advise them regarding the:

    - Risks?
    - Benefits?
    - Market demand?
    - Other?

Community

27. We are also interested in knowing about any other groups working in your community doing work similar to BLA/COAMCO that you may be aware of. We would like to know who such groups are and what kinds of activities they are conducting. Please describe the work of any groups or other initiatives that:

    - Promote empowerment of women? Probe for details.
    - Promote joint household decision making? Probe for details.
    - Offer training in leadership and entrepreneurship? Probe for details.
    - Promote improved technologies for groundnuts? Probe for details.
    - Provide farmers with groundnut seed and buy back groundnuts? Probe for details.
    - Sharing marketing information related to groundnuts? Probe for details.

End Line Focus Group Discussion Guide for Female Agro-business (PROFIT+) or Producer Group (BLA/COMACO) Members

Zambia GNVC Impact Evaluation

Name of Interviewer	
Name of Note taker	
Date of Interview	
Length of Interview **(Record stop and start time)**	**Start time:** **Stop time:**
Age (in years) of participants	**1.** **6.** **2.** **7.** **3.** **8.** **4.** **9.** **5.** **10.**
Highest Grade Completed for each participant	**1.** **6.** **2.** **7.** **3.** **8.** **4.** **9.** **5.** **10.**
District of Residence	
Village/Locality	
Intervention Approach **(PROFIT+ or BLA)**	

Materials: Large flip chart paper, markers, pre-cut colored circles, tape

Note to facilitator: You should ask questions as written, while taking frequent advantage of probing opportunities to further explore what participants share so that you get richer, more explanatory/contextual information. Do not rush to get to the next question. And please remember to follow the 80/20 rule: the participants should be talking 80% of the time and you only 20%.

Introduction

Good morning/afternoon, my name is _____ and this is my assistant _____.

Thank you for joining us for a discussion about groundnut farming. Today we will be talking about HH-level decision making related to groundnut farming and how husbands and wives make decisions.

I am the moderator and I will be guiding our discussion today. It is my job to make sure that we get to all of the topics that we would like to cover. My assistant will be taking notes on our discussion. Everything you say during the discussion will remain confidential. We will not identify anyone by name in our report.

Before we start, I would like to remind you that there are no right or wrong answers in this discussion. We are interested in knowing what each of you thinks, so please feel free to share your point of view, regardless of whether you agree or disagree with what others say. It is very important that we hear everyone's opinions. We will be recording the discussion so that we can capture all of your ideas, so we request that only one person speak at a time. Please listen respectfully, even if you disagree with what another person is saying.

As an introduction, let's go around the group and have everyone tell us their first name.

Experience with PROFIT+ (only ask of PROFIT+ savings groups)

First, we would like to hear about women's experiences in their savings group and other PROFIT+ activities, such as farmer field schools.

1. What farming practices, if any, do you recall learning in your group/field school? (Only offer examples if needed. For example, did they learn about methods for drying groundnuts? Or for tillage?)
    - For any practice mentioned, ask:
        - What did women think of this practice?
        - Have women adopted this practice? Please explain.
            - If it has not been adopted, reasons why.

2. Please tell me what you know about the "household approach" (joint decision making and budgeting) promoted by PROFIT.

- If they are familiar with it, ask:
    - What do women think about this approach?
    - What do men think about this approach?
    - Have any households here adopted this approach? If yes, please give examples.
    - How have these households changed, if at all, as a result?

3. What else was discussed in your group/field school? Please describe. (If not mentioned, probe for savings activities, connections to markets for groundnuts, connections to improved seed supply.)
    - How has that affected groundnut farming for women, if at all? (Probe for positive and negative effects.)

4. What has been the most valuable component of the savings groups for women? Please explain.

5. What has been the most valuable component of the farmer field schools (if they are familiar with them)? Please explain.

6. What do you think projects like PROFIT+ could do better to help support female groundnut farmers?

Experience with BLA (only ask of BLA producer groups)

First, we would like to hear about your experience in your producer group and any other experience with BLA/COMACO activities.

1. What farming practices, if any, do you recall learning in your producer group? (Only offer examples if needed. For example, did they learn about methods for drying groundnuts? Or for tillage?)
    - For any practice mentioned, ask:
        - What did women think of this practice?
        - Have women adopted this practice? Please explain.
            - If it has not been adopted, reasons why.

2. Please tell me what you recall about joint household decision making and budgeting discussed in producer groups.
    - If they are familiar with it, ask:
        - What did women think about this approach?
        - What did men think about this approach?
        - Have any households here adopted this approach? If yes, please give examples.
        - How have these households changed, if at all, as a result?

3. What else was discussed in your producer group? Please describe. (If not mentioned, provision of inputs and seed and purchase of groundnuts by COMACO.)
    - How has that positively or negatively affected groundnut farming for women, if at all?

4. What has been the most valuable component of the producer groups? Please explain.

5. What has been the valuable component of the demo plots? Please explain.

6. What do you think programs like BLA/COMACO could do better to help support female groundnut farmers?

Groundnut Farming

Now, I would like to ask about the different groundnut farming activities that take place each agricultural season. For the purposes of this activity, we will consider the agricultural season to be October 1 – September 30.

7. How is land usually prepared for groundnuts in this community (methods)?
    - In what month(s) do HHs typically prepare land for planting groundnuts?
    - Who typically provides most of the labor for land preparation?
        - How has this changed, if at all, if the past 3 years?
            - If they say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

8. When do the rains typically start in this area? In what month(s) do HHs typically plant groundnuts?
    - Who typically provides most of the labor for planting?
        - How has this changed, if at all, if the past 3 years?
            - If they say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

9. In what month(s) do HHs typically weed their groundnut fields?
    - Who typically provides most of the labor for weeding?
        - How has this changed, if at all, if the past 3 years?
            - If say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

10. How are groundnuts usually harvested in this community (methods)?
    - In what month(s) do HHs typically harvest groundnuts? (*Probe on fresh and dried.*)
    - Who typically provides most of the labor for harvesting?
        - How has this changed, if at all, if the past 3 years?
            - If they say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

11. In what months do households usually transport dried groundnuts to their HH for storage? (*Note: includes loading and unloading of groundnuts.*)
    - Who typically provides most of the labor for transporting groundnuts for storage?
        - How has this changed, if at all, if the past 3 years?
            - If they say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

12. Do households typically sell their groundnuts shelled or unshelled? (If unshelled, go to Q9.)
    - If they sell the groundnuts shelled:
        - In what month(s) does shelling generally occur?
        - Who typically provides most of the labor for shelling?
        - How has this changed, if at all, if the past 3 years?
            - If say it has changed, ask: What do you believe has caused/contributed to this change? Please explain.

13. In what month(s) are groundnuts typically sold? (*Probe on both fresh and dried.*)
    - When is <u>most</u> of the harvest sold during a typical year?
    - When is the price of groundnuts highest?
    - When is the price of groundnuts lowest?

14. What are the peak months for women's labor related to groundnut farming?
    - What are women doing during these months related to groundnuts?
    - What other activities are women doing at this time (not related to groundnuts)?
    - Do women spend as much time as they would like on the groundnut crops?

15. How has women's time spent farming groundnuts changed in the past three years, if at all?
    - If they say they spend more time now on groundnuts, ask:
        - How has this affected women's time for household chores? (Probe for whether women are getting help from husband, children, or others more often now)
        - For childcare? (Probe for whether they are getting help from husband, older children, or others more often now)

16. What are the peak months for men's labor related to groundnut farming?
    - What are men doing during these months related to groundnuts?
    - How has this changed in the past 3 years, if at all?

17. How are children involved in groundnut farming, if at all?
    - If they say children are involved, ask: how has this changed in the past 3 years, if at all?

Decision Diagramming Activity

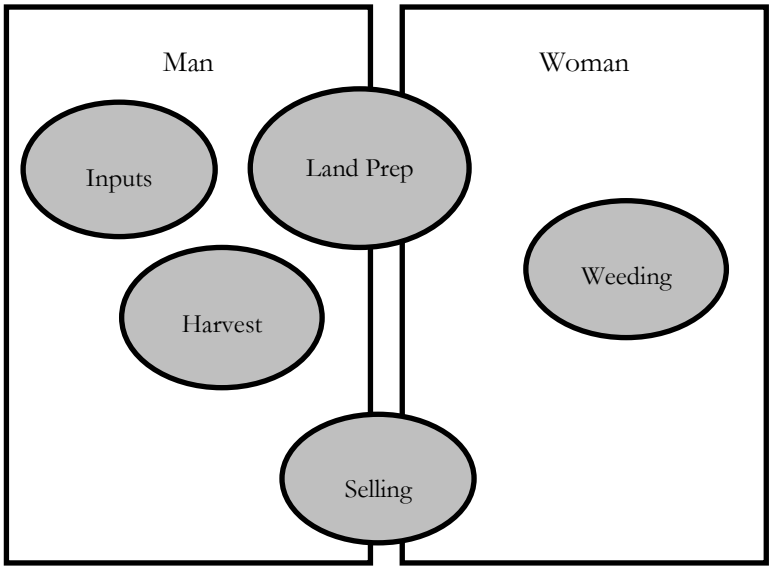
There are many decisions that go into groundnut farming. We would like to hear from you about the roles that men and women play in making those decisions.

In this next activity, we will discuss the key decisions HHs make related to groundnut farming in five areas: 1) input acquisition, 2) land preparation, 3) weeding, 4) harvesting, and 5) selling. As we determine what each key decision is, we will write it on a circle (show the circles to the

group). We will then place each circle on the diagram depending on whether decisions about that activity are made mostly by husbands or wives (show the flip chart paper to the group).

If the husband mostly makes the decisions by himself, then we will put the circle on the "Man" side (demonstrate). If the wife mostly makes the decisions by herself, then we will put the circle on the "Woman" side (demonstrate). If the husband and wife are both equally involved in making the decisions, we will put the circle in the middle (demonstrate). If the husband and wife are both involved in making the decisions, but one has more influence, the circle will go closer to that person's side.

Example of Venn Diagram



18. First, let's talk about decisions regarding input acquisition for groundnuts.
    - For each of the following decisions:
        - What type of seed to use?
        - Where to source the seed?
    - What do people generally consider when making this decision?
    - Who typically makes that decision? Is it mostly the husband or wife or both?
    - Why is that person(s) the one who makes the decision?
    - How has decision making for inputs changed, if at all, if the past 3 years?
        - If they say it has changed, ask: What do you believe has caused this change? Please explain.

19. Next, let's talk about decisions regarding land preparation for groundnuts.
    - For each of the following decisions:
        - What method to use?
        - Who will prepare the land (labour)?
        - When to prepare land?
    - What do people generally consider when making this decision?
    - Who typically makes that decision? Is it mostly the husband or wife or both?

- Why is that person(s) the one who makes the decision?
- How has decision making for land preparation changed, if at all, if the past 3 years?
    - If they say it has changed, ask: What do you believe has caused this change? Please explain.

20. Next, let's talk about decisions regarding weeding of groundnut fields.
    - For each of the following decisions:
        - Who will do the weeding (labour)?
        - When to do the weeding?
        - Which fields to start with/prioritize?
    - What do people generally consider when making this decision?
    - Who typically makes that decision? Is it mostly the husband or wife or both?
    - Why is that person(s) the one who makes the decision?
    - How has decision making on weeding changed, if at all, if the past 3 years?
        - If they say it has changed, ask: What do you believe has caused this change? Please explain.

21. Next, let's talk about decisions regarding harvesting of groundnut fields.
    - For each of the following decisions:
        - Who will do the harvesting (labour)?
        - When to do the harvesting?
        - Which fields to start with/prioritize?
    - What do people generally consider when making this decision?
    - Who typically makes that decision? Is it mostly the husband or wife or both?
    - Why is that person(s) the one who makes the decision?
    - How has decision making on harvesting changed, if at all, if the past 3 years?
        - If they say it has changed, ask: What do you believe has caused this change? Please explain.

22. Finally, let's talk about sales of groundnuts.
    - For each of the following decisions:
        - When to sell?
        - Quantity to sell?
        - Whether to sell shelled or unshelled?
        - Where to sell?
        - Who will do the selling?
        - What to do with the cash from the sale?
    - What do people generally consider when making this decision?
    - Who typically makes that decision? Is it mostly the husband or wife or both?
    - Why is that person(s) the one who makes the decision?
    - How has decision making for sales changed, if at all, if the past 3 years?
        - If they say it has changed, ask: What do you believe has caused this change? Please explain.

Thank you for your help in making this diagram. We would now like to discuss how you feel about your role in making decisions related to groundnut farming. (OK as is, want larger role, want smaller role).

23. Overall, how do you feel about the amount of input that women have in making decisions related to groundnut farming?

24. For the decisions that you said that women usually do not make, would you like to have more input in these decisions? Which ones?
    - If yes, please tell me why you would prefer to have more input in this decision.

25. For the decisions that you said women usually make with their husbands, would you prefer to be able to make these decisions by yourselves without your husband? Which ones?
    - If yes, please tell me why you would prefer to make this decision by yourselves without your husbands.

PROFIT+ Implementation Process Monitoring

Key Informant Interview Questions: Master List

Zambia GNVC Impact Evaluation

The following list of questions are to be asked of various PROFIT + key informants. We will work with the project to determine who we need to speak with so as to answer these questions. We will then divide up the questions into individual key informant interview guides as needed based on the project roles of the identified key informants. Also, depending on length of the final guides, we will consider adding questions to non-gender sections on perceived challenges and successes; currently, in the interest of time and maintain focus, we only have such questions in gender section.

Increasing Smallholder Access to Improved Seed

The first set of questions are activities to increase access to improved groundnut seed.

1. Please describe how the revolving seed fund/seed alliance functioned. Probes:
   a) Who are members of the revolving seed fund/seed alliance?
   b) What were the target amounts of certified and basic groundnut seed to be multiplied each year?
   c) How were these targets for seed multiplication amounts determined?
   d) Have there been seed multiplication shortfalls? If yes, to what do you attribute these shortfalls?
   e) Have there been seed multiplication surpluses? If yes, to what do you attribute these surpluses?

2. Please describe any differences in demand for seeds between women and men.
   a) Are there specific varieties that are preferred by women?
   b) Are there specific varieties that are preferred be men?
   c) What is the main difference between the two?

3. Have people been happy with the seeds that are distributed? Please explain.

4. Please describe factors influencing whether women purchase improved seeds.

5. Please describe factors influencing whether men purchase improved seeds.

6. Please describe any major changes (e.g., in comparison with original plans) in the project's approach to increasing smallholder access to improved seed. (Probes: what/why/when)

7. Do CADs also buy groundnuts? What is process?

Supporting Agro dealers to Sell Certified Seed and Other Inputs

Next, I would like to ask about PROFIT+'s activities related to agro dealers, input suppliers, and (community agro dealers) CADs.

8. Please describe how CADS were facilitated into producer companies.
   a) Please describe the relevancy of this to the groundnut value chain.

9. Project documents noted 123 agro dealers were trained. What percentage of total agro dealers in the 4 PROFIT+ districts do the 123 trained dealers represent?
   a) How were the agro dealers selected for training?
10. From project documents, it sounds like there was a move away from working with existing agro dealers to establishing community agro dealers (CADs). Did this happen? If so, please tell me more why this decision was made.

11. What were the specific activities carried out by community agro dealers (CADs)?
   a) Please describe the relevancy of these activities to the groundnut value chain.

12. Where are the CADs located geographically? Please share any data on the average distance (in kilometers) from smallholder households to the CADs. What is the range of distances?

13. Please explain how CADS were linked to input suppliers.

14. How many input suppliers does each CAD work with, on average?

15. The percentage of female CADs was over 30% and reached target. How was the target established?

16. How have the CADs bridged the gap between communities and the private sector, if at all?
   a) If they have not bridged the gap: To what do you attribute the CADs not bridging the gap?

17. To what extent do the input suppliers include products and services related to groundnuts?

18. To what extent do the CADs include products and services related to groundnuts?

Next, I would like to ask about your perceptions of how female and male beneficiaries interact with CADs, agrodealers/input suppliers, and also lead farmers. First, I will ask a few questions about females' interactions, then I will ask the same questions about males'.

19. What is the nature & frequency of female groundnut growers' interactions with CADs?
   a) Probe for: how often, for what purposes, how easy is it to interact, are female growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

20. What is the nature & frequency of female groundnut growers' interactions with agrodealers/input suppliers?
   a) Probe for: how often, for what purposes, how easy is it to interact, are female growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

21. What is the nature & frequency of female groundnut growers' interactions with lead farmers?
    a) Probe for: how often, for what purposes, how easy is it to interact, are female growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

22. What is the nature & frequency of male growers' interactions with CADs?
    a) Probe for: how often, for what purposes, how easy is it to interact, are male growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

23. What is the nature & frequency of male growers' interactions with agrodealers/input suppliers?
    a) Probe for: how often, for what purposes, how easy is it to interact, are male growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

24. What is the nature & frequency of male growers' interactions with lead farmers?
    a) Probe for: how often, for what purposes, how easy is it to interact, are male growers satisfied? Does it vary by size of harvest? Does it vary by whether they intend to sell unshelled or shelled groundnuts?

25. Of those beneficiaries who sold to the markets the project connected them to, what % were women? Men? Were these sales for shelled or unshelled groundnuts (or what was the breakdown)?
    a) If this data is not available, ask: What are the names of the markets to which the project connected beneficiaries?

26. In our baseline data collection, we found that men reported higher returns on sales. From your perspective, to what might you attribute this?
    a) Men also reported higher volumes produced and sold. From your perspective, to what might you attribute this?

27. Please describe any major changes in the project's approach to supporting agrodealers to sell certified seed and other inputs. (Probes: what/why/when)

Promoting Improved Technologies

The next few questions are related to demo plots.

28. Geographically, it appears groundnut demo plots in Year 2 were only in two districts (Katete and Chipata). Was this true for every year of the project? If so, why?

29. What was the geographic distribution of groundnut demo plots? Are GPS coordinates of the groundnut demo plots available? (*if so, follow-up for data*)

30. How were Demo Host Farmers (DHFs) chosen?

31. If these groups are considered beneficiaries, the 50% target for females was not reached. To what do you attribute this for DHFs? For FAs?

32. How many total DHFs were there at project end and what was breakdown by sex and geography (district)?

33. Of the 164,523 total beneficiaries noted in Year 3, what can be said about the percentage of groundnut farmers in the 4 PROFIT+ districts that were reached? (The 2010 census indicates 176,672 HHs in the four PROFIT+ district grew groundnuts—do we know the crops grown by the 164,523 beneficiaries and therefore can we estimate the percentage of groundnut farmers reached by the project.)

34. Project documents showed that yield increased, but gross margin declined. To what do you attribute this?

35. What is the project's current thinking regarding the value of inputs in increasing production/commercialization of groundnuts?

36. Are there any differences in which groundnut-relevant technologies/practices that women DHFs and farmer field schools demonstrate (as compared with the technologies that men DHFs demonstrate)? If so, please explain. (Probes: which and why?)

37. Please describe any major changes in the project's approach to promoting improved technologies that are relevant to groundnuts. (Probes: what/why/when)

Facilitating Access to Finance

The next few questions are about Savings and Internal Lending Communities (SILCs) and women's access to finance. Please describe how outreach to SILCs was conducted.

38. Under PROFIT +, what have the strengths of SILCs been with regard to increasing women's access to finance?

39. Under PROFIT +, what have been the weaknesses of SILCs with regard to increasing women's access to finance?

40. Please explain how it was decided to focus on SILCs in Katete and Petauke (but not Lundazi or Chipata).

41. What was the geographic distribution of:
    a) SILC groups that were formed?
    b) SILC groups that started saving?

42. Please describe the activities of the SILC groups.

43. How have SILCs connected with CADs and agribusinesses under PROFIT +?

44. What are the strengths of the agribusiness groups that were formed around CADs with regard to increasing women's access to finance?
    a) What are the factors or practices that have been key to the success of the agribusiness groups?

45. What are the weaknesses of the agribusiness groups that were formed around CADs with regard to increasing women's access to finance?

46. What was the geographic distribution of the agribusiness groups that were formed?

47. What were the activities of the newly formed agribusiness groups?

48. Please describe any major changes in the project's approach to facilitating access to finance. (Probes: what/why/when)

Strengthening Local and Regional Trade

The next set of questions are about cooperatives and aggregation centers.

49. 32 cooperatives were chosen for collaboration in Year 1; are all involved in groundnut farming? What are the names and locations of these cooperatives?
50. The project also worked with aggregation centers, and project documents note that they were mapped. Can we get this geographic data, and the date each started operations?

51. In year one, 7 aggregation centers were set-up in Lundazi, Chipata, and Katete. Please explain why none were established in Petauke.

52. How widespread were the CAD aggregation activities? Were they aggregating groundnuts?

53. How many total farmers were trained on gross margin (we have the information for Year 1 but not subsequent years)?
    a) What was the breakdown by sex and geography (district)?
    b) With regard to yield, we note that project documents report on lack of rain. We would like to hear your opinion on how rainfall/climate effected yield.
    c) Were all project districts similarly affected?

54. Please describe any major changes in the project's approach to facilitating local and regional trade that are relevant to groundnut farming. (Probes: what/why/when)

Increasing Investment in Agriculture

The next few questions are on project activities related to increasing investment in agriculture.

55. Please describe for me how the IIP Fund worked.

56. We read that the project signed an MOU with WFP to co-invest in a one stop business project in Katete – it was expected to house diverse business activities including aggregation, input distribution, trading and processing of groundnuts. Was this one-stop business project developed? Please explain.

57. Project documents noted that Vision Fund provided input loans in Chipata and Katete and that 110 farmers, 101 men and 9 women, accessed loans. To what do you attribute the low number of loans to women?

58. Please describe any major changes in the project's approach to increasing investment in agriculture. (Probes: what/why/when)

Gender

The final set of questions are on gender activities.

59. I would like to ask about the couple gender sensitization sessions. Please describe the messaging included in couple gender sensitization sessions.
    a) Describe the format as well – length of a session, # of sessions per couple, lecture, video, discussion, etc.
    b) What were the target #s for these sessions?

60. Please share any targets for gender activities in general in year 3.

61. What were the names of the 6 women's organizations whose capacity was built as described in Year 1 project documents?
    a) Where are these located?
    b) How were the organizations selected?

62. Please describe the organizational strengthening and capacity building for the women's organizations – content, length and # of any trainings, etc.

63. Project documents noted that gender training was part of the CADs training. Please describe the content/key messages and length of this gender training.

64. Project documents noted that 175 (124F, 51M) were trained in a Leadership, Governance, and Gender TOT. Please describe the content/key messages and length of this training.
    a) Project documents note that the trainers rolled out this messaging to 28,659F and 15,569M. Please tell me more about this (e.g., what was format of the sessions, how many sessions were held, what was the average size of the sessions?).

65. From your perspective, how have PROFIT+ project activities and new technologies & practices influenced women's time commitments to farming/childcare/other?
    a) How does the project know this? (e.g., data from interviews, anecdotal conversations, formal survey?)

66. Considering the aspects of the project related to gender, on which of these did the project spend the most time/resources?

67. Among these (the gender aspects most focused on), what were the most useful/impactful actions for women in households that grow groundnuts?

68. Please describe any major changes in the project's approach to addressing gender. (Probes: what/why/when)

69. What challenges has the project faced in implementing its gender strategy?

70. What successes has the project experienced in implementing its gender strategy?

71. How has the project linked with Women's Improved Marketing and Asset Control Project (WIMAC)? What have been the results of that linkage?

Questions for CADs

1. How did you become a community agro-dealer (CAD)? How long have you been a CAD?

2. Did you receive training on gender from PROFIT+? If yes, please describe?

3. What are the specific activities you carry out as a CAD?

   Please describe activities any activities specifically related to groundnuts.

4. Are you part of a producer company? How does the producer company function? What activities does the company carry out?

5. Where are you located? What communities do you serve? (Goal is to understand the range of HHs served and the distance HHs must travel to access CADs).

6. Do you work with any agribusinesses? Please describe how you work with agribusinesses?

7. How did PROFIT+ link you to input suppliers/private sector? (How does PROFIT+ support you?)

8. How many input suppliers do you work with?

9. Who else do you work with in the private sector?

10. What specific inputs do you carry related to groundnuts? What other inputs? (What proportion of your work is related to groundnuts?)

11. What other activities do you carry out specifically related to groundnuts? (Probe for training, aflatoxin awareness, etc.)

12. What is the nature & frequency of female groundnut growers' interactions with CADs?

    Probe for: how often, for what purposes, are female growers satisfied?

13. What is the nature & frequency of male growers' interactions with CADs? Probe for: how often, for what purposes, how easy is it to interact, are male growers satisfied?

14. Do you buy groundnuts? If yes, please describe the process?

15. What is the demand for groundnuts?

BLA Implementation Process Monitoring

Key Informant Interview Questions: Master List

Zambia GNVC Impact Evaluation

The following list of questions are to be asked of various BLA/COMACO key informants. Since BLA has ended, we recognize that there may be limitations as to who is available to be key informants. We will work with COMACO to determine who we can speak with so as to answer these questions and then divide up the questions into individual key informant interview guides as needed based on the project roles of the identified key informants. Also, depending on length of the final guides, we will consider adding questions to non-gender sections on perceived challenges and successes; currently, in the interest of time and maintaining focus, we only have such questions in gender section.

Zambia Institutional and Farm Capacity Reinforced

The first set of questions relate to BLA activities focused on reinforcing farm capacity.

1. Did beneficiaries receive all the types of inputs/seeds provided by BLA or just some (e.g., groundnut and soybean seed? Year 2 data suggest they received one or the other?
    a) If just some, please explain who received what and the reasons for this division.

2. What were the selection criteria of the farmers trained as certified seed growers? (If not mentioned, probe: Was sex of the farmer a criterion?)

3. What was the geographic distribution of the farmers trained as certified seed growers?

4. What was sex and geographic distribution of lead farmers?

5. Project documents only showed geographic distribution of kgs of groundnuts by in Year 2. What data can you share about Years 3 and 4?

6. What was geographic distribution of beneficiary farmers by district? Or at least by chiefdom?

7. Twelve of 29 cooperatives (29 was the target) were registered by Year 4. To what do you attribute not reaching the target?

8. What are the names of the 12 cooperatives registered?

9. Please describe the role of the cooperatives.

10. What is the working relationship, if any, between the cooperatives and producer groups?

11. While the amount of seeds packaged and distributed were under target somewhat, the targets for farmers supplied with inputs was significantly more under target. For example, in Year 2, 90% of the target for groundnuts distributed was met, but only 67% of targeted farmers were provided seed (and of these only 74% received groundnuts). To what do you attribute this?

a) (If not mentioned, probe: We understand that PROFIT+ had problems producing seed; was BLA's not reaching targets related to this?)

12. Based on your BLA project experience, please describe any differences in demand for groundnut seeds by gender. Probes:
    a) What do women want/look for in a seed?
    b) Why do women purchase improved seeds (or not)?
    c) What do men want/look for in a seed?
    d) Why do men purchase improved seeds (or not)?

13. Did groundnut seed demand vary by land area cultivated? If so, how?

14. How did groundnut seed demand vary, if at all, by whether the smallholder was planning to sell the groundnuts shelled or unshelled?

15. Were people happy with the seeds distributed? Please explain.

16. In your opinion, how has rainfall affected groundnut yield in the last two years?
    a) How has this varied by region?

17. Please describe any major changes made in BLA's approach to reinforcing farm and institutional capacity under this results module over the course of the project. (Probes: what/when/why)

Improved and Sustainable Agricultural Production Systems

The next set of questions have to do with BLA's efforts to improve sustainable agricultural systems.

18. Project documents note that a MOU was signed with Cargill in Year 1. Can we have a copy of this MOU? [Obtain a copy.]
    a) If not, please explain what was this for?
    b) Did the work under the MOU come to fruition? Please explain.

19. What are the contents of the Better Life Book? [Obtain a copy.]

20. How was the Better Life Book used in group activities, if at all?

21. Please describe any training provided for those using the Better Life Book.

22. From your perspective, how did BLA project activities and new technologies & practices influenced women's time commitments to farming/childcare/other?
    a) How did the project know this? (e.g., data from interviews, anecdotal conversations, formal survey?)

23. Please describe any major changes made in BLA's approach to improving sustainable agricultural systems over the course of the project. (Probe: what/when/why. For example,

did BLA originally plan to address a certain topic in the Better Life Book and associated group sessions but then this topic was cut?)

Increased Trade and Value Chain Development

The next set of questions relate to BLA activities to increase trade and value chain development.

24. What percentage of the crops bought by BLA were groundnuts?
    a) Who was the crop purchased from? E.g., what was the selection criteria for farmers who were provided a direct market?
    b) What was the male to female ratio of farmers provided with a direct market?
25. Which chiefdoms qualified for premium price?

26. What were the reasons some chiefdoms qualified and others did not?

27. Project documents show that in Year 1 COMACO approached lenders to raise $3M to support commodity purchases. $1.5M was raised and a $1M loan was applied for but not received. Not receiving the loan then led to a reduced quantity of crop to be bought—2,775 ton purchased and target was 6000-7000 tons of groundnut and soybean purchasing. To what do you attribute COMACO not receiving the loan?

28. In our baseline data collection, we found that men reported higher returns on sales. From your perspective, to what might you attribute this?
    a) Baseline data also showed men reporting higher volumes produced and/or sold. From your perspective, to what might you attribute this?

29. Please describe any major changes made in BLA's approach to increasing trade and value chain development over the course of the project.

Sustained Resiliency and Climate Change Adaption in Place

The next set of questions are about BLA activities that fall under resiliency and climate change adaption.

30. Project documents noted that bikes and radios were distributed. What was the geographic distribution of bikes? Of radios?
    a) What was the sex breakdown of those who received bikes? Radios?
    b) What was the selection criteria for distribution?

31. With regard to Farm Talk Radio -- What were the listening rates among women vs. men?

32. What Farm Talk programs did women listen to?
    a) To what do you attribute this?

33. What Farm Talk programs did men listen to?
    a) To what do you attribute this?

34. What messages were there, if any, in the radio programs around gendered decision making (for example, on control over income or farming decisions)?

a) (If there were messages around gendered decision making) What feedback, if any, did you receive from listeners on any gender decision-making content?

35. What other messages of the radio programs involved gender sensitization? Please describe.
    a) (If there were other gender sensitization components) What feedback, if any, did you receive from listeners on these messages?

36. What other activities existed under this pillar of Sustained Resiliency and Climate Change Adaptation (beyond radio and distribution of bikes and radios and Farm Talk Radio)?
    a) If not mentioned, probe: Were improved cook stoves distributed as planned?

37. Please describe any major changes made in BLA's approach to resiliency and climate change adaptation over the course of the project.

Gender

Our final set of questions relate to gender activities. First, we would like to understand how BLA may have worked similarly or differently with male versus female-headed households.

38. Please describe BLA's interactions with women who were part of male-headed households? Compare these to BLAs interactions with men in male-headed households?
    a) How did they come to be a part of the project? / How did the project reach them?
    b) What project activities do they tend to do or prefer?

39. Roughly, what proportion of male-headed BLA households had women who were growing groundnuts?

40. Please describe BLA's interactions with women who were part of female-headed households? Compare these to BLAs interactions with men in male-headed households?

41. Roughly, what proportion of female-headed BLA households had women who were growing groundnuts?

42. Considering the aspects of the project related to gender, on which of these did the project spend the most time/resources?
    a) Among these (the gender aspects most focused on), what do you believe were the most useful/impactful actions for women in households that grow groundnuts?

43. Please describe any major changes in BLA's approach to addressing gender over the life of the project. (Probes: what/why/when)

44. What challenges did BLA face in addressing gender-related issues?

45. What successes did BLA experience in addressing gender-related issues?

46. What would you do differently, if anything, in the future to address gender-related constraints in a project like BLA?

APPENDIX E. EVALUATION SCOPE OF WORK

Year 3 Workplan: October 2016 – September 2017

ACTIVITY CODE:	4BFS-001
ACTIVITY TITLE:	Zambia GNVC Impact Evaluation
ACTIVITY LEAD:	Curtis, Sian L
PRIMARY RESULT/INPUT:	Result 4: Increased Capacity for Rigorous Evaluation
PRIMARY USAID BACKSTOP:	Asrat, Lily

Brief Description

Test the hypothesis that the gender interventions implemented by the Production, Finance, & Technology Plus (PROFIT+) project and the Better Life Alliance (BLA) project under the Feed the Future (FTF) initiative will assist in maintaining or increasing women's control over production, marketing/sales, and proceeds from groundnuts as groundnut commercialization increases. Enhance the capacity of local organizations to implement impact evaluations by "mentoring through collaboration" on the evaluation.

Work Plan Supported with Year 3 Funding

This work plan describes the tasks necessary to complete midterm implementation process monitoring and implement the end line quantitative survey for the Zambia Gender and Groundnut Value Chain (GNVC) impact evaluation through September 30, 2017. The end line qualitative component, quantitative and qualitative analysis, and the writing of the draft and final impact evaluations reports will occur the following year, if approved (October 1, 2017-September 30, 2018). Baseline data collection occurred in 2014, followed by the first half of midterm implementation process monitoring in 2015-2016.

FTF Zambia aims to assist an estimated 263,000 vulnerable Zambian women, children, and family members to escape poverty and hunger. Two mechanisms operating under FTF Zambia are the PROFIT+ project and the BLA project. PROFIT+ aims to improve smallholder productivity, expand markets and trade, and increase private sector investment in agriculture. The project is targeting 200,000 smallholder farmers in the Eastern Province districts of Chipata, Katete, Lundazi, and Petauke and is focused on the value chains of maize, soybean, sunflower, groundnuts, tomato, and onion. BLA's goal is to increase sustainable, market-led growth across the entire food production and market chain, resulting in improved food and income security for 40,000 households in selected, environmentally-sensitive areas in Chipata, Katete, Lundazi, Mambwe, Nyimba, and Petauke districts.

Both mechanisms have adopted a gender mainstreaming approach to maximize positive impact on female farmers, and to prevent women from being displaced from value chains as commercialization increases. The Zambia GNVC impact evaluation aims to test the hypothesis that the gender interventions implemented by PROFIT+ and BLA will assist in maintaining or increasing women's control over production, marketing/sales, and proceeds from groundnuts as groundnut commercialization increases.

This work plan covers the following:

- Midterm process implementation monitoring: The MEASURE Evaluation research team has reviewed PROFIT+ and BLA project documents; drafted an initial report describing project activities conducted (e.g., numbers/sex of beneficiaries, interventions specific to groundnuts and/or gender, and geographic locations of interventions and beneficiaries); and developed key informant guides to gather information from PROFIT+ and BLA staff members to fill in gaps in information in projects documents. The next step in this process is to conduct key informant interviews (KIIs) with PROFIT+ and BLA staff in collaboration with the project's local research partner, the Indaba Agricultural Policy Research Institute (IAPRI). KIIs are scheduled for November 2016, and a final implementation process monitoring report is planned for January 2017 to inform end line data collection (i.e., changes to data collection tools.)
- Quantitative end line survey: A household survey will be implemented beginning in mid-August 2017, and the approximately 4,000 households that participated in the baseline survey will be targeted for participation in the end line survey. The quantitative survey instrument was designed to capture characteristics and outcomes at the household and individual level, and includes three questionnaires: a household questionnaire for all selected household; a women's questionnaire for all selected households; and a men's questionnaire for a randomly selected sub-sample of approximately 38 percent of selected households.
- Qualitative component: The qualitative component aims to contextualize the findings of the quantitative study by gathering information about gendered household decision making related to groundnut production and sales. The qualitative component employs a case-based approach involving individual in-depth interviews (IDIs) and focus group discussions (FGDs) at three sites per case, where a "case" is defined as an intervention approach (PROFIT+ or BLA). While the qualitative component will not be implemented under this work plan (scheduled instead for November 2017), the baseline IDI and FGD guides will be modified as necessary and included in the UNC and Zambia IRB applications.

Before implementing the quantitative end line survey, the following work will be completed:

- Local research partner(s) will be subcontracted. For the baseline, these partners were IAPRI and the Zambia Central Statistical Office (CSO).
- The results of the midterm implementation process monitoring will be used to inform any modifications to the baseline survey tools—both quantitative and qualitative—and accompanying enumerator and supervisor manuals, and the tools and manuals will be finalized.
- The quantitative tool will be programmed on ODK and tablets will be shipped to Zambia.
- UNC and Zambia IRB approval will be secured.
- Master trainers will be trained on the study protocol and will pilot the revised tools.
- The data collection team will be trained.

How This Activity Builds on Lessons Learned from Past MEASURE Evaluation Work

This is a new activity that was requested by BFS. The impact evaluation design and implementation incorporates lessons from past impact evaluations conducted by the project.

How This Activity Supports USAID Priorities

This evaluation directly supports the FTF Learning Agenda on gender.

Benchmarks and Deliverables Supported with Year 3 Funding

Benchmark	Expected Completion*
Midterm process monitoring KIIs for Zambia GNVC impact evaluation completed.	January 2017
Quantitative and qualitative data collection instruments for Zambia GNVC impact evaluation finalized.	February 2017
Subcontract with local research partner(s) for Zambia GNVC impact evaluation completed.	February 2017
UNC and Zambia IRB applications for Zambia GNVC impact evaluation submitted.	March 2017
Zambia GNVC impact evaluation midterm implementation process monitoring final report developed.	March 2017
Zambia GNVC impact evaluation ToT held and tools piloted.	July 2017
Data collectors for Zambia GNVC impact evaluation trained.	July 2017
Implementation of baseline quantitative survey for Zambia GNVC impact evaluation initiated.	August 2017

*These dates assume a work plan start date of October 1, 2016. If delays in work plan approval or the receipt of funding delay the start date, these dates will be automatically adjusted to account for the delay.

Deliverable	Expected Completion*
Final quantitative and qualitative data collection tools for Zambia GNVC impact evaluation	February 2017
Zambia GNVC impact evaluation midterm implementation process monitoring final report	March 2017

*These dates assume a work plan start date of October 1, 2016. If delays in work plan approval or the receipt of funding delay the start date, these dates will be automatically adjusted to account for the delay.

International Travel Supported with Year 3 Funding

Destination	Quarter	Primary Purpose	# Travelers
Zambia	Y3Q1	To conduct midterm implementation process monitoring KIIs.	1
Zambia	Y3Q4	To train master trainers and data collectors.	2

Year 4 Workplan: October 2017 – September 2018

ACTIVITY CODE: 4BFS-001

ACTIVITY TITLE: Zambia GNVC Impact Evaluation

ACTIVITY LEAD: Curtis, Sian L

PRIMARY RESULT/INPUT: Result 4: Increased Capacity for Rigorous Evaluation

PRIMARY USAID BACKSTOP: Asrat, Lily

Brief Description

Test the hypothesis that the gender interventions implemented by the Production, Finance, & Technology Plus (PROFIT+) project and the Better Life Alliance (BLA) project under the Feed the Future (FTF) initiative will assist in maintaining or increasing women's control over production, marketing/sales, and proceeds from groundnuts as groundnut commercialization increases. Enhance the capacity of local organizations to implement impact evaluations by "mentoring through collaboration" on the evaluation.

Work Plan Supported with Year 4 Funding

This work plan describes the tasks necessary to complete the end line quantitative survey initiated in Year 3, the qualitative component, quantitative and qualitative analysis, and the writing of the draft and final impact evaluations reports as well as a results dissemination meeting for the Zambia Gender and Groundnut Value Chain (GNVC) impact evaluation through September 2018.

FTF Zambia aims to assist an estimated 263,000 vulnerable Zambian women, children, and family members to escape poverty and hunger. Two mechanisms operating under FTF Zambia are the PROFIT+ project and the BLA project. PROFIT+ aims to improve smallholder productivity, expand markets and trade, and increase private sector investment in agriculture. The project is targeting 200,000 smallholder farmers in the Eastern Province districts of Chipata, Katete, Lundazi, and Petauke and is focused on the value chains of maize, soybean, sunflower, groundnuts, tomato, and onion. BLA's goal is to increase sustainable, market-led growth across the entire food production and market chain, resulting in improved food and income security for 40,000 households in selected, environmentally-sensitive areas in Chipata, Katete, Lundazi, Mambwe, Nyimba, and Petauke districts.

Both mechanisms have adopted a gender mainstreaming approach to maximize positive impact on female farmers, and to prevent women from being displaced from value chains as commercialization increases. The Zambia GNVC impact evaluation aims to test the hypothesis that the gender interventions implemented by PROFIT+ and BLA will assist in maintaining or increasing women's control over production, marketing/sales, and proceeds from groundnuts as groundnut commercialization increases.

This work plan covers the following:

- Quantitative end line survey: Data collection for the quantitative survey initiated at the end of Year 3 will be completed in Year 4.
- Qualitative data collection: The qualitative component aims to contextualize the findings of the quantitative study by gathering information about gendered household decision making related to groundnut production and sales. The qualitative component employs a case-based approach

involving individual in-depth interviews (IDIs) and focus group discussions (FGDs) at three sites per case, where a "case" is defined as an intervention approach (PROFIT+ or BLA).

- Quantitative and qualitative data analysis.
- Impact evaluation report: A draft report will be written and submitted to BFS and USAID/Zambia for review. Feedback will be incorporated and the impact evaluation report will then be finalized.
- Results dissemination workshop: MEASURE Evaluation will coordinate with FTF, USAID/Zambia, and BFS to communicate findings from the final impact evaluation report. A dissemination meeting in Lusaka will occur following completion of the full study.

How This Activity Builds on Lessons Learned from Past MEASURE Evaluation Work

The impact evaluation design and implementation incorporates lessons from past impact evaluations conducted by the project.

How This Activity Supports USAID Priorities

This evaluation directly supports the FTF Learning Agenda on gender.

Benchmarks and Deliverables Supported with Year 4 Funding

Benchmark	Expected Completion*
End line qualitative data collection for Zambia GNVC impact evaluation initiated.	October 2017
End line quantitative data collection for Zambia GNVC impact evaluation completed.	October 2017
End line qualitative data collection for Zambia GNVC impact evaluation completed.	November 2017
Draft Zambia GNVC impact evaluation report completed.	June 2018
Results dissemination workshop for Zambia GNVC impact evaluation held.	September 2018
Final Zambia GNVC impact evaluation report written.	September 2018

*These dates assume a work plan start date of October 1, 2017. If delays in work plan approval or the receipt of funding delay the start date, these dates will be automatically adjusted to account for the delay.

Deliverable	Expected Completion*
Dissemination meeting for Zambia GNVC impact evaluation	September 2018
Final report for Zambia GNVC impact evaluation	September 2018

*These dates assume a work plan start date of October 1, 2017. If delays in work plan approval or the receipt of funding delay the start date, these dates will be automatically adjusted to account for the delay.

International Travel Supported with Year 4 Funding

Destination	Quarter	Primary Purpose	# Travelers
Zambia	1	Qualitative interviewer training	1
Zambia	4	Dissemination meeting	2

APPENDIX F. EVALUATION TEAM AND DISCLOSURES OF CONFLICT OF INTEREST

Sian Curtis, PhD, served as the activity lead and Principal Investigator for the evaluation. She was responsible for the overall development of the evaluation design as well implementation of the evaluation. She had primary responsibility for collaboration with local partners as well as coordination with USAID. Dr. Curtis is a statistical demographer whose research and administrative efforts have focused on monitoring and evaluation of global population and health programs and family planning and reproductive health. As the past Director of the MEASURE Evaluation Project (from 2002-2012), she provided technical direction and leadership to a portfolio of over 100 individual monitoring and evaluation activities in over 25 countries. Dr. Curtis is currently a senior evaluation specialist responsible for designing and leading evaluations related to international health and food security projects. She has particular expertise in the design and analysis of complex surveys and previously worked as a senior analyst with the Demographic and Health Survey Project at Macro International.

Jessica Fehringer, PhD, served as the qualitative lead and gender expert for the evaluation. Dr. Fehringer is a senior technical advisor for MEASURE's evaluation portfolio, leads several evaluation and research projects in South Asia and sub-Saharan Africa, and is responsible for oversight of gender-related research activities. She has worked in international public health for over 15 years and has designed and carried out qualitative and quantitative research and evaluation in South and Southeast Asia, South America, and sub-Saharan Africa on a range of MNCH/FP, HIV, and health systems strengthening topics. She most recently completed a quasi-experimental mixed methods evaluation examining the MNCH/FP and health service impacts of integrating gender and social inclusion into capacity building with local health facility committees in Nepal. Dr. Fehringer also leads a randomized control trial of a household economic strengthening and HIV and other health services support program for vulnerable populations in Rwanda.

Aiko Hattori, PhD, developed the sampling plan for the baseline and end line quantitative surveys and managed and analyzed the survey data. Dr. Hattori is a research associate (public health economist) with MEASURE Evaluation and has been working in the field of Public Health for the past 19 years. She has a PhD in Maternal and Child Health and an MPH in Biostatistics from the University of North Carolina at Chapel Hill. Her research has been centered on evaluations of health policies/programs in both developed and developing countries. Her research with the University of North Carolina at Chapel Hill since 2012 has involved studies of public health projects in multiple developing countries, including Bangladesh, Zambia, South Africa, Nigeria, and Democratic Republic of the Congo.

Milissa Markiewicz, MPH, PMP, provided project management, logistic, and qualitative research support to the evaluation. She also oversaw the IRB application process and managed subcontracting. Ms. Markiewicz is a research associate at UNC's Carolina Population Center (CPC), and serves as project manager/research associate for several evaluations in Malawi, Uganda, Rwanda, Kenya, Tanzania, and Zambia. She previously served as project manager for the Southeast Region of the Network for Public Health Law and as a program director at the Terry Sanford Institute of Public Policy at Duke University. Ms. Markiewicz worked in Uganda for over three years as an academic director and special projects coordinator for the School for International Training.

Megan Barry, MSPH, assisted with literature review, tables, and report writing. Ms. Barry is a doctoral student in the Department of Maternal and Child Health in the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill. Ms. Barry's research interests focus on improving

understanding of maternal and child health and development, and she is particularly interested in intergenerational transmission of health. Before beginning her doctoral program, Ms. Barry worked in the Reproductive Health and Family Formation area at Child Trends in Washington, DC.

Thelma Namonje, MSc, provided expertise in agricultural policy and research to the evaluation and oversaw both quantitative and qualitative data collection at end line. Ms. Namonje is a research associate at the Indaba Agricultural Policy Research Institute. Before joining IAPRI, she worked for ACTESA-COMESA as a technical program assistant under the Africa Agricultural Markets Program, which focuses on enhancing regional capacity through policy dialogue and coordination on staple food markets in East and Southern Africa. Ms. Namonje's areas of interest include agriculture marketing and pricing of food staples as well as gender relations in agriculture development. Her past research work focused on the Zambia's Food Reserve Agency and maize transportation and storage. Her research focuses on the effects of late delivery of subsidized fertilizer on technical efficiency of smallholder farmers and maize production.

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Sian Curtis
Title	Senior Evaluation Advisor
Organization	MEASURE Evaluation, University of North Carolina
Evaluation Position	Team Leader and Principal Investigator
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-OAA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: Real or potential conflicts of interest may include, but are not limited to: 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	NA

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	June 29, 2018

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Jessica Fehringer
Title	Research Associate
Organization	MEASURE Evaluation, University of North Carolina
Evaluation Position	Co-Investigator
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-0AA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: Real or potential conflicts of interest may include, but are not limited to: 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	NA

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	Jessica Fehringer
Date	June 29, 2018

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Aiko Hattori
Title	Research Associate
Organization	MEASURE Evaluation, University of North Carolina
Evaluation Position	Co-Investigator
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-0AA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: Real or potential conflicts of interest may include, but are not limited to: 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	NA

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	June 29, 2018

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Milissa Markiewicz
Title	Research Associate
Organization	MEASURE Evaluation, University of North Carolina
Evaluation Position	Project Manager and Research Associate
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-0AA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
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Signature	
Date	June 29, 2018

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Megan Barry
Title	Graduate Research Assistant
Organization	MEASURE Evaluation, University of North Carolina
Evaluation Position	Research Assistant
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-0AA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
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Signature	Megan Barry
Date	June 29, 2018

DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Thelma Namonje
Title	Research Associate
Organization	Idaba Agricultural Research and Policy Institute (IAPRI), Zambia
Evaluation Position	Local Principal Investigator
Evaluation Award Number (contract or other instrument)	MEASURE Evaluation; AID-0AA-L-14-00004
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	Production, Finance, and Improving Technology Plus (PROFIT+), Implementing Partner ACDI/VOCA; and Better Life Alliance, Implementing Partner Community Markets for Conservation (COMACO)
I have real or potential conflicts of interest to disclose.	No
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Signature	
Date	June 29, 2018

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 W. Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350 | measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government. This report was prepared independently by Zulfiya Charyeva (team leader), MEASURE Evaluation; Smisha Agarwal, University of North Carolina at Chapel Hill; Kristen Brugh, MEASURE Evaluation; Siân Curtis, MEASURE Evaluation, and Stephanie Mullen, MEASURE Evaluation. TRE-18-014

ISBN: 978-1-64232-076-3

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